1995-1996
MADISON AREA TECHNICAL COLLEGE
CATALOG
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The information found in this catalog is accurate at the time of its publication. Madison Area Technical College reserves the right to make changes without obligation or further notice.
**WELCOME**

There’s never been a better time to come to Madison Area Technical College. Change in technology is continuous and so is learning. Our curriculum is developed with the help of advisory committees made up of employers and employees – many of whom are former students. That way we know our students are getting skills that will allow them to hit the ground running.

Our students learn problem-solving skills. They learn how to think, adapting to many of the changes that take place on the job.

As change continues to accelerate, more people find themselves coming back to school. Many choose MATC because of our small classes, reasonable cost, quality teachers and comprehensive education.

Whether you’re about to graduate from high school or have been out of school for a while, remember that MATC means education for the real world. Check out the programs and courses on the following pages. We’ll provide you with the tools you need to create a satisfying career.

Dr. Beverly S. Simone
President

**EQUAL OPPORTUNITY POLICY**

The Madison Area Technical College District is in full compliance with Titles VI and VII of the 1964 Civil Rights Act (as amended), Title IX of the Educational Amendments Acts of 1972, Section 504 of the Rehabilitation Act, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, the Carl D. Perkins Vocational Education Act, the Equal Pay Act of 1973, the Age Discrimination Acts of 1967 and 1975, the Civil Rights Restoration Act of 1987, the Wisconsin Fair Employment law, and other appropriate laws and executive orders and/or administrative directives and codes including the Office for Civil Rights Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Handicap in Vocational Programs.

Equal opportunity, as required in Chapter 38 and the Wisconsin Fair Employment Law (Sec. 111.31-111.395, Wis. Stats.), is for all persons regardless of political affiliation, age, race, creed, color, handicap (disability), marital status, sex, national origin, ancestry, sexual orientation, arrest or conviction record, service in the armed forces, genetic testing and the use or nonuse of lawful products off the employers’ premises during nonworking hours.

Affirmative action is required throughout the MATC District for women, racial/ethnic groups and persons with disabilities in educational programs and job categories. The purpose of the statement is to identify areas of concern and establish measures to correct areas of significant under-representation, better balance the work force, and implement the minority recruitment and retention guidelines established in the Governor’s Task Force.

Affirmative action will be implemented in all employment practices including but not limited to recruitment, hiring, transfers, promotions, training, layoffs, terminations, retention, certification, testing and committee appointments.

MATC’s policy is to prevent and, if necessary, remedy harassment that is based on age, disability, national origin, ancestry, race, color, record of arrest or conviction, religion, creed, sex, sexual preference and marital status. The Affirmative Action Office serves as central intake point for all internal complaints of discrimination and/or harassment. The procedures for filing a discrimination/harassment complaint are in the MATC Catalog. Upon registration, each student is provided a copy of the MATC Catalog. Additional copies are available at each MATC facility. Inquiries regarding this policy may be directed to Dr. Richard H. Harris, Affirmative Action Officer, Madison Area Technical College, 3550 Anderson Street, Madison, WI 53704, (608) 246-6045.

**INTRODUCTION**
CHOOSING A CAREER

Where you are right now in your life — your interests, values and abilities — has a direct influence on what you want to become and what career you'll prepare for. This holds true whether you're just beginning to decide on the kind of career you want or if you're thinking about changing careers.

You can start your career decision process by taking a self-inventory using the following points as a guide.

Interests

Your interests play an important role in career selection. When you enjoy what you do, you increase your chances for success because you find your work satisfying and fulfilling.

Skills and Abilities

You need to identify what you're good at, and then develop the ability to talk with others about your strengths. You'll earn a living for what you can do, not for what you cannot do! Your skills and abilities are the keys to knowing yourself better, making positive career decisions, and then waging a successful job campaign to help you achieve your goals.

Work Values

Think about what kind of work structure and what kind of environment you want to work in. Consider the amount of responsibility you'll want and whether you prefer to work alone or with others, be your own boss, work outdoors, work in a large company or a small business, or interact with the public.

Personal Values

You constantly make personal value decisions — where to live, what to do for entertainment, what kind of food to eat, car to drive, etc. Think about these choices. By assessing them, you can begin identifying the priorities in your life.

Lifestyle

The kind of career you choose can influence the kind of life you'll live. For example, some health care workers often work weekends, but they find the work rewarding and good for their self-esteem because it fulfills a personal value.
Rapidly changing needs of business and industry may require changes in program curriculums. Curriculums may change at any time to assure that instruction is keeping pace with changing technology and workplace requirements. Contact department offices for most current information.

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**Campus Key:**
- M = Madison campus or center
- F = MATC-Fort Atkinson
- P = MATC-Portage
- R = MATC-Reedsburg
- W = MATC Watertown

* = First year or limited course offerings
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Program students are bound by the graduation requirements in effect the semester they begin taking classes as formally admitted program students.

Regional campuses add or discontinue programs periodically. Please contact the Admissions Office for information on current program availability.

Introduction
WHAT DOES MATC OFFER?

Degrees & Programs

**Associate in Applied Science**

This degree is designed to lead the student directly to employment in a specific career. It is awarded upon successful completion of occupational programs where technical courses emphasize applied sciences (those skills that apply directly to a certain field).

Possible career fields include computer technology, public safety, industrial production, business techniques, food services, agriculture or health. In some instances, particularly in health-related fields, this degree is a prerequisite for taking a licensing examination.

**Associate in Applied Arts**

This degree is designed to lead the student directly to employment in a specific career. It is awarded upon successful completion of occupational programs where technical courses emphasize creative techniques and activities in the study of subject areas such as commercial art, photography, interior design or occupational therapy.

**Associate in Arts & Associate in Science Liberal Studies Degrees**

Either of these degrees is designed for students who wish a broad general education which, in some instances, can be beneficial when seeking employment. It is awarded upon successful completion of program requirements and electives comprising 64 semester credits. The associate in science degree is earned by students whose liberal studies course work emphasizes mathematics and science. The associate in arts degree is earned by students whose liberal studies course work emphasizes the social sciences and humanities.

**Vocational Diploma**

Vocational diploma programs are designed to prepare students in the basic skills necessary for employment. After satisfactory completion of any of these programs, a less-than-one-year, one-year or two-year vocational diploma is granted.

**College Transfer Program**

The College Transfer Program provides courses comparable and corresponding to those generally required in the first two years of programs offered by four-year colleges and universities, thereby enabling students to transfer to a four-year institution.

Students who pursue the College Transfer Program are advised to schedule courses that meet the requirements of their chosen four-year college. Students should contact the college or university where they intend to transfer for advice on specific courses they should take for entering their major fields. Some of the courses in associate degree programs are accepted for transfer by certain institutions, but these courses vary from program to program and from accepting institution to accepting institution. Courses that are applicable for college transfer should be discussed at the time of registration.

Qualified students in associate degree technical programs, with consent of the dean/chairperson of the particular division, may substitute courses from the College Transfer Program which satisfy technical program requirements.

**Vocational-Technical Developmental Program**

Courses in this program are designed to serve one of two functions for students: 1) to provide classes which remove deficiencies in past training and therefore, enable students to be eligible for the vocational or technical programs of their choice; or 2) to strengthen and refresh academic competencies to better ensure success in vocational or technical studies.
Apprenticeship

An apprenticeship is a training program that involves an agreement (indenture) between an apprentice and an employer or an employer/employee agency. Apprenticeships usually last from two to six years. It is an ideal learning situation which combines work experience with related classroom training. MATC’s Apprenticeship Department coordinates and oversees apprenticeships in a variety of skilled trades.

An apprentice training program is a legally constituted program of education set up under Wisconsin state law in such a way that the employer and the apprentice are fairly treated under a contractual agreement called an indenture, varying in length from two to six years. During this time, the apprentice is assured of receiving well-rounded training in his or her selected field, and the employer is assured of having a screened, tested, qualified employee. This is accomplished through the cooperative efforts of the Bureau of Apprenticeship Standards of the Department of Industry, Labor and Human Relations, which supervises the work of the apprentice on the job to see that it meets standards set for the particular trade; the employer, who provides work experience for the apprentice; and MATC, which provides instruction in trade technology and related sciences.

A combination of work on the job and related training in school forms the basis for an ideal learning situation.

To be eligible for apprenticeship, a person must be employed in the field and meet the application and testing procedures of the trade in which he or she wishes to participate. The rules and policies for apprenticeship may vary because of policies set forth by outside agencies and advisory committees.

Offerings in the Apprenticeship Department may vary depending upon the needs of business and industry. It must be kept in mind that apprenticeship programs belong to their respective industries. Therefore, all listed programs may not be offered each year. Contact the MATC Apprenticeship Office to be sure the program described is available.

Content of Indenture

The terms of indenture are defined under the supervision of DILHR’s Bureau of Apprenticeship Standards with the aid of joint labor and management apprenticeship committees. These terms determine the content of an indenture:

1. Length of training, varying from two to six years;
2. Work-related schooling and school attendance, ranging from 288 to 800 hours;
3. Additional 24 to 450 hours of unpaid, related school attendance;
4. Work processes through which the apprentice is to be rotated on the job; and
5. Wages to be paid in step increments to the apprentice for the duration of his/her apprenticeship.

Joint Apprenticeship Committees

Joint apprenticeship committees are made up of representatives of labor and management who serve in an advisory capacity to the college in connection with the planning of apprenticeship programs for both day and evening classes. Recommendations are made relative to curriculum content, equipment needs and other information necessary to keep the apprenticeship instruction and programs current with the needs of industry.

Apprenticeship Information

Prospective applicants for apprenticeship may receive information about the different programs and special aptitudes required for the apprenticeship trades by contacting the campus administrator/apprenticeship chairperson at 2125 Commercial Avenue, 246-5202.

A variety of procedures are followed by Joint Apprenticeship Committees representing the numerous crafts in the Madison area. Upon request, the chairperson will furnish application information.

MATC currently offers technical training for apprenticeships in the following trades:

Construction Trades

- Bricklaying and Masonry
- Carpentry
- Construction Electrician
- Heating, Ventilating and Air Conditioning
- Ironworking
- Painting and Decorating
- Plastering
- Plumbing
- Sheet Metal
- Steamfitting (construction)
- Tile, Terrazzo and Marble Finishing

WHAT DOES MATC OFFER?
Industrial Trades
- Electrician (industrial)
- Machinist
- Millwright (maintenance mechanic)
- Injection Mold Set-Up (plastics)
- Sheet Metal (industrial)
- Tool and Die

Service Trades
- Barber/Cosmetologist
- Garage Mechanic
- Steamfitting (service)

Retraining & Upgrading Skills
The Apprenticeship Department also offers courses and programs in occupational and trade retraining or upgrading. For further information, call 246-5202.

- Adult and Continuing Education
- Job Safety and Training-Telecommunications
- Plumbing Code Review
- Supervisory Training
- Public Water Supply (Groundwater)
- Wastewater Treatment
- Customized Training
- Related evening courses for apprentices and journeymen

Apprenticeship Program Offerings
Barber/Cosmetologist
Apprentice barbers/cosmetologists participate in the following activities: basic and advanced cutting and styling of hair, shaving, hair coloring, chemical waving, the conditioning of hair, hair relaxing and straightening, hairpiece and wig care and styling, giving of facials, skin care and correct application of cosmetic makeup, cosmetic art (facial massage plus use of cosmetic preparations), manicuring, scalp services and shampooing, other activities related to hair and skin care, proper care of shop equipment, shop maintenance and sanitation, plus the use of therapeutic lights, training in public relations and record keeping.

Bricklaying & Masonry
Bricklayers and masons lay building materials such as brick, structural tile, concrete, cinder, glass, gypsum and terra cotta block. They construct and/or repair walls, partitions, arches, sewers and other structures such as fireplaces and chimneys. They also fasten brick, terra cotta veneer or other natural or man-made products to faces of a structure. They may also do some welding. Persons in this trade usually serve a four-year apprenticeship consisting of 6,240 hours of on-the-job and school training. The related classroom training includes 435 hours of classes.

Carpentry
Carpenters build forms for such items as floors, beams, joists, wall columns, stairs, etc. They also do rough framing, roof framing, stair framing and scaffolding building in both home and heavy construction. They may complete outside finishing by installing such items as cornices, outside wall trim, door, window and roof coverings. They may also install inside finishing materials such as doors, windows and their trim, baseboards, cabinets, wardrobes, flooring, ceiling materials and stain work, or they may apply exterior and interior hardware to doors, windows and cabinets. They may do miscellaneous repair work, set up work for machinery and other equipment, and some welding.

Cement Finishing
Cement masons may participate in the following job activities: setting screeds to line; tamping and rodding concrete; floating and troweling masonry surfaces; using edges and joints; chipping concrete; patching concrete; rubbing and brushing concrete; establishing grade lines and heights; forming valleys and summits; setting expansion strips; setting curb and gutter screeds; finishing curbs, gutters, sidewalks, driveways, basement floors and wash pans; finishing foundations, walls and ceilings; laying out joints in special designs; laying risers and treads; making asphalt and master installations; waterproofing; spreading and finishing all epoxy materials on floors and other surfaces; and safety in the related areas.

Electrician (Construction)
Electricians lay out, install and test electrical fixtures; they also install electrical wire systems used to provide heat, light, power, air conditioning and refrigeration in homes, office buildings, factories, hospitals and schools. They install conduit, greenfield and other materials, and connect electrical machinery, equipment and controls. Electricians use a wide variety of hand tools to perform various tasks.
The journeyman electrician must master both mechanical and technical skills. He/she must understand the use of meters and specialized testing equipment, be adept at troubleshooting and understand the theory behind the transmission of electrical energy.

**Electrician (Industrial)**

Industrial electricians may assist in inspections of motor bearings and other electrical equipment; repair motors, starters, push buttons, switches, fuses and other electrical equipment; assist in the installation of electrical equipment; install conduit; pull wires; dismantle, clean and paint motors; work with hand and power tools; cut holes; bend conduit and make minor connections; interpret and use prints and codes to take measurements and install electrical equipment properly; troubleshoot motor and other electrical equipment problems; and recognize failures and complete repairs. Due to the variety of electrical fields, apprentices may be required to gain additional skills as well as those listed.

**Heating, Ventilating & Air Conditioning**

HVAC apprentices learn to install, service and repair environmental control systems in residences, department stores, office buildings and commercial establishments. HVAC specialists utilize knowledge of refrigeration theory, pipelining and structural layout to mount compressors and condenser units on platforms or floors; fabricate, assemble and install ductwork and chassis parts; install evaporator units in chassis or in air duct systems; cut and bend tubing to correct length and shape; cut and thread pipe; join tubing or pipe to various refrigerating units; install expansion and discharge valves in circuit; connect motors, compressors, temperature controls, humidity controls and circulating-ventilation fans to control panels; install air and water filters in completed installation; inject small amounts of refrigerant into compressors to test systems and add freon gas to build-up, prescribed operating pressure; observe pressure and vacuum gages and adjust controls to ensure efficient operation; test joints and connections for gas leaks; wrap pipes in insulation batting and secure them in place; and replace defective breaker controls, thermostats, switches, fuses and electrical wiring. They may also install, repair and service air conditioners with cooling capacities ranging from 15 to 20 tons in warehouses and factory buildings.

**Ironworking**

Ironworker apprentices might assist journeymen to unload and distribute materials, and handle tools and equipment, while always employing good safety practices. Other types of activities may include learning about different materials; ornamental work, including layout, fabrication and erection; reinforcing layout; binding, cutting, placing and tying; structural work, including layout, fitting, connecting, hooking on, riveting and signaling; rigging; knots, cable and rope splicing; cribbing; moving and setting up machinery; and acetylene and electric welding, burning and cutting with proper handling of tanks and equipment. Work operations are performed outdoors.

**Machinist**

Machinists perform many job activities. Apprentices may learn to operate equipment such as a drill press, milling machine, both horizontal and vertical, and automatic screw machines; set up and operate machine tools; fit and assemble parts to make or repair metal parts, mechanisms, tools or machines; apply knowledge of mechanics, shop mathematics, metal properties, layout and machining procedures; interpret specifications, blueprints, sketches; make a drawing or describe parts which may have to be machined; measure, mark and scribe dimensions and reference points to layout stock for machining; verify dimensions and alignments with measuring instruments such as micrometers, height gauges and gauge blocks; operate mechanism or machine; observe operation and/or test with inspection equipment to diagnose malfunction of machine, or to test repaired machine; and perform flame cutting and arc or gas welding operations.

**Millwright (Maintenance Mechanic)**

Millwright apprentices learn to repair and maintain machinery and mechanical equipment using hand tools, power tools, precision measuring and testing equipment; observe mechanical devices in operation and, listening to their sounds, locate causes of trouble, be capable of analyzing problems and completing needed repairs; dismantle devices to gain access to and remove defective parts using hoists, cranes, hand tools and power tools; complete repairs and maintain operations in accordance with diagrams, sketches, operation manuals and manufacturers' specifications; perform preventive maintenance procedures; adjust functional parts of devices and control instruments using hand tools, levels, plumb bobs and straight edges; inspect used parts to determine changes in dimensional requirements using rules, calipers, micrometers and other measuring instruments; lubricate and service hydraulic and pneumatic devices; complete performance tests on equipment; set up and operate power equipment to make replacement parts for small repair on machinery: start and maintain service schedules recommended by equipment manufacturers; work with and maintain electrical equipment; and repair and maintain hand and power tools used in daily operations.

**Painting & Decorating**

Painting, by its simplest definition, is the process of applying a material to various surfaces for the purpose of protection, sanitation or decoration. The surface may be wood, metal, masonry or other composition, and may be interior or exterior. Structures may vary from small houses to enormous industrial facilities, structural bridges or high towers.

Apprentices may participate in the following activities: wood finishing, print reading, erecting ladders and scaffolding, spray painting, abrasive and water floating, color
mixing and matching, drywall taping, finishing and texturizing, applying special coatings and special decorative finishes, hanging wallcoverings, health and safety practices, and management and communication skills.

**Plastering**

Plastering apprentices can expect to learn: scratching and brownin, (all bases), including using sand and lightweight plaster to prepare walls and ceilings which are to receive tile; lining, dotting and reefing of different surfaces which are to receive tile; and how to apply thinwall and finishes such as whitecoating, sand finishing, acoustic, plastering and stucco. Plastering apprentices may also learn specialty work with texture finishes, acoustical tile, plaster veneering, plaster coatings, fireproofing and insulating, exposed aggregate, waterproofing, bonding agents, application and artificial finishes. Includes the exterior finishings, drifit, stow and synergy.

**Plumbing**

Plumbers install pipes for water, gas, sewage and drainage systems. They also install sanitary facilities such as lavatories, toilets, tubs, bathroom fixtures, showers, kitchen fixtures, drinking fountains and laundry equipment. Plumbers install pipe systems using both hand and power tools to cut, bend and thread pipes, and to make welded and soldered joints. Plumbers must also run tests on their installations to assure that the system is functioning properly and meets the Plumbing Code. They are often called upon to clear pipe lines and drains and to make repairs on faucets, valves and leaky pipes.

**Sheet Metal**

A sheet metal apprentice does the following types of jobs: layout work encompassing blueprint reading; measuring and designing of any type of project in a shop or on the job, which may include such work processes as shearing, forming, welding, soldering, fabrication and assembly; the fabrication and installation of architectural metal, which may include such items as gutters, metal roofs, flashing, tin ducts, gravel stops and coping; the assembling and installation of heating and ventilating systems for comfort; specialty-type work with stainless steel and aluminum; the installation of lockers, toilet partitions, metal pan ceiling and metal decking; and flow pipe and plastic duct work. Sheet metal apprentices also learn to weld.

**Steamfitting**

Steamfitters (occasionally called pipefitters) are craftpeople who assemble, install and maintain pipes to carry water, steam, compressed air, gases and fluids needed for processing, manufacturing, heating or cooling. The journeyman pipefitter must be able to adapt and repair pipe systems, install appliances, heating and refrigeration units, and do all types of pipe welding. Pipefitters work with both high- and low-pressure pipes, mostly in industrial and commercial buildings. They also install and repair residential heating and cooling equipment. They install ammonia-carrying pipelines in refrigeration plants, complex pipe systems in oil refineries and chemical and food processing plants, and also install automatic sprinkler systems. They know how to prevent corrosion, clogging and breaking of pipelines, and how to test pipes for proper operation.

**Tile, Terrazzo & Marble Finishing**

Tile, terrazzo and marble finishers apply tile to walls, floors, ceilings and promenade roof decks while following design specifications. They examine blueprints, measure and mark surfaces to be covered, and lay out work; measure and cut metal lath; tack lath to wall and ceiling surfaces; spread plaster base over lath with trowels and level plaster to specified thicknesses; spread concrete on subfloor with trowels and level it with screeds; spread mastic or other adhesive base on roof deck; cut and shape tile; affix tile to plaster or adhesive base; apply grout and clean installed marble; mix mortar, plaster and grout; drill holes and chisel channels in edges of marble slabs to install metal wall anchors; fill marble joints and surface imperfections with grout; grind and polish marble; clean installed marble surfaces; work and storage areas; apply grout and finish surfaces of installed terrazzo; apply curing agent to installed terrazzo; grind surface of cured terrazzo and prepare for grouting; spread grout across terrazzo to fill surface imperfections; grind and polish surface of terrazzo; wash surface of polished terrazzo using cleaner and water; apply sealer; and install grinding stones in power grinders, using hand tools.

Tile, terrazzo and marble finishers may also modify mixing, material moving, grouting, polishing and cleaning methods and procedures; repair and fill chipped, cracked or broken marble pieces; secure marble anchors to studs; spread marble chips or other material over fresh terrazzo surface and press into terrazzo, using roller; or cut divider and joint strips to size as directed.

**Tool & Die**

Tool and die apprentices analyze specifications and prints, develop specifications from general descriptions, make drawings or sketches of tools or tool parts, plan the sequence of operations to complete a product using various tools, and operate both hand and power tools in any work process, including drill presses, surface grinders, layout presses and shapers. They will be able to measure, mark and scribe metal stock to layout, work pieces for machining, and set up and operate the machining tools of their trade areas. They will be able to fit and assemble parts into assemblies or mechanisms, verify dimensions and alignment using measuring instruments, and hand treat tools or tool parts.
International Studies/Study Abroad Programs

International opportunities to study abroad are now available to MATC students through the college’s membership in the Illinois Consortium for International Studies and Programs.

Madison Area Technical College is able to offer its students the opportunity to spend the fall or spring semester abroad in England or Austria, or a summer session in Costa Rica. Business students can spend a spring semester in the Netherlands.

Eligibility requirements are 12 credits of college-level work, a 2.75 grade point average, and completion of 801-151, Communications Skills I, or equivalent, by the time of travel.

Study in Canterbury, England

In Canterbury, located in the southeast corner of England, students study at Christ Church College, a small, friendly school of about 4,000 students. American students live with host families near the college; take liberal arts courses with British and other Illinois and Wisconsin students; join student activities such as clubs, sports and drama; and travel both in England and on the continent. (Fall and spring semesters.)

Study in Amsterdam, Netherlands

At Hogeschool Holland in suburban Amsterdam, business students from Illinois and Wisconsin join others from the Midwest, England, and the Netherlands to study business. Housing is in apartments with the option of taking meals at the university. A full range of field trips is planned and participation in clubs and activities of Hogeschool Holland is encouraged. (Spring semester only.)

Study in Salzburg, Austria

Salzburg College is in an important cultural center of Europe in the northern foothills of the Alps. Here, students attend classes taught in English with other American and Japanese students, live with host families, eat meals at the college and travel extensively. Course selections include such subjects as art, music, political science, history, photography, hiking and skiing. (Fall and spring semesters.)

Study in San Jose, Costa Rica

Costa Rica is especially appealing as a study-abroad site because of its beauty, prosperity and political stability. Illinois and Wisconsin students have a full range of field trips and activities during this five-week, Spanish-immersion summer program designed by the College of DuPage. Courses are in Latin American civilization and culture. (Summer semester only.)

For more information on these programs and other international education programs, please contact Sharon Hart in Room 173, Truax, or call 246-6800.

Dane County Area Adult & Continuing Education

(Dane County Area ACE)

The major focus of MATC’s Dane County Area Adult and Continuing Education is to promote noncredit and credit offerings throughout Dane County. With the cooperation of school districts and senior citizens’ centers, we are able to present a wide variety of courses for Dane County residents. This includes a number of nontraditional offerings not usually associated with a formal classroom setting.

By cooperating with industry and business, public and private agencies, community groups and other institutions of learning, Dane County Area ACE is able to sponsor and develop a wide variety of special institutes, seminars and workshops. Dane County Area ACE seeks and welcomes contacts, requests, inquiries and suggestions in its effort to expand and become more effective in adult continuing education. Through the efforts of our business liaison representative, we are able to expand and provide customized training and technical assistance to Dane County area businesses and industries.

Typical course offerings at various locations in Dane County include computers, foreign languages, woodwork-
Alternative Learning Division
The Alternative Learning Division is dedicated to making quality education accessible. The division addresses the unique needs of individuals and families within our district so they may acquire the skills and knowledge they need to participate fully in all aspects of modern society.

Academic instruction and special services are provided through the Adult Basic Education Department, Special Programs/Services, and Supplemental Services/Instruction in the division. Instructional learning centers and/or classrooms are located at all MATC campuses — Downtown, Truax, Commercial Avenue, Fort Atkinson, Portage, Reedsburg and Watertown — and numerous outreach sites throughout the district.

All basic skills and instructional support programs are offered free of charge. To register, students must contact Alternative Learning Division staff at the appropriate campus. No on-line self-scheduling or phone-in registration is permitted.

Adult Basic Education Department
The Adult Basic Education Department provides individuals an opportunity to review, relearn or improve basic academic skills such as reading, writing and math. Individualized, small and large group, and computer-assisted instruction are provided at the learning centers and in classes. Materials are available to help students achieve their academic goals. Students may enroll throughout the semester.

Basic skills & remedial instruction
The ABE Department helps people develop their skills from grade levels 0-12 in all academic subject areas. Instruction is provided in learning centers and various modular and semester-long classes during the day, evenings and weekends for the convenience of all students.

Remedial Instruction for program students
Anyone enrolled in an occupational training program or a general studies class at MATC may receive individualized support instruction to improve the skills required to complete class assignments successfully. Instructional staff work on an individual or small group basis with students. Remedial instruction is offered in all of the following areas: English grammar, spelling, composition skills, reading comprehension, math, basic sciences and social studies.

High School Completion Options
General Education Development (GED)
Instruction is provided for individuals who are preparing to take the GED tests, which consist of five content areas: writing skills, social studies, science, literature and mathematics. The standardized GED tests are given on a regularly scheduled basis at sites throughout the MATC District. Applicants for the GED must also take part in career awareness counseling, which includes an assessment of reading skills, an assessment of career interests and aptitudes, and the development of a career plan. A nominal fee is charged to take the actual GED tests.

TV GED
Assistance is offered to students who prepare for GED exams via the GED program televised on public television. Instructors provide assistance through telephone conferences and special help sessions.

High School Equivalency Diploma (HSED)
GED/HSED
Individuals who want to obtain an HSED must pass all the GED requirements and must also meet requirements in health, civic literacy and employability skills.

Competency-Based HSED (P.I. 5.09)
The 5.09 option covers the content area of the HSED through a self-paced, competency-based format. Knowledge is assessed in small increments through a variety of ways, including oral discussions, written quizzes, take-home assignments and demonstrations. Assessments are kept in a student portfolio. Upon successful completion of the competencies, the portfolio is reviewed and the student is awarded a High School Equivalency Diploma by the Wisconsin Department of Public Instruction.

This option is targeted for limited-English-proficiency students and native English speakers, aged 18.5 and above, without high school credentials, who have a greater chance of success through competency-based assessment than through timed, cumulative GED/HSED testing.

What Does MATC Offer?
External Diploma Program (EDP)
This program allows adults to demonstrate high school-level skills by applying the skills they have learned through their life and/or work experiences. The academic skills, including writing, speaking, computation, problem-solving, reading and critical thinking, will be demonstrated by doing real-life tasks, such as searching for a new apartment. In this example, reading, writing and math skills might be demonstrated by reading a lease, writing a letter of complaint to a landlord, and budgeting the rent from a simulated monthly salary. Adults must also demonstrate an entry-level job skill or home management experience, either by successfully holding a job, demonstrating performance or getting job training. Upon successful completion of the program, a high school diploma is awarded by a local high school district. A fee is charged for this program.

Special Programs & Services
The division has identified the needs of various targeted populations who might not otherwise obtain instructional services and it has developed specific programs to address their educational needs.

English as a Second Language (ESL)
Individuals whose native language is not English may attend ESL classes and/or a language lab to improve their English speaking, listening, writing and reading; to acquire knowledge of American culture; and to obtain job-seeking skills. Instructional staff work with students who are just beginning to learn English as well as students who have more advanced English skills. Classes are open to American citizens, permanent residents and refugees.

Civic literacy (citizenship) classes
Classes are offered to prepare and assist individuals who will be taking the oral exam necessary to apply for United States citizenship.

Intergenerational Literacy Program
This program, a cooperative effort with agencies that provide instruction to children, recognizes that the educational needs of parents and children must be addressed concurrently. The programs focus on three components: adult basic education for parents, an approved curriculum for children and a child development/parenting component.

Shelter Basic Skills Program
Through this program, adult basic education is provided at homeless shelters in the Madison area. Established links between shelter programs and the sponsoring campuses enable students to continue their educational programs after they leave the shelters.

Workplace Education Program
Workplace education programs are developed through a three-way partnership among businesses, labor and education. Basic skills instruction is provided on-site, utilizing job-specific materials at numerous companies throughout the district.

Institutionalized Adult Program
Through collaborative efforts with county jail and state correctional administrative staff, the program for institutionalized adults provides on-site basic skills and remedial instruction throughout the MATC District. Individualized, small group and/or computer-assisted instruction is provided through a learning center. When possible, information is provided to assist participants in transition to community educational programs.

Compulsory Education Program
Through this program, a student who is under the age of 18 and at risk of not graduating from his/her local high school may attend MATC in lieu of high school to complete either the high school diploma or obtain a High School Equivalency Diploma. It is necessary that the student, a parent, a representative from the local high school and MATC enter into a written agreement which defines the services that will be provided to the student.

Supplemental Services & Instruction
In addition to the academic programs sponsored by the Adult Basic Education Department, the following services are offered to students:

Tutoring
Tutors are available in all program areas as well as in basic skills. The division offers one-to-one tutorial services for students experiencing difficulties with their course work. The tutoring program is provided free of charge to students.

Special needs student services
Students with special needs, those with a learning or physical disability which may inhibit their academic success, can work with instructors and peer tutors to arrange basic skills instruction, test-taking accommodations, assistance in program areas, etc.

Basic skills testing
Assessment is offered in such basic skill areas as vocabulary, reading comprehension, math computational and reasoning skills, spelling, English grammar and English as a second language.

WHAT DOES MATC OFFER?
STUDENT SERVICES

Admissions

Admissions Requirements
Madison Area Technical College is open to all students who are capable of profiting from instruction. Postsecondary programs are open to: 1) applicants who have graduated high school, 2) applicants who have passed high school equivalency tests or 3) mature applicants who, through work experience, can prove that they are capable of mastering the subject matter. High school equivalency is interpreted to mean a passing score on all parts of the Wisconsin High School Equivalency Test or a passing result on the GED test. A photocopy of the GED test scores or Wisconsin High School Equivalency Test results is required in these cases.

For particular programs within the college, admission requirements may vary depending on aptitude for the curriculum, available student stations and a reasonable probability of academic success.

A current application form indicates admission testing policies. Specific examinations are required for certain programs. A student's application is evaluated on the basis of a combination of high school and other transcripts, work experience, entrance examination results and an interview, if it is deemed necessary.

It is possible for students to be concurrently enrolled in high school and in classes offered by Madison Area Technical College. In all cases, high school students must have parent or guardian permission. Costs for those attending in lieu of high school, under the provisions of Section 118.15 of the Wisconsin Statutes, are charged in accordance with the law.

Assessment & Orientation

Assessment
Many kinds of instruments are available to assess student interests, abilities, aptitudes, personality traits and values. The counselor and student decide which evaluation instruments are beneficial. Afterward the counselor explains the significance of evaluation results to the student. This information is kept confidential. There currently are no charges for these tests.

Entry placement test
The Assessment of Skills for Successful Entry and Transfer (ASSET) test is an American College Testing Program, which includes counseling, orientation and assessment of basic skills in math, reading and writing for course placement. The purpose of ASSET is to obtain information about your skills, plans and needs at MATC.

After your application and transcript are received, you will be scheduled for an ASSET test and a brief orientation session. To schedule classes students must first fulfill the assessment requirements through one of the following methods:

1. Complete the assessment test through MATC or another Wisconsin technical college.

2. Have an ACT composite of 18 or higher or an SAT score of 400 or higher on each subtest within the last three years.

Students may be exempt from the assessment requirement on the following basis:

1. Completing at least 12 credits from a post secondary school with a minimum GPA of 2.0 on a 4.0 scale.

2. Receiving a waiver from appropriate divisional staff (chairpersons, lead teachers, program directors) as designated by the dean, associate dean or chairperson.

Your social security number is required for testing. Test accommodations are arranged for students who have documented disabilities. At these test sessions, students receive a brief orientation to student services and campus resources.

Orientation
Orientation is also integrated with the registration process. After you are accepted into a program, you will be scheduled for an orientation and registration session. A general orientation for new students will include a review of campus policies and procedures, student services and campus resources. A program orientation will review program requirements, class selection and registration procedures.
Admissions Procedures

All of the following credentials must be on file in the Admissions Office before an application will be processed. Admissions does not accept faxed materials.

1. Fully completed application form. (Applicants may be considered for only one program and location at a time.)

2. Official high school transcript and/or GED scores (and post-high school transcript, when applicable).

3. List of senior subjects and credits if currently enrolled in high school.

4. Required test results as indicated for each program.

5. Applicants indicating a second-choice program will be considered only when denied admissions to their first-choice program.

6. Application fee of $25 in the form of a check or money order payable to MATC. Do not send cash.

Note: Applications will be considered on a first-come, first-served basis in compliance with Wis. TCS-10. Applications received on the third Monday in November (April) will be considered complete when applicants have had an opportunity to take the tests given by the college this year. The ACT (or SAT) battery should be taken on the first ACT (or SAT) testing date for the programs requiring this test.

Application Processing Dates

Applications will be considered as of the third Monday in November for the fall semester and third Monday in April for the spring semester. Applications received prior to this will be dated the third Monday in November (fall semester) or the third Monday in April (spring semester).

Applicants currently enrolled in high school must have completed six semesters prior to making application. A seventh- and eighth-semester transcript should be submitted upon graduation.

The closing date for applications is July 1 for the fall semester and November 15 for the spring semester.

Board policy mandates that qualified applicants are accepted on a first-come, first-served basis. If the number of qualified applicants with complete credentials on file on the first day of accepting applications exceeds the number which can be taken in a program/location, students shall be randomly selected by computer.

A $50 advance reservation fee is due within 15 days after the notification of acceptance or waiting list status. The receipt for this fee is assurance of a place in the program for which the applicant has been accepted or placed on the waiting list. This fee will apply toward regular fees at the time of enrollment. If the applicant cancels their acceptance and the Admissions Office receives this written notification by July 1 for the fall semester (December 5 for the spring semester), $30 of this fee will be refunded. If the applicant cancels their waiting list status the full $50 is refunded upon notification.

It is imperative that applicants inquire about specifics through the individual division offices where programs are offered, as program requirements are updated periodically.

You will be notified of enrollment procedures and times. Notify the Admissions Office of any address changes.

Health Forms & Physical Examinations

Barber and cosmetology students must pass the physical requirements set by the Wisconsin State Board of Health. All students in all health occupations and emergency medical services programs must show evidence of a physical examination and measles immunity prior to the beginning of the first semester. Their physician must mail examination results directly to the Health, Human and Protective Services Division. Forms are provided. Under no circumstances are students assigned to the clinical area until this requirement is met.

Specific programs in the Health, Human and Protective Services Division may also require or recommend that students be immunized against certain diseases, i.e., hepatitis. Vaccines are available at cost through the Health Services Office at the student's expense.

In the case of accidental exposure, the student is responsible for all costs, i.e., Hepatitis B vaccine, office visits and tests. There are no exceptions to this policy.

Due to the inherent risk of exposure to harmful agents and the requirements of some affiliating agencies, all students in the Health, Human and Protective Services Division are required to have health insurance coverage prior to their assignments to a clinical facility. The limits of such coverage must be at least as comprehensive as those of the student health insurance available through MATC.
Since individuals in Health, Human and Protective Services are subjected to varying degrees of physical demand and/or mental stress, and all students are expected to perform at a predetermined level of competency to be eligible for graduation, it is recommended that applicants who question their ability to meet these requirements consult with the appropriate program administrator.

**International Students**

Enrollment of foreign students (student visa required) at MATC is based upon the following:

A. International students under Section 38.14 of the Wisconsin statutes are considered nonresidents out-of-state for tuition and enrollment purposes.

B. Regulations and laws under the jurisdiction of Immigration and Naturalization Service (U.S. Department of Justice) are followed. Wisconsin Administrative Code TCS-I determines admission priorities in that out-of-state residents are given lowest priority. Consequently, enrollment is on a space-available basis only. Conditions of enrollment state that international students must:

1. Have an MATC District resident as a sponsor.
2. Sign an MATC training agreement.
3. Have a Test of English as a Foreign Language (TOEFL) score of 550 or better on file.
4. Have application and transcripts translated into English.
5. Apply for post-high school programs only.
6. After acceptance, deposit $7,000 in American funds to be used for tuition purposes only; upon receipt, an I-20 is issued.
7. Enroll full time (12 credits or more).

The maximum enrollment of international students shall be 10. This number is based on a) typical enrollments in the past and b) the heavy demand placed on counseling resources for international students.

**Transfer of Credits**

Students transferring from other institutions may have their records evaluated by the division dean/chairperson to receive permission to waive certain program requirements provided the courses being transferred are equivalent in nature and satisfactory grades were received. MATC will not accept any transfer courses for which the student has earned a grade below C (2.0 grade points).

At the discretion of the division dean/chairperson, students previously enrolled at other institutions of higher learning who are no longer acceptable for academic reasons at such institutions, or students who were on probation upon leaving such institutions, may be accepted on a strict probationary status for one semester. Such students must achieve a grade point average of 2.0 or better by the end of the semester in order to continue.

**College Transfer**

Students enrolled in College Transfer-Liberal Arts programs are limited to acquiring 72 credits.

**Registration & Records**

**Registering for Classes**

Registration for classes is conducted after students have been accepted into a program. Letters are sent to students about the specifics of registration. Phone-in registration is conducted separately for part-time students enrolling in degree and nondegree credit classes. These classes are listed in the MATC Timetable mailed to all district residents.

Registration is on a scheduled basis. New students who have been accepted into a program register during student orientation. Registration is scheduled by program and then alphabetically by student’s name. Continuing students are scheduled to register according to credits accumulated, not alphabetically.

Students are not permitted to attend classes without being officially registered. Registration after the semester has ended is not permitted. In the event of extenuating circumstances, permission to register must be obtained from the vice president of Instructional Services.

**Adding a Course**

Students who wish to add a course must follow these procedures:

1. For as long as a course is on “reserved” status, a student must obtain the approval of the division/department/campus office offering the course.
2. For all other courses, a student may register through the second week of the course on a space-available basis.
3. After the second week of the course, signature of the instructor and approval of the division/department/campus office are required.

**Auditing Courses**

A student may audit a course for no credit or grade with the consent of the division dean/chairperson. Selection of audit must be made at the time of registration. The same
fee is charged as if for credit. A student taking a course for audit may not change to credit, nor can a student change from credit to audit after classes begin without the permission of the dean/chairperson. The course is indicated as "Au" for audit on the transcript. An auditor must meet attendance requirements, participate in the classroom work and complete assignments, but may not take examinations. Audits may affect a student's eligibility for financial aid (including Social Security and veterans' benefits.) Students should check with the Office of Financial Aid.

**Attendance**

Students who will not be in attendance for their first class meetings must inform the appropriate dean/chairperson in writing. Extenuating circumstances arising on the first day of class which prevent attendance shall be made known to the department office. Failure to comply may jeopardize continued enrollment. Attendance is the responsibility of the individual student. In cases of absence, work must be made up by arrangement with the instructor. Missing a final examination without notifying the instructor and without having a satisfactory excuse will result in an automatic F on the examination.

**Program Withdrawals**

A student accepted into a program and enrolled in three or more credits who desires to withdraw from the program is required to schedule an exit interview with the division dean, a counselor or other designated personnel to complete the appropriate forms so that the student can be advised of the consequences of withdrawing from a program. (See Course Withdrawal and Refund Policy for refund payment due.)

**Course Withdrawals**

It is the responsibility of the student to officially notify the college in order to withdraw from a course. A student may telephone course withdrawals to the Office of Registration and Records and/or their department/division office. It is strongly recommended that a student who desires to withdraw from a course should discuss the withdrawal with his/her instructor. Students should be aware that in some programs withdrawal from certain courses may result in program withdrawal and/or a student's eligibility for financial aid. Students should contact their respective division/department office to clarify this issue. (See Refund Policy for refund payment due.)

Nonattendance does not constitute an official withdrawal and students will be held responsible for fees not paid. Financial aid applicants and recipients may have their refunds delayed depending upon their financial aid status.

Stop payment of a check does not constitute a formal cancellation. Registrants will be held liable for the fee until the date of official cancellation. Allow four weeks from the date of cancellation to receive a full refund of payment.

Withdrawals are not granted during scheduled final exam periods. A student who is absent 25 percent or more of the total scheduled class periods or for 16 consecutive calendar days (not class meetings), may be withdrawn from that class by the instructor. Re-admission is with the consent of the division dean or designee, and the instructor.

**Student Records**

**Access to Student Records**

Madison Area Technical College, to be in compliance with the Family Educational Rights and Privacy Act of 1974 (Buckley Amendment), considers the following to be directory information and may release such information to anyone who requests: name, address, telephone listing, date of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance (which includes credits enrolled in each semester), total credits completed toward a degree, dates of withdrawal from courses or programs, degrees and awards received, and the most recent previous educational agency or institution attended.

Students have the right to inform MATC that any or all of the above information should not be released without their prior consent. Students who wish to do this are to report to the Office of Registration and Records to fill out the necessary form revoking any or all of the public information listed. Revocation remains in effect until the student modifies it (including after the student has left the college).

In accordance with this act, students have the right to inspect, review and challenge the contents of their educational records and to request corrections to inaccurate or misleading data contained in their records, or to submit an explanatory statement for inclusion in their records if the outcome of a hearing is unsatisfactory.

Student educational records are maintained and kept in the Office of Registration and Records. All requests to review educational records must be made in writing. Review may
be immediate, but the Office of Registration and Records may take up to 45 days to honor requests if files are not accessible. If photocopies of records are requested, fees for copies are the same rate charged by the college library.

Records placed on hold for individual indebtedness to the college are not released until cleared of the obligation. No personally identifiable information from college records is disclosed by the college without each student's prior written consent, except when prior written consent is not required by the Family Educational Rights and Privacy Act of 1974.

Social Security Number
Social security numbers are used for identification of student records and are kept in strict confidence. Failure to furnish this voluntary number may delay processing and the maintenance of files while a number is being assigned.

Transcripts
The student's record is confidential and is not released from the college except by the signed request of the student. Each student is entitled to three free transcripts. A charge of $1 is made for each additional transcript.

Grading
Grades & Grade Reports
Grade Reports are issued at mid-term and two weeks after the end of each semester. Grade Reports are mailed directly to students if all financial obligations have been met. Grades are recorded at the end of each semester on a permanent transcript.

Incompletes
A grade of incomplete may be given if a student has done passing work and because of illness or major cause beyond the student's control fails to complete the course requirements. Incompletes must be made up by the end of the next semester or the grade will change to an F. No student is allowed to graduate without the removal of all incompletes.

When an incomplete is recorded in a semester, the calculations for the semester grade point average will not include either the credits for the incomplete, nor will any quality points be recorded for the incomplete. The incomplete will be shown on the transcript. For the purpose of calculating the grade point average the credit for that course will not appear in the total credits attempted or earned. When the incomplete is resolved, the calculation for the semester will be updated and a new Grade Report will be issued to the student.

Grade Point Average
Grade point averages are figured on a 0-4 scale with 4 credit points granted for an A, 3.5 credit points for an AB, 3 credit points for a B, 2.5 credit points for a BC, 2 credit points for a C, 1 credit point for a D and 0 credit points for an F or I.

If any course is repeated during continued enrollment, both courses are recorded on the permanent academic record. The lower grade is deleted and replaced with an asterisk (*). Only the higher grade is used to calculate grade point average.

To calculate your GPA, divide the total grade points received for one semester by the number of credits taken that semester. Example: you enrolled for 16 credits this semester and you receive 4 credits of A, 4 credits of B, 4 credits of C and 4 credits of D. Your grade points are (4x4) + (4x3) + (4x2) + (4x1) = 40 total grade points. Your GPA for the semester is 40 divided by 16 = 2.50.

All students are required to maintain a current and cumulative grade average of 2.0 (C average). If your semester grade average is less than 2.0, it is recommended that you make an appointment with your instructors, and if necessary, the program dean/chairperson to discuss your academic record. Achieving less than a 2.0 grade average at the end of a semester may result in probationary action according to the Academic Probation and Dismissal Policy.

Dean's List
Honor letters are sent to students and made public for those who are enrolled in at least six credits and who have completed a News Information Card. Cards will be kept on file for only one academic year. A new card must be completed each fall. Perfect honors are awarded to those students with a 4.0 grade point average; high honors are assigned to those students with a semester grade point average of 3.75 to 3.99; and honors are assigned to those students with a semester grade point average of 3.25 through 3.74.

Graduation
Students who anticipate graduating must notify their division office at least 45 days before graduation. This will ensure the inclusion of their names in the printed graduation program.

In order to provide the correct address for mailing the diploma, graduates must also complete a graduate card at the Office of Registration and Records. A schedule for completing graduate cards and picking up caps, gowns and announcements will be posted in the Student Bulletin.
Degrees, Diplomas & Certificates
Under the provisions of Chapter 51, Laws of 1961, the Wisconsin Technical College System authorizes local boards of vocational and adult education to grant vocational diplomas and associate degrees in the appropriate areas to students who successfully complete one and two years of post-high school technical level instruction.

Associate degrees are granted to students who successfully complete the two-year college transfer programs or the two-year technical programs.

Diplomas are issued to students who successfully complete one-year or two-year vocational programs.

Certificates may be issued to those who have completed special courses of study.

Associate degrees or diplomas are issued to students who complete the prescribed curriculum both in hours of attendance and in terms of achievement, participate in graduation exercises, have obtained satisfactory achievement (C or 2.0 grade point average) in their major field subjects, have maintained an overall C or 2.0 grade point average and are recommended by the department instructors and the dean/chairperson of the division.

Certificates of Completion are issued to students who complete all of their program requirements with a GPA of 2.0 or better in their major field subjects, but have an overall GPA of less than 2.0.

Certificates of Attendance are issued to students who complete all of their program requirements, but attain a GPA of less than 2.0 in their major field subjects. The overall GPA is of no significance for attendance certificates.

Associate degrees, diplomas and certificates are granted at the end of each semester and summer school. Students who receive incompletes or have other deficiencies to remove from their records are granted their associate degrees, diplomas or certificates at the end of the semester during which all obligations have been satisfied. Students who had terminated their attendance for a semester or more are required to meet the current graduation requirements of the program in which they re-enrolled.

Additional diploma/degree: Only one diploma/degree may be awarded at a semester commencement. To obtain an additional diploma/degree, the student must: a) meet all of the requirements of the second diploma/degree; b) meet the scholastic residency requirements; and c) acquire a minimum of 25 percent of the second degree/diploma credit requirements of new, additional credits in residence (for example, if the second program has 64 credits, a minimum of 16 credits must be taken in residence while meeting A and B above).

Exceptions: Any exceptions to these policies shall be approved in writing by the dean/chairperson of the division in which the program or second degree/diploma is offered (refer to Advanced Standing and Transfer of Credits).

Graduation Academic Honor Awards
Candidates for Graduation Academic Honor Awards must attain a program cumulative grade point average of 3.75. Graduating students become eligible in two-year programs by achieving a 3.75 cumulative GPA after completing 75 percent of the total program credit requirements. Graduating students in one-year programs become eligible by achieving a 3.75 cumulative GPA after completing 50 percent of the total program requirements. Candidates are designated on the graduation program and wear a white cord at the graduation ceremony. Final determination and the awarding of Graduation Academic Honor Award certificates include the graduates achieving a 3.75 after program completion. Students receive their certificates in the mail with their diplomas.

Absence from Graduation Ceremony
Deans/chairpersons may excuse only those students whom they consider to have valid reasons, such as illness, death in the family, military commitment or other justifiable excuses, from participation in the graduation ceremony.

Graduation Special Service Awards
Graduating students demonstrating extraordinary service to fellow students and the college are nominated for the Special Service Award. Nominees must be recommended by at least two faculty members. These nominees will have demonstrated leadership in student government, clubs and/or participated voluntarily in college-sponsored
educational or recreational activities. Nominees are submitted to the Awards Committee after approval of the division dean/chairperson. Selected students will be designated on the graduation program and will wear a gold cord at the graduation ceremony. A Special Service Certificate will be mailed with the student's diploma.

Scholastic Residency
Fifty-percent requirement: At least one-half of the credit requirements necessary for obtaining a diploma/degree in any program must be taken at the college.

Graduation requirement: The student must be registered in and satisfactorily complete current course work during the semester that the student is completing his/her program requirements.

Advanced Standing
A student may be granted credit toward a diploma or an associate degree by making application to the division dean/chairperson for transferring applicable credits from other institutions of higher learning (see Admissions-Transfer of Credits).

Students may also apply for experiential advanced standing credit. Such credit may be for previous work experience, previous military education or experience, and advanced high school courses comparable in content and level. At the discretion of the division dean/chairperson, the evaluation of such credit takes place by oral, written or performance testing, or by a combination of these.

During the semester in which a student has registered for a course, he or she may not request advanced standing by test-out without the permission of the division dean/chairperson. The decision to grant advanced standing rests with the division dean/chairperson.

Students currently enrolled in vocational diploma programs who wish to transfer to associate degree programs may request evaluation of their completed courses on the same basis as indicated above.

A student may appeal an adverse decision, in writing, to an Advanced Standing Appeals Committee composed of the vice president-Instructional Services, the registrar, the dean/chairperson of the division and an instructor of the particular instructional specialty. If the decision is adverse, the student may appeal to the president and the MATC District Board.

Credit for Experiential Learning
Students may earn up to one-half of the credits required for an associate degree through evaluation of their experiential learning. Credit may be given for learning occurring outside the classroom which is firmly related to a particular program and academic procedure. Giving credit for experiential learning refers especially to learning which occurs in work settings, communities or self-directed accomplishments emphasizing performance over concept. The applicant should contact the experiential learning advocate for guidance and aid in pursuing such credit. The office of the division dean/chairperson may also be contacted for further information.

Health, Human & Protective Services Special Academic Policies
Clinical Laboratory or Affiliations
A student may be withdrawn from the clinical component of a nursing course at any time there is a status of failure to provide a “standard of care” as established by course objectives, basic nursing competencies, affiliating agency agreements and the Rules of Conduct of the Wisconsin Administrative Codes, Rules of Boards of the Department of Regulation and Licensing. This withdrawal may result in failure of the course and is reviewed by the dean of Health Occupations.

The same policy applies to any other program which has a clinical component in any other department or division of the college requiring affiliations.

Other Health, Human & Protective Services Policies
Health, Human and Protective Services programs have other policies addressing immunizations; affiliation agencies and Department of Industry, Labor and Human Relations health requirements; incompletes; academic standards; and withdrawals. Students must check with the program or division regarding these policies.

Study Load
A full-time student in an associate degree program may take a maximum of 18 credit hours. In some programs in the vocational studies division, when the study is largely confined to the classroom or laboratory, up to 20 credit hours may be taken. A student who is carrying a 12-hour credit load or is in classroom attendance twenty periods per week is considered a full-time student.

Work Study or Clinical Affiliation Policy for Temporarily Disabled or Pregnant Students
A student enrolled in a program of the district which requires a clinical affiliation or work experience and who becomes temporarily disabled or pregnant, or who otherwise incurs a temporary physical condition, may continue to participate in the program until such time that a licensed medical professional, upon review of the program, determines that the student can no longer participate safely.
The student may return to the program upon the approval of a medical professional and as the schedule for clinical experiences permits. The college may require the student to obtain the certification of a physician or certified nurse-midwife that the student is physically and emotionally able to continue or resume participation in the program.

Financial Information

Fees
Current Fees
Information on current fees is published in each semester’s Timetable.

Advance Reservation Fee
An advance reservation fee of $50 is due within 15 days after notification of acceptance. The receipt for this fee is the student’s assurance of a place in the program or a place on the waiting list for the program in which he or she has been accepted.

If a student does not withdraw prior to classes commencing, the advance reservation fee applies toward program and material fees. Prior to the semester of entry, $30 of the fee is refundable if the student notifies the college of cancellation in writing before August 1 for the first semester and before December 6 for the second semester.

Credit Agreement Processing Fee
A nonrefundable $10 fee is charged for processing each fee agreement.

Field Trip Fee
The cost of field trips is paid at registration time. Refunds are not granted for nonparticipation in field trips unless the student officially withdraws prior to the field trip.

Graduation Fee
A graduation fee is paid by each student if he/she anticipates graduating at the end of the semester. Contact the Bursar’s Office, Room 145, for information. If the student is dropped for academic, medical or other reasons, or withdraws of his/her own volition, this fee is refunded upon request. Approval for nonattendance at graduation does not eliminate or reduce payment of this fee.

Late Registration Fee
New and continuing students in full-time, post-secondary programs who fail to register and pay their fees at the appointed time are charged an additional $20 late registration fee. This late registration fee is not applicable toward any other fees or charges and is nonrefundable.

Students are not permitted to attend classes without being officially registered. Registration after the semester has ended is not permitted. If facing extenuating circumstances, permission to register must be obtained from the vice president of Instructional Services.

Nonresident Fee
All out-of-state students and all foreign students are responsible for paying their own nonresident fee. In all cases, the individual student is responsible for proving his/her residency status.

Parking Fee
Students who wish to park at Truax or the Commercial Avenue Education Center will pay a fee for a student parking sticker. The cost of a student parking sticker is $3 per semester and $1.50 per summer session per vehicle. All students who apply for a parking sticker shall be charged an additional fee of $1 per credit. Fractions of credits shall be charged accordingly. Fees are payable at time of registration. See Parking on page 51.

Program & Materials Fees
Program and materials fees are established annually by the Wisconsin Technical College System according to Wisconsin state statutes.

Supplemental Fee
A supplemental fee is charged to all students enrolling in post-high school courses. The fee supports co-curricular activities and programming, including student newspapers, athletics, extracurricular arts, Student Senate, leadership programs, clubs and associations, the Programs and Activities Council and the Student Life Office. It is not refundable unless the college cancels the course or the student withdraws before classes begin.

Textbooks & Class Materials
Students purchase their own textbooks and class materials as required.

Transcript Fee
Students are entitled to three free transcripts. A charge of $1 is made for each additional copy.

Payment of Fees
All fees are payable after students receive an invoice. Registration is not complete until all fees are paid or a credit agreement has been arranged.

Credit Agreements
MATC will allow students to defer payment of semester fees upon completion of a credit agreement. A credit agreement is an open-ended charge account which shall comply with the Wisconsin Consumer Protection Act and the Wisconsin Marital Property Act.

The credit agreement shall be subject to the following rules and conditions:

1. The account shall be assessed a finance charge at the annual percentage rate of 12 percent (one percent

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monthly periodic rate) assessed on the balance subject to finance charges. The balance subject to finance charges is computed by deducting from the tuition and fee assessment all fee payments or credits of any kind made during the semester to the end of the billing period. (This balance is referred to as the "New Balance.") Finance charges will be assessed only on those accounts that are not paid by the due date. See 2.b.

2. Minimum payment schedule:
   a. $100 down payment on all tuition and fees assessed or other items or services purchased as part of the registration process. (Students receiving financial aid, who have a signed award letter on file in the Financial Aid Office, can have the $100 down payment waived.)
   b. The New Balance is due the last workday of the fourth week of fall and spring semesters. For the summer semester the New Balance is due on the last workday of the first week of classes.

3. Failure to sign a credit agreement and make the minimum down payment shall result in dropping a student from scheduled classes.

4. Obligations that can be placed on the plan include tuition and fees, or other items or services purchased as part of the registration process. The plan does not include books and/or supplies, or other items or services that are not part of the registration process.

5. An additional charge of $2 will be added to the account each month that the New Balance is not paid.

6. Students will be assessed a $10 processing fee for each semester they elect to pay installments.

7. A student may only defer payment if he/she is enrolling for three or more credits during a semester or summer session.

8. A student may not register for classes if he/she has any outstanding obligations to the district.

9. All records, grades and transcripts will be on hold until outstanding obligations to MATC are paid.

10. The Bursar's Office may revoke the credit agreement of any student who has not paid the account in full within two billing periods of the due date. Students whose credit agreement has been revoked shall not be allowed to establish an account for a period of one year from the time that all obligations to the district have been cleared.

11. Any financial aid students receive is applied to outstanding financial obligations to MATC before being disbursed to the student.

Failure to officially withdraw from classes per the State Board Refund Policy or being officially withdrawn from a class by an instructor for nonattendance does not relieve the student of his/her credit agreement obligation. No student shall be allowed to defer fees for any semester after the payment due date. See 2.b., above.

Exceptions to credit agreement rules and conditions can be granted by the financial administrator or designee based on extenuating circumstances.

Hold for Indebtedness
Records and registration are withheld for students who fail to meet financial obligations that are levied by the college.

Refund Policies
Refund Policy for Program, Material & Nonresident Tuition Fees
Students who plan to withdraw from a particular course should do so immediately. A single day can make a major difference in the amount of refund. Nonattendance does not constitute a cancellation of registration. Except in cases of cancellation or discontinuance of courses, or when the student is sponsored, the student must request the refund within the stipulated time period. In the event of extenuating circumstances students should consult with their divisional dean or a counselor.

The MATC District may establish a charge of not more than $3 per course to be deducted from any refund to defray processing costs. Financial aid applicants and recipients may have their refunds delayed depending upon their financial aid status.

Stop payment of a check does not constitute a formal cancellation. For stop payments, there will be a returned check fee of $15 and the registrant will be held liable for the fee until the date of official cancellation. Allow four weeks from the date of cancellation to receive a full refund of payment.

Refund Policy for All Courses
1. Late fees, supplemental and parking per credit fee portions of the total fee are not refundable, after the 100-percent period, unless the college cancels the course.

2. If the district cancels a course, the refund is 100 percent of all (program, materials and nonresident tuition) fees paid.

3. If the district discontinues or cancels a course during the 80-percent refund period, the refund is 100 percent of all (program, materials and nonresident tuition) fees paid. After this period or after consumable materials

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Courses which are scheduled to meet:

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<thead>
<tr>
<th></th>
<th>100% of total fees due</th>
<th>86% of total fees due</th>
<th>66% of total fees due</th>
</tr>
</thead>
<tbody>
<tr>
<td>A semester or longer</td>
<td>before class meets</td>
<td>first 14 calendar days of semester</td>
<td>15-28 calendar days of semester</td>
</tr>
<tr>
<td>Less than a semester</td>
<td>before class meets</td>
<td>less than 11% of hours</td>
<td>11-20% of potential hours</td>
</tr>
</tbody>
</table>

* See paragraphs numbered 1-5 for exceptions.

have been issued to students, the refund is a proportionate amount of the above fees paid.

4. If the student makes application for a refund before any of the classes which the student is scheduled to attend have begun, the refund is 100 percent of above fees paid.

5. A student who drops from one course and adds another during the first 14 calendar days of the term shall receive credit for all applicable program fees, materials fees and out-of-state tuition for the course dropped — which must be applied to the course added:
   a) If the applicable program fees, materials fees and out-of-state tuition for the course dropped exceed the fees for the course dropped, the student will be assessed the additional amount.
   b) If the applicable program fees, materials fees and out-of-state tuition for the course dropped exceed the fees for the course added, refunds will be made pursuant to Wisconsin Technical College System Administrative Code, TCS 10.08 and U.S. Department of Education regulations.
   c) In the event of extenuating circumstances students should consult with their divisional dean or a counselor. Requests must be received during the semester of enrollment or during the following semester, summer session excluded. Once a student is granted withdrawal for extenuating circumstances for all of their semester courses, withdrawal for extenuating circumstances will not be granted again.

Financial Aid

The financial aid program is administered on the principle that financial assistance should be viewed only as supplementary to the efforts of the family. Therefore, to determine need and make awards fairly, the parents of aid applicants are required to complete a financial aid application. In the case of a student who is clearly self-supporting in accordance with federal guidelines, eligibility is based on the financial resources of the student and/or spouse. All financial aid awards are based on the applicant’s financial need as determined by the Financial Aid Office.

Application Procedures

It is recommended that incoming freshmen apply for financial aid by April 15 of the year preceding their enrollment in school. Application forms and instructions are available from high school counselors or from the Financial Aid Office. Continuing or transfer students should also apply for assistance by April 15. Students who apply after this date will be considered for all types of aid, but some funds may not be available.

Students who have received assistance previously must reapply each year in order for the award to be renewed. Application forms and instructions are available from the Financial Aid Office.

To be considered for financial aid, the following information must be on file in the Financial Aid Office:

1. Pell Grant Student Aid Report: This report is received by the applicant after the Financial Aid Application is completed by the student and processed by the Federal Processing Center. The applicant must submit all parts of the Student Aid Report to the Financial Aid Office.
2. Copy of the student’s/spouse’s federal income tax form: In the case of a dependent student, a copy of his or her parents’ prior year federal tax form is required, in addition to the student’s prior year tax form.
3. Evidence that the applicant is enrolled in an approved associate degree, college transfer or vocational diploma program. Enrollment in courses without acceptance into an eligible program does not qualify a student for financial aid.

Types of Aid

Federal Pell Grant

This is a federal program designed to provide grants to students based on financial need. A maximum award is determined annually by federal guidelines. Grant awards become part of a student’s financial aid package. To receive a 100-percent award, the student must be enrolled in 12 or more credits. To receive a 75-percent award, the student must be enrolled in 9, 10 or 11 credits. To receive a 50-percent award, the student must be enrolled in 6, 7 or 8 credits.
Federal Supplemental Educational Opportunity Grant (FSEOG)
Federal supplements, as provided under the Higher Education Act, are available to students on the basis of financial need. The grant becomes part of the student's financial aid package. Students must be enrolled at least half-time.

Wisconsin Higher Education Grant (WHEG)
The amount of the grant is calculated by the Wisconsin Higher Educational Aids Board and is based on financial need. This grant becomes a part of the financial aid package developed by the Financial Aid Office. Students must be Wisconsin residents and enrolled at least half time.

Federal Stafford Loan
Students who are enrolled at least half time (6 credits or more) may be able to borrow up to $2,625 per year. Terms and conditions of loan programs often change. Contact Financial Aid for current regulations and procedures.

Federal Work Study
Under provisions of the Higher Education Act, employment opportunities are available to students on the basis of financial need. The amount they are eligible to receive becomes part of their financial aid award. Students must be enrolled at least half time.

Minority Student Grant Program
This program is designed to improve retention and increase graduation opportunities for second-year students enrolled in a two-year program. Students must have completed at least 24 credits to be eligible for the Minority Grant. Students must also show financial need and be enrolled at least half time (6 credits). The Minority Student Grant Program provides financial assistance to Black, Hispanic, Native American and Southeast Asian (Cambodian, Laotian and Vietnamese) students.

Native American Assistance Grant
Grants for Native American students are available through the Wisconsin Higher Educational Aids Board and the Bureau of Indian Affairs. The grant amount is based on financial need. Financial aid application procedures, as previously outlined, must be followed in determining financial need. In addition, a student must complete a separate Indian Scholarship Application for the purpose of certification by the Bureau of Indian Affairs as to the degree of Indian blood. A student must be enrolled full time to receive a Bureau of Indian Affairs Grant and half time to receive a State Indian Assistance Grant.

Talent Incentive Grant (TIG)
This program supplements the WHEG program and is targeted to serve disadvantaged and/minority students. Contact the Financial Aid Office for further information.

Veterans' Educational Benefits-Federal
To qualify for monthly educational benefits through Veterans Affairs, a veteran must be enrolled in an approved associate degree or vocational diploma program. Most programs of study at MATC are approved for veterans' benefits by the Wisconsin Educational Approval Board.

To be eligible for maximum benefits, a veteran must be enrolled in a minimum of 12 credits in an approved associate degree program or at least 22 hours per week in a vocational diploma program dominated by shop practice. For some programs, where classroom and theoretical instruction is dominant, only 18 hours per week may be required for full benefits.

Sons, daughters, spouses, and surviving spouses of deceased veterans, totally and permanently disabled veterans or MIA as a result of military service may be eligible for VA monthly educational assistance.

It is the responsibility of the student receiving veterans' educational benefits to notify the MATC Veterans' Service Office of any changes in enrollment status or withdrawal. Additionally, all veterans and dependents must make satisfactory progress in their programs of study. (See Veterans Affairs Reporting on page 50.)

Veterans' Educational Benefits-State
Veterans enrolled less than full time who entered the military service as residents of Wisconsin or who have lived in Wisconsin 10 continuous years, and who served during a qualifying wartime period, may be eligible, upon satisfactory completion, for reimbursement of tuition, fees and textbook costs. Contact a county veterans' service officer for additional eligibility criteria and application. Note that application must be made within 60 days after the ending of each course. Unmarried widows, widowers and minor or dependent children of deceased, qualified veterans enrolled less than full time, may also be eligible for this state reimbursement grant.

MATC Foundation
The MATC Foundation, established in 1973, operates for the purpose of aiding students and the college. Funds are provided by the generous contributions of alumni, staff, retirees, business, industry, foundations and friends. Short-term loans, grants and scholarships are available through

STUDENT SERVICES
the foundation. Information regarding scholarships is available by contacting the Foundation Office in the Administration Building. Deadlines for these MATC scholarships are the last Friday in September for first semester and the last Friday in January for second semester.

**Disbursement of Financial Aid Funds**

Grant and loan checks require two to six weeks for processing, depending on the source of the funds. Grant checks are disbursed once each semester, usually at the beginning of the term. When aid is ready to be disbursed, students will receive an authorization card by mail, advising them to report to the Bursar’s Office to pick up their check(s).

To receive aid, students will be required to produce: 1) an authorization card and 2) a picture identification card. There will be no exceptions to this policy. Under no circumstances will financial aid checks be disbursed before classes begin or after a student is considered withdrawn for nonattendance or other reasons.

**Conditions for Repayment of Grants**

Repayment of grant funds, as a result of withdrawal, is related to the terms and conditions of the fee refund policy. Continued eligibility for aid is outlined under Satisfactory Progress Requirements.

**Standards of Progress**

The U.S. Department of Education requires MATC to establish satisfactory progress requirements for financial aid recipients. The Department requires standards of progress to measure both qualitative (grade point average) and quantitative (number of credits earned) progress.

All courses the student is enrolled in will figure into the calculation of the standards of progress regardless of whether the student received financial aid when enrolled in those courses. Students who withdraw from MATC before completing their enrollment period will have their financial aid eligibility suspended unless the withdrawal is due to extreme circumstances. Students withdrawing from courses due to extenuating circumstances will receive a refund code of R4 for these courses.

**Duration of Financial Aid Eligibility**

The maximum credits in which a student must complete their education is:

1. Two-year programs (associate degree, liberal studies; and two-year vocational diploma): Students will be funded for 102 credits attempted.
2. One-year vocational diploma programs: Students will be funded for 48 credits attempted.
3. One-year vocational diploma – Barber/Cosmetologist Program: Students will be funded for 78 credits attempted.

All courses the student is enrolled in, including repeated courses, withdrawals, incompletes and noncredit remedial courses, will be counted toward credits attempted. The only courses which will not be counted as credits attempted will be courses assigned refund codes of R1 and R5.

Satisfactory academic progress will be calculated at the conclusion of the second semester of each academic year. The number of credits earned for the academic year will be divided by the number of semesters in which the student was funded in that year. This must equal at least 6 credits and the grade point average for the academic year must be at least 2.0. Failure to meet these two requirements will result in loss of financial aid eligibility.

Students receiving a Pell Grant who enrolled for less than 6 credits will have to complete all credits.

**Repeated Courses**

Courses that have been assigned grades and refund codes of I, W, N, R2 or R3 will not be eligible for funding if a student enrolls for these courses in a subsequent semester.

**Reinstatement of Financial Aid Eligibility**

Students whose enrollment at MATC was terminated (complete withdrawal) prior to the completion of the semester and/or students who fail to meet the grade point average and/or six credit per semester requirement will be reinstated when they complete an enrollment period earning at least six credits with an overall cumulative grade point average of 2.0 or higher.

Students must make a written request to the financial aid administrator for reinstatement of their financial aid. Students may also be required to attend academic counseling and submit an educational plan which has been approved by their counselor to the Financial Aid Office.

**Evaluation of Standards of Progress & Appeals**

Loss of financial aid eligibility may be appealed by the student. Such appeal must be placed in writing and submitted to the financial aid administrator within 30 calendar days from the time the student is notified that he or she has lost financial aid eligibility. The financial aid administrator will review the individual’s situation to determine continued eligibility.

A student may appeal the outcome of this determination. Such appeal must be made in writing to the Standards of Progress Review Committee within 30 calendar days from the time the decision was made by the financial aid administrator. The Standards of Progress Review Committee shall be appointed by the vice president—Student Services. A decision on an appeal shall not conflict with state or federal regulations.
Veterans Affairs Reporting

Student veterans who fail to obtain a satisfactory grade point average of 2.0 or better upon completion of their initial semester of enrollment, or a cumulative satisfactory grade point average of 2.0 upon completion of any given semester, are placed on academic probation. Failure to achieve a satisfactory grade point average of 2.0 or better for the subsequent probationary semester results in the student's name being reported to Veterans Affairs for unsatisfactory progress.

The reporting of unsatisfactory progress results in the immediate suspension of the affected student's educational benefits pending administrative review by Veterans Affairs.

Wisconsin Higher Education Bond Program

MATC is approved by the State of Wisconsin Department of Administration for participation in the State of Wisconsin Higher Education Bond Program.

Minority Student Services

Madison Area Technical College values diversity. The active recruitment and retention of minority students promotes the college's mission to provide innovative leadership in a changing global marketplace and to ensure accessible quality education to all current and prospective students.

The Minority Student Services Office provides an array of support services which include financial aid application assistance, registration and application assistance, educational and career planning, personal counseling, tutorial assistance and other referral services to meet individual needs.

Students should feel free to call or stop by the Minority Student Services Office located in Room 135A, Truax Campus, 246-6059. Students do not need to have a specific educational problem; the staff wants to get to know students and share information about available services.

Services for Students with Disabilities

Services are provided to assist students with disabilities to achieve their educational goals. The transition facilitator is available to assist disabled students.

MATC has telecommunication devices (TTYs) for the deaf, hard of hearing and speech impaired. These are located at the Information Booth at the Truax Campus (246-6663) and in room D117 at the Downtown Education Center (258-2454). In addition, most of the outlying campuses are TTY accessible.

Any entering student who has a diagnosed disability is encouraged to submit appropriate documentation, including test scores and evaluation measures, to the transition facilitator. This information will help instructors and counselors meet student needs.

Supportive services are provided to assist students with disabilities to overcome specific barriers and face the different challenges encountered during their attendance at MATC. Such services may include counseling, career exploration, interpreting for the deaf/hard of hearing, note taking, tutoring, taping of textbooks, and test-taking accommodations. Students are referred by the transition facilitator to the Adult Basic Education Department in the Adult Learning Division for tutoring, basic skills assessment and test-taking accommodations.

Accessibility to physical facilities and academic programs is stressed as part of the commitment to meet student requirements. Every effort is made to integrate students with disabilities into the mainstream of the college's vocational education programs.

MATC is committed to the belief that it is the right of all students to have an equal opportunity to acquire knowledge, gain social skills and develop personally. An informational handbook for students with disabilities has been prepared to acquaint people with general information about educational opportunities for MATC students.

Copies are available upon request in the office of the transition facilitator, and students should be familiar with its contents. The book provides a guide for students, including the availability of helpful services, the accessibility of campus areas, parking guides and several floor plans for campus buildings.

Affirmative Action

The affirmative action officer administers MATC's compliance with affirmative action guidelines. Refer to page 43 for MATC's discrimination and harassment policies.
Counseling Center
Students are encouraged to consult with professional counselors in the Student Services Counseling Center about any academic, career or personal problem. Since college students face important and often difficult decisions, they should feel free to make use of the counseling services at MATC. Students can be assured that they may work in a confidential relationship in which they may explore their aspirations, abilities, interests or other concerns they may have. The unique needs of each student are taken into account by the counselor.

Counseling services may include career counseling or guidance, academic advising, career information, assistance with academic and study problems, personal counseling or referrals and assessments. The counselor can help determine what services the student might access in order to promote a positive educational experience at MATC.

Students who are having academic difficulties and are considering dropping a course or withdrawing from school are encouraged to schedule an appointment with a counselor. It may be important to discuss the effects of decisions on future financial aid or educational plans.

The Counseling Center is located in Room 159 at Truax and Room D 107 in the Downtown Education Center. Counselors are also available at regional campuses. Call 246-6076 for an appointment.

Career Planning Resources
Career planning is an important step toward academic success and career satisfaction. Career planning resources are designed to help match students' abilities, interests and experiences with appropriate careers. Counselors can provide up-to-date career information and decision-making strategies.

Resources available are the Career Center (a self-paced center for career exploration, self assessment, career information, learning options and job search strategies), the Career Planning Program (a group assessment and career orientation program available to adult students, high schools and community groups), individual counseling, career planning groups, computerized career guidance programs and additional assessment instruments. Call 246-6076 for more information.

Other Support Services
Counselors and other Student Services staff provide assistance and support services to meet the needs of families, including special programs for single parents, single pregnant women and displaced homemakers. Call 258-2950 for more information.

Support services emphasize career exploration and development, economic self-sufficiency, training and general information necessary to enter or re-enter the work force. Support groups, study skills workshops and stress management seminars are also available.

Support services, including the Job Training Partnership Act (JTPA) programs and Minority Student Services, are provided. Call 246-6194 for more information.

Health Services
Health services are provided to enable students to maintain physical and emotional health. These services are staffed by a registered nurse, and a consulting physician who serves in an advisory capacity.

The primary function of Health Services is health education and counseling. Temporary treatment of minor illnesses may be administered under the medical directives of the consulting physician. First aid for injuries is provided during the hours Health Services is staffed.

All students are expected to be responsible for their own health care and insurance and to have a physician or clinic as their primary health provider. Health Services is designed to supplement the basic care students receive from physicians and dentists in their own communities. The MATC District does not assume responsibility for the payment of medical charges by the consulting physician, hospital or clinic.

Student Health Insurance Plan
A student health insurance plan covering accident and illness is available to students in full-time programs. Information and enrollment forms are available during registration and in the Student Services and Student Life offices.

Alcohol & Other Drug Abuse Prevention Program
MATC recognizes drug and alcohol dependency or abuse as major health problems, as well as a safety and a security problem. Some of these problems include:

- Diseases of the liver, brain, heart, pancreas and every other organ and/or system in the body;
- Depression, moodiness, disorientation and lack of inhibitions, which can lead to increased risk of accident, suicide and violent behavior including homicide;
- Difficulties with memory, concentration, attention span, abstract reasoning and the ability to process
perceptual information in a manner consistent with reality;

- Spontaneous miscarriage and fetal malformations including physical, cognitive and emotional problems which can be permanent; and
- The risk of addiction and its related physical, mental, emotional, social, legal, family and financial problems.

A student in need of assistance in dealing with such problems is encouraged to contact the Student Services AODA specialist or other district services. Conscientious efforts to seek such help shall not in themselves jeopardize any student's enrollment and will not be noted in the student's records. Help may be obtained anonymously and a listing of some of the community agencies which provide AODA treatment in this area is provided in a brochure entitled Alcohol and Drug Abuse Prevention Program. These and other informational brochures may be obtained from any campus library or any campus counseling office. Call 246-6076 for additional information.

Housing

Madison Area Technical College is primarily a commuter college. The Truax Campus is located near major highways and is easily reached from most parts of the district. Parking costs are modest. Buses from all parts of Madison connect at the Capitol Square — one block from the Downtown Education Center at 211 N. Carroll Street — and provide direct service from there to the Truax Campus.

For students who move to Madison, the college provides a housing information service.

Housing lists prepared each June and updated twice during the summer are mailed on request between June 1 and August 15. These lists are available in Student Services, Room 159, along with area maps, consumer information and housing consultation. A housing bulletin board is maintained throughout the school year.

Madison Area Technical College assumes no responsibility for inspection or condition of the premises or the terms of the leases offered. The City of Madison enforces a minimum housing code, a fire safety code and an equal opportunities ordinance.

Placement

The Placement Office provides assistance in securing part-time and full-time employment. Many students attending college need part-time work in order to earn money to defray expenses. Assistance is offered to help students identify job opportunities and develop appropriate job application skills so they may be successful in finding a job.

Employers contact the college in their effort to obtain qualified employees. The Placement Office works with faculty members to facilitate communication between employers and students. Notices of job opportunities received from employers are kept on file in the Placement Office, posted on bulletin boards, distributed to appropriate program areas and mailed to graduates and alumni registered for placement assistance. Graduates are encouraged to register with the Placement Office so they will be notified of job openings relating to their chosen fields. Placement reports, which include salary ranges for graduates, are also available.

Student Life

Get Involved!

Enjoy being a student at MATC by getting involved! The Student Life Office offers a wide variety of activities to enhance your experience at MATC.

Professionally speaking, Student Life provides opportunities to learn job-related skills, enrich classroom learning experiences, participate in extra-credit activities and develop leadership skills.

Personally speaking, Student Life plans dozens of events each semester for entertainment, growth and education.

The entire philosophy of the activities program can best be summed up in one word: involvement. Students may choose from dozens of areas, including music, athletics, drama, student government, clubs, publications, programming, networking groups and community service.

Studies show that experiences outside the classroom enhance the educational process. Students who participate in co-curricular activities gain valuable experience, knowledge and acquaintances that benefit them in the competitive job market.

Read on to learn how you can become involved in all that MATC has to offer.

Student Life Office

At Truax, Room 140 houses the Student Life Office. The office and staff at the Downtown Education Center are located in D237. The staff plans leadership conferences, Issues Series and Cultural Diversity Series programs, community service projects and other specialized programs.

The Recreation Center, Student Life Service Center, Student Senate, Programs and Activities Council, The
SLANT newspaper, student publications, child-care centers and student clubs and organizations are all part of Student Life. For information, call 246-6228.

MATC Events Beyond the Classroom

MATC Events Beyond the Classroom is a monthly publication produced by the Student Life Office during the academic year detailing the many programs scheduled by this office. Anyone at MATC can publicize an event through this publication, which is distributed with the student newspaper, The SLANT.

Hot Dates Calendar of Events

The Student Life Office publishes a calendar of events each year that is packed with information about programs and entertainment for the MATC community.

Cultural Diversity Series

The Cultural Diversity Series focuses on a different culture or region of the world every four to five weeks, featuring cultural exhibits, poster displays, speakers and performing groups, as well as music and art exemplifying the culture. Simulation cross-cultural activities are planned to further acceptance and understanding of other cultures.

Native American, Asian-American, African-American and Latino students all have active clubs and operate networking groups within the local community. Students interested in helping to plan cultural events or who know of groups or organizations who might like to help are encouraged to contact the Student Life Office.

Issues Series

The Issues Series encourages awareness of global issues, featuring displays, speakers and programs that change with each month's focus. Many instructors encourage students to get involved by giving extra credit for attending activities and by discussing similar issues during classes. Through involvement with these projects, students become aware of current issues, enriching the learning experience. Any students wishing to help plan issues programs and activities should contact the Student Life Office.

Cultural Diversity Series

<table>
<thead>
<tr>
<th>Culture</th>
<th>Month</th>
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<tbody>
<tr>
<td>Hispanic</td>
<td>September</td>
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<td>Asia</td>
<td>October</td>
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<tr>
<td>Europe</td>
<td>November</td>
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<td>Africa</td>
<td>February</td>
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<tr>
<td>Multiculturalism</td>
<td>March</td>
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<tr>
<td>Native Americans</td>
<td>April</td>
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Issues Series

<table>
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<th>Issue</th>
<th>Month</th>
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<tr>
<td>Survival Skills (AIDS, Stress, Time Management, Study Skills, Safety, Harassment, other college-life problems)</td>
<td>September</td>
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<td>Substance Abuse</td>
<td>October</td>
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<tr>
<td>Hunger/Homelessness/Poverty</td>
<td>November</td>
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<tr>
<td>Civil Rights/Racism</td>
<td>February</td>
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<tr>
<td>Women's/Men's/Family Issues</td>
<td>March</td>
</tr>
<tr>
<td>Environment</td>
<td>April</td>
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Student Development Transcript

The Student Development Transcript is the official document that details all areas of co-curricular involvement at MATC. The transcript includes all activities on file and verified through the Student Life Office. The Student Development Transcript is the best way to document participation in leadership, co-curricular activities and/or paraprofessional experience. It can be of great value when applying for a professional job or to a new college or program.

The Student Development Transcript is available through the Student Life Office. Involvement in student activities and professional associations outside the classroom help students gain valuable experience, knowledge and acquaintances that benefit them in the competitive job market. For information regarding the Student Development Transcript, please stop by the Student Life Service Center, Room 140D at the Truax Campus or the Downtown Student Life Office, Room D237 at the Downtown Education Center.

Professional Development

In addition to the Student Development Transcript, Student Life sponsors several events that focus on developing students' job skills. These include the MATC Job Fair, resume-writing workshops, leadership workshops and conferences, and lectures on professional topics.
Political Involvement
Opportunities are available for students to become politically involved in MATC, local, state and national issues. We encourage interested students to stop by Truax Room 140 for details.

Leadership Recognition Programs
MATC offers students a variety of leadership opportunities through involvement in professional clubs, the Programs and Activities Council, the Student Senate or numerous community service projects. Leadership training can give students a competitive edge in the job market and provide them with skills that help them succeed and advance in their careers. We recognize student leaders and their importance to the quality of life at MATC. The following is a summary of the awards available to outstanding student leaders.

Phi Theta Kappa
Phi Theta Kappa is an international honor society for two-year schools which recognizes and encourages scholarship among two-year college students. To achieve this purpose, Phi Theta Kappa provides opportunities for developing leadership and service skills, exchanging ideas and ideals in an intellectual climate, developing lively friendships between scholars, and stimulating interest in continuing academic excellence.

For more information on Phi Theta Kappa, stop by the Student Life Office, Room 140.

Academic All-American Team
The Academic All-American program commends scholarly achievements of students enrolled in America's community, technical and junior colleges. This award recognizes students who excel in the classroom; possess the intellectual curiosity to pursue academic, career and cultural enrichment outside the traditional classroom; show evidence of substantial development of talents in academic and technical education; and demonstrate the ability to share this development with others.

This national award is co-sponsored by USA Today, Phi Theta Kappa International Honor Society and the American Association of Community Colleges.

Entertainment & Recreation
The Student Life Office, in cooperation with the Programs and Activities Council and the Outdoor Recreation Club, offers a wide variety of entertainment, recreational and social activities for students. We invite students to get involved and help plan even more activities. These events include the spring picnic, winter and spring break trips, camping outings, ski trips, tournaments, a Brewers trip, and bicycle maintenance and cross country skiing workshops.

In addition, the Programs and Activities Council sponsors performances featuring nationally recognized acts. These events include comedians, musicians, magicians and dance bands. Many perform free over the lunch hour.

Announcements run in The SLANT, MATC Events Beyond the Classroom and the Student Bulletin.

Student Activities Board
Student activities are funded through the Student Activities Board. Its objectives are:

1. To establish criteria for the formal recognition of student groups and/or clubs as official college organizations which share in segregated funds.

2. To formulate guidelines for administering funds.

3. To examine annual applications and review, approve or deny in whole or in part, the budgets of activities' groups judged to be eligible to share funds.

4. To make judgments on the allocation of funds from segregated funds to those activities which qualify according to established guidelines.

5. To report recommendations to the MATC District Board through the president.

6. To administer all segregated funds responsibly.

7. To recommend other areas to be covered by the segregated funds to the MATC District Board.

For further information about the Student Activities Board, contact the vice president of Student Services.

The SLANT, MATC's Student Newspaper
The SLANT (Student Life and News Today), the college's student newspaper, is produced twice a month by MATC students for MATC students and staff. Editors, reporters, photographers, graphic designers, cartoonists and salespeople work together to keep readers informed about people, issues and events concerning MATC. Some staff members receive scholarships for their work and many others contribute articles, photographs and illustrations to The SLANT, which has a circulation of about 4,000. The SLANT is an excellent place for students to get experience for their resumes, articles and artwork for their portfolios, and to work together with an enthusiastic group to produce a quality newspaper. Independent study credit can be arranged. To find out more about getting involved, students are encouraged to stop by the newsroom in Truax Room 133 or call The SLANT Office at 246-6809 or The SLANT advisor at 246-6576.

Programs & Activities Council
The Program and Activities Council is a student organization that plans and coordinates a variety of student activities and entertainment programs for the MATC student...
body. PAC’s mission is to offer co-curricular programs to enhance students’ recreational, cultural, educational and social experiences.

Experience is not required to become a member of PAC. Through participation in PAC, students gain career-related experience. PAC members benefit from opportunities to develop time management, communication, organization and other leadership skills. Members strengthen their classroom learning in marketing, publicity, accounting, public relations, writing and other areas of study. Committee work enhances team-building abilities.

Many committee members become committee chairs and officers. The experience gained through any position held in PAC is a valuable asset when applying for work upon graduation. PAC’s Executive Council consists of the organization’s officers: president, vice president, treasurer, secretary and historian. PAC works hard to provide a wide variety of programs that will be of interest to MATC students.

Educational Forum programs present speakers and programs on various topics such as conflict/resolution, AIDS and safe sex, and politics. This committee also plans programs to celebrate cultural diversity.

Special Events include performances featuring comedians, magicians and other novelty artists. This committee also coordinates the Dessert Theater and the annual Spring Picnic.

Kidz Days are family-oriented programs for MATC students and their children, such as puppet shows, movies, storytellers and an Easter egg hunt.

Soundstage programs present musical artists in a listening atmosphere, highlighting such styles as folk, jazz, bluegrass, contemporary, a cappella, etc.

Members review tapes, videos and promotional materials from a multitude of artists and speakers and choose which entertainers to bring to campus. Students have the opportunity to talk with agents and performers, schedule and prepare for programs (reserve facilities, arrange transportation, accommodations, etc.), publicize events and coordinate the program.

PAC welcomes MATC students of all ages, interests and backgrounds. Being a member takes as much time as one wishes to put into it. To find out more about PAC, stop by the PAC Office or call 246-6722.

Student Senate
The Student Senate is the representative body for students enrolled in diploma or degree programs at the Madison College. This organization’s purpose is to represent the students’ voice in their student government, provide a liaison between administration and students and promote citizenship and leadership among student body.

The Student Senate, when possible, will include elected representatives from all degree and diploma programs. The Senate meets twice monthly to make decisions or recommendations on college policy, school activities, educational advancement, improvements to the college and lobbying for student rights and needs. Students carrying nine or more credits in post-high school programs who are subject to supplemental fees are eligible to run for a Senate seat. Senate officers are elected each spring to serve one-year terms. The Student Senate’s constitution and bylaws are available in the Student Senate Office, Room 130, 246-6107.

Student Senate Committee Representation:
- Academic Advising
- Affirmative Action/Anti-Harassment
- Charitable Campaign
- Enrollment Management
- Facilities
- Graduation
- Institutional Aesthetics
- Institutional Objectives
- Instructional Computer
- Joint Study Committee on Shortened Academic Year
- Legislative
- Minority Planning Committee
- Newspaper Publication Board
- In-Service/All-Staff Coordinating Team (Professional Growth)
- Public Information/Relations Advisory
- Safety Sub-Committee: Indoor Air Quality
- Student Rights and Responsibilities
- Transportation and Parking Committee

Community Service
Volunteer work at MATC includes the Bloodmobile, tutoring, voter registration, Santa’s Wish List, collecting food and money to fight hunger, and planning community involvement programs.

Each year the Student Life Office sponsors a Volunteer Fair that has included up to 40 community service organizations from the Madison area. The local organizations recruit students to their programs. This fair gives students and community organizations the chance to work together to promote volunteerism.

The Volunteer Center in the Student Life Office makes getting involved in community service a lot easier for MATC students.

Students interested in volunteering can browse through information and literature about many local service organizations. The information describes the agencies’ services, the people they serve, transportation, expenses, benefits and required training.
Club Advisor Directory

Networking Organizations

African Descendants Student Organization (ADSO)
Russell Brown ........................................ 246-6584
Alternatives
Sean Robinson .......................................... 246-6333
Asian-American Student Assn.
Lue Thao .................................................. 246-6587
Native American Student Assn.
Sandy White Hawk ...................................... 246-6109
Latino Student Assn.
Juan Morales ............................................. 246-6563
Special Needs Organization
Jerry Lamers ................................................ 246-6561

Special Interest Groups

Chess Club
James Johnston .......................................... 246-6539
Christians In Action
Gene Loomans ............................................ 246-6571
Drama Club
Roger Herian .............................................. 246-6524
Outdoor Recreation Club
Marsha Mann .............................................. 246-6163
Spanish Club
Jody Thrush ................................................ 246-6573

Program-Affiliated Clubs

Architectural Technology Club
Yaman S. Tari ............................................. 246-6852
Assn. of Civil Technicians
Fred Thomack ............................................. 246-6741
Biotechnology Student Assn.
Joy McMillan/Tiffany Nelson ......................... 246-6581
Believing In Kids (BIK)
Terry Thompson .......................................... 258-2392
Business Professionals of America
Tom Thompson .............................................. 246-6688
Connoisseurs Club
Maureen Egan ............................................. 246-6007
Data Processing Management Assn. (DPMA)
Rick Richards ............................................. 246-6620
Dietetic Technicians
Barb Hundt ................................................ 246-6319
Health Occupations Students of America (HOSA)
Sue Buboltz ................................................. 246-6110
Hospitality Management Assn.
Jack Hart .................................................... 246-6197
Interior Design
Kathy Wiggins ............................................. 246-6312
Marketing Club
Greg Chemak .............................................. 246-6486
Mechanical Design Club
Mark Durkee .............................................. 246-6743
Medical Lab Technicians
Mary Nelson ............................................... 246-6564
Optometric Technician Club (Spec Techs)
Lynn Konkel ............................................. 246-6557
Pharmaceutical Technical Club
Glen Hinz ................................................. 258-2384
Police Science
Al Whitaker ............................................... 246-6670
Post-Secondary Agricultural Students Organization (PAS)
Stuart Schlough .......................................... 246-6834
Radiography Club
Jami Skaar ............................................... 258-2478
Recreation Assn.
Peter Vlisides .......................................... 246-6695
Respiratory Care (Breath Savers)
Linda Thompson .......................................... 246-6686
Student Dental Hygienists Assn.
Mary Lou Masik .......................................... 246-6754
Student Assn. of Electron Microscopists
Glenn Boda ................................................. 246-6254
Student Midrange Users Group (SMUG)
Janice Weinberg .......................................... 246-6705
Student Nurse Club
Amy Smith .................................................. 246-6673
Student Occupational Therapy Assn. (SOTA)
Toni Walski ............................................... 258-2314
Vocational Industrial Clubs of America
Marilyn Kressin .......................................... 246-2407
Welding Specialists Assn.
Frank Juckem ............................................. 246-6828
Wisconsin Industrial Machinists
Bob Brown .................................................. 246-6866
Wisconsin Society of Architects
Jim Grenzow ............................................... 246-6742
Wisconsin Student Assn. of
Veterinary Technicians (WSAVT)
Kay Bradley ............................................... 246-6504

One-time volunteer opportunities also are available. They are posted on a bulletin board in the Truax Student Lounge and announced in the weekly Student Bulletin.

The Volunteer Center is housed in the Student Life Office, Truax Room 140, and is open daily from 8 a.m. to 4 p.m. Other information can be found in the library and the Downtown Student Life Office, Room D237.

Current Clubs on Campus

The Student Organizations Office is located in Truax Room 140. It provides office space, limited storage, publicity production, and meeting areas for recognized MATC student clubs and organizations. Clubs are encouraged to utilize the Student Organizations Office and meet with Student Life staff members for assistance.

STUDENT SERVICES
Club Council
This organization is comprised of MATC club advisors, student club presidents or their designees and the club activities coordinator. The entire group meets at least once a semester to discuss club-related business, issues and fund-raising activities.

MATC's clubs and organizations fit into three categories: networking organizations, special interest groups and program-affiliated clubs. The following is a brief description of each.

Networking Associations

African Descendants Student Organization
The African Descendants Student Organization concentrates on current issues that affect African descendants on campus and in the community. The organization sponsors events that provide positive recognition for the heritage of African descendants and socialize their members. The organization is comprised of student club advisors, student club presidents or their designees. All MATC students are welcome to attend these meetings. The organization sponsors events that provide positive recognition for the heritage of African descendants and socialize their members. The organization is comprised of student club advisors, student club presidents or their designees. All MATC students are welcome to attend these meetings.

Alternatives
Alternatives is open to all students of MATC interested in furthering the goals of the organization. The organization provides advanced knowledge and understanding of gay, lesbian and bisexual issues and concerns. The group lends support to gay, lesbian and bisexual students. Alternatives works with supportive MATC administration and the Student Life Office to promote sensitivity and respect for diversity in the MATC community.

Asian-American Student Association
The Asian-American Student Association is open to all students. Its purpose is to provide networking opportunities for Asian-American students. One of the focuses of this group is to reach area high schools and stress the importance of furthering the education of Asian-Americans. Students involved in the association provide education and information about their cultures to MATC students, faculty and staff.

Latin Student Association
The Latino Student Association strives to promote an understanding of Latino culture through cultural and recreational activities. The organization provides the opportunity for people interested in the Spanish language and Latino culture to meet and share their common interests. The club advisors strive to improve academic success for Latino students.

Native American Student Association
The Native American Student Association strives to bring the Native American population of MATC together. The members promote a positive image of Native people through education and shared experiences with the non-Native population. The association is a support system, academically as well as culturally, for all Native American students attending MATC.

Special Needs Organization
The Special Needs Organization addresses the needs of students with disabilities. Membership is open to all students and staff interested in advocating for the rights of citizens with disabilities. SNO is primarily concerned with: 1) facilitating the provision of services that meet the needs and interests of students with disabilities; 2) providing opportunities to foster social relationships among people with and without disabilities; 3) alleviating the societal myths associated with disabilities; 4) providing information and assistance during registration periods; 5) printing informational brochures regarding appropriate topics; and 6) disseminating information regarding state and federal legislation that speaks to the civil rights of people with disabilities.

Special Interest Groups
Chess Club
The Chess Club was formed to promote chess activity, to provide a structured environment in which to learn and play chess, and to promote chess as a serious sport at MATC.

Christians in Action
Christians in Action is a networking organization for students of all faiths. The group meets on a regular basis so members can share their feelings on the importance of faith and fellowship in their lives. The time and location of these meetings will be posted in the Student Bulletin at the beginning of each school year.

Drama Club
The Drama Club is open to all students at MATC. Its purpose is to encourage self-development techniques in acting and to participate in theatrical endeavors at MATC. Field trips to the Guthrie Theater in Minneapolis and a spring New York City theater trip are planned annually.

Outdoor Recreation Club
The Outdoor Recreation Club is open to all students interested in planning and participating in outdoor programs. The club offers a variety of seasonal trips for students and staff of MATC. Each fall, the club hosts a canoe trip down the scenic Wisconsin River. In addition, the club sponsors workshops throughout the school year.

Spanish Club
This club is for students studying Spanish and those interested in learning about the Hispanic culture. The purpose is to encourage an awareness of the diverse cultural, social and political aspects of the Spanish-speaking world.

Program-Affiliated Clubs
Architectural Technology Club
This organization consists of members of the Architectural Technology Program. The purposes of the club are to promote and practice leadership and citizenship, to promote public relations in the structural design and drafting fields, to keep abreast of trends, to gain an understanding of related fields, to promote educational advancement, and to promote fellowship and understanding among structural designers.

Association for Biotechnology Technicians
The purpose of this association is to promote biotechnology education and careers among biotechnology students. This association also stimulates networking among students, program graduates and persons employed in biotechnology.

Association of Civil Technicians
Civil technology graduates or students in good standing may belong to this club, which seeks to unite civil technicians, promote interest, provide education in this field and encourage citizenship and leadership.

Association of Electronic Technicians
Active members of this organization include students enrolled in the two-year electronics technology and the one-year electronic servicing programs. The purpose of the club is to promote the interests of members...
in a professional manner through field trips, recreational activities, speakers and job interviews. Up-to-date files are kept on prospective employers. Class reunions are also arranged with the help of the club.

B.I.K.
This club, which derives its name from "believing in kids," includes students in the child care and development program. The purpose of the organization is to encourage and practice leadership in the field and to promote the professional status of child-care workers. Activities include attendance at professional conferences, community service functions, fund-raising and social events.

**Business Professionals of America**
Business Professionals of America is a voluntary student organization supporting office education occupations. The organization is designed to develop leadership abilities and interests in the American business system and competency in office occupations. It is open to all MATC students, full- and part-time. Students who join become members of the Business Professionals of America on a national level as well as on state and local levels. As part of state and national conferences, students can compete in events related to their future chosen professions. The Torch Awards program offers recognition for service to the local, regional, state and national levels. The MATC Chapter of Business Professionals of America is involved in community service, service to the school, fund-raising, and social and professional activities.

**Connoisseurs Club**
This organization is open to any student in a culinary trades program. Activities of the club include special catering functions and annual statewide student organization competitive events, which give members the opportunity to practice their skills outside the classroom. Members also attend state and national restaurant conventions.

**Data Processing Management Association, MATC Chapter**
The MATC Chapter of DPMA exists to develop better understanding of the nature and functions of data processing by promoting sound general principles, improving technical methods, studying equipment, and assisting members in solving their individual problems. Members also hope to foster among students a better understanding of the vital business role of data processing, the proper relationship of it to management, and the necessity for a professional attitude and approach to understanding and applying these principles. The organization is affiliated with the International Data Processing Management Association.

**Dietetic Technician Club**
MATC's Dietetic Technician Club is open to any full-time or part-time student associated with the dietetic technician program. The club strives to promote career and professional development in the field of dietetics and human nutrition. Additional activities include related field trips and conferences, participation in community nutrition projects and the promotion of nutrition awareness among its members in the school and in the community. Members are strongly encouraged to join and follow the parent organization, the American Dietetic Association.

**Health Occupations Students of America**
Health Occupations Students of America is a statewide organization with a local chapter at MATC. It is dedicated to refining student skills and to community service. It is open to all students within Health Occupations. Students assist with the biannual Red Cross Bloodmobile Drive at MATC. In the spring, competitive health-related events are held statewide in the areas of medical terminology, medical spelling, extemporaneous speaking, job applications, CPR, first aid, medical assisting, operating room technology, dental assisting and nursing. National competitions are held in the summer.

**Hospitality Management Association**
The Hospitality Management Association is open to all MATC students, especially those involved in the hospitality management and tourism programs. The organization's purpose is to develop industrial awareness by building industry relationships. Funds raised by HMA are used by students to attend professional seminars held by organizations such as the Wisconsin Innkeepers and the Wisconsin Restaurant Association.

**Interior Design Club**
This club is an organization consisting of student members, part-time and full-time, who are enrolled in the Interior Design Program. Activities include providing enrichment through guest speakers and field trips. Social functions and community services are also included.

**Marketing Club**
This club is open to all MATC students, especially to those in marketing and business programs. The organization's purpose is to enable student members to develop professional skills and leadership abilities. The Marketing Club participates in several conferences during the year, including two state conferences and a national conference. The chapter allows members the opportunity to meet district business people by attending meetings of organizations such as the Sales and Marketing Executives of Madison. The Marketing Club is affiliated with the Wisconsin Marketing and Management State Association of the Delta Epsilon Chi Division of DECA.

**Mechanical Design Club**
Students in the Mechanical Design Club meet with new students and professionals in the design field to provide networking opportunities. The club sponsors several fund-raising events each year which allows them to attend mechanical design field trips.

**M.L.T. Electrolytes**
Membership in this club includes medical lab technician students. Its primary objective is to help raise funds for student activities. The club brings medical lab technicians students together and informs them of happenings in course programming that may be of interest.

**Optometric Technician Club (Spec Techs)**
This club consists of full- and part-time optometric technician students. The purposes are to promote interest and knowledge of optometry on campus and in the community, improve and advance education and qualifications in optometry, and engage in activities to further the dissemination of knowledge regarding the practice of optometry.

**Pharmaceutical Technician Club**
This organization includes all pharmaceutical technician students. Its purpose is to foster decision-making in a group setting while promoting pharmacies, proper use of medicine and poison prevention. Through various fund-raising activities, club members can attend conventions and visit pharmaceutical manufacturers.

**Police Science Association**
The purposes of this organization are to encourage understanding and cooperation among those engaged in academic and active law enforcement fields, to promote expansion of education and training, to actively engage in the elevation of law enforcement professionalism, and to allow for social communication among educators, students and law enforcement personnel.

**Post-Secondary Agricultural Students Organization**
This club develops and encourages student interest in agriculture/agribusiness and promotes involvement in club activities, including the Agricultural Machinery Service Technician competition and other PAS events at state and national conventions. The club also sponsors field trips to farm equipment manufacturing plants and national machinery shows. The club maintains contacts with ag-mechanics graduates by encouraging attendance at the annual alumni meeting. Other purposes of the club are to help students make occupational choices, to develop character and leadership abilities, and to encourage cooperation with students in other areas.

**Radiography Club**
Active members of this organization include students enrolled in the radiography program. The club's purpose is to assist members and to promote their interest in a professional manner through field trips, recreational activities and educational programs.

**Student Services**
Recreation Association (Rec Club)
This association is organized by the Recreation Services and Travel Services programs and is open to any student at MATC. The Rec Club plans, implements and evaluates special events such as the annual Spring Picnic Volleyball Tournament and the Brewers Trip. Funds raised by the Rec Club are used by students to attend professional workshops and conferences like the Wisconsin Parks and Recreation Association Conference, the State Conference and Governor’s Conference on Tourism. The Rec Club also promotes community service projects and the chance to socialize with fellow students.

Respiratory Care (Breath Savers)
The members of this club include all respiratory therapy students. The club’s purposes include fund-raising activities so that club members may attend educational conventions and other activities, informing the public of the value of respiratory therapy, providing communication between first- and second-year students, and helping to make learning fun.

Student Dental Hygienists Association
This organization is the student component of the National American Dental Hygienists Association. The activities are primarily professional in nature. As members, students are eligible to participate in any of the local, state or national meetings of the ADHA, and students receive the ADHA’s publication.

Student Association of Electron Microscopists
The Student Association of Electron Microscopists brings together MATC students for the promotion of microscopy by attending conferences and symposiums by professional microscopists. The students promote involvement in community affairs and the development of leadership skills throughout the school year. Each semester students have opportunities to attend and participate in microscopy conferences. Students also get the opportunity to visit industrial facilities and make professional contacts. The microscopy students are encouraged to join the Midwest Society of Electron Microscopists, Microscopy Society of America and Materials Research Society.

Student Midrange Users Group
The students in SMUG attempt to provide and expand professional access and promote communication between students in the computer information systems field. Students gain professional experience by scheduling speakers, attending MAM'SUG meetings and touring midrange shops.

Student Nurse Club
The Student Nurse Club is a local chapter of the state and national Student Nurse Association at the Reedsville and the Truax campuses. Members participate in conferences and conventions, hold state offices and participate in decisions made by state and national levels. The purpose of the Student Nurse Club is to promote awareness of nursing in the community, promote health education, become actively involved in the legislative process regarding nursing issues, and recruit and retain nursing students.

Locally, students have formed a “peer assistance” program to help incoming nursing students. They have demonstrated skills, screened for health problems and taught good health practices at MATC on open houses or health days. They discuss nursing with congressmen at Legislative Day at the Capitol. They also help at the blood banks and other community-related health events.

Student Occupational Therapy Association
This organization consists of students in any semester of the Occupational Therapy Program at MATC. The main purposes of the organization are to 1) promote leadership and citizenship among students; 2) promote interest in and knowledge of occupational therapy on campus and in the community; 3) improve and advance the education and qualifications of occupational therapists; 4) maintain communication with other OT students in the state and nation; 5) enhance understanding between technical and baccalaureate occupational.

Vocational Industrial Clubs of America, MATC Chapter
This club is open to all MATC students. Local VICA chapters affiliate with the national organization through their state associations. Students in the club develop their leadership abilities as they participate in educational, occupational, civic, recreational and social activities. This organization’s purpose is to promote high standards in personal ethics, workmanship and scholarship. MATC VICA participates in several conferences during the year, including a state Skills Olympics held in the spring. It encourages the students to interact with the district industry businesses and participate in at least two civic projects to benefit the community.

Recognition of Clubs
Every fall, MATC clubs and organizations must apply/reapply with the Student Life Office in order to obtain official recognition. Depending on the active status of the club, the group may be eligible for tentative or formal recognition. Forms are available in Truax Room 140. All clubs and organizations must be in accordance with the MATC Student Activities Board “Organizational Policies and Guidelines.”

Organizational Policies & Guidelines
1. Every student organization shall have at least one advisor who is a contractual member of the Madison Area Technical College professional staff.

2. All student organizations shall have their regularly-scheduled meetings on campus.

3. Student organizations shall not have discriminatory clauses, either overtly or covertly, which restrict membership on the basis of color, creed, religion, sex, age, national origin, disability or any other characteristics identifiable with a specific group of people. Student organizations must be in full compliance with Title VI and VII of the 1964 Civil Rights Act, Title IX of the Education Amendments of 1972, Governor’s Executive Order #9 and Executive Order #11246.

4. Student organizations shall not have secret or closed meetings.

5. Student organizations shall comply with all policies and procedures of the MATC District Board to include, but not be limited to, accounting, promotional and operational procedures.

6. Student organizations must have a minimum of 10 bona fide MATC student members before they will be recognized.

7. As appropriate, all students shall have the opportunity to participate in all activities.

8. Student Activities Board funds shall not be used for political or quasi-political purposes or for political parties, for the election of political candidates or for the furthering of political causes.

9. Student Activities Board funds may not be used for religious or quasi-religious purposes whether recog-
nized as established organizations, sects or denominations, or whether personal or nonorthodox.

10. To request funds, an organization must be a formally recognized organization as per the criteria set forth by the Student Activities Board.

11. Each student organization must register all on-campus and off-campus events and programs with the Student Life Office. In addition, all student organizations must file a year-end report detailing their programs for that past year on or before the end of second semester.

12. Organizations may be disciplined as necessary by the Student Activities Board for reasons such as the following:
   a) Failure to comply with the policies set forth;
   b) Failure to annually renew active status;
   c) Failure to comply with district board policies and regulations; or
   d) Fiscal irresponsibility.

Tentative Recognition
An application must be completed by new clubs who wish to become officially recognized at MATC or for existing clubs who do not request funding from the Student Activities Board. New clubs must be active and have Student Life approval for at least one year before applying for formal recognition.

Formal Recognition
An application (or renewal) must be completed by all clubs who are eligible for this status. Each club must submit an updated constitution which includes name, purpose, operating procedures, membership requirements and basic structure of the continuing organization. Clubs must maintain their active status and have Student Life approval to be formally recognized.

Club Monies
Formally recognized clubs are eligible to request club support funds for fund-raisers and service programs through the Student Life Office. Clubs must fill out the “Request for Club Activities” form and meet with the Student Life administrator/designee prior to obtaining approval. All of these activities must be open to all MATC students. Clubs are encouraged to apply for funds by the fall deadline date in order to secure desired dates and funding for the entire school year.

Formally recognized clubs are also eligible to request funds for conference travel as outlined in the Club Council’s conference guidelines and in accordance with the Student Activities Board’s constitution and bylaws. All travel request forms obtained through the Student Life Office must be submitted to the Student Life administrator for the entire school year with the club’s anticipated registration and transportation costs by the fall deadline date.

The executive committee of the Club Council will review all requests and determine how the budgeted money will be allocated to the clubs. At the end of each semester, the clubs must submit travel request forms with the actual costs, numbers and names of student delegates, receipts and conference programs, to the Student Life Office. The appropriate funds will then be reimbursed to the clubs.

Club Accounting
The Financial Operations Office, located in the District Administration Building, maintains a special funds accounting system to keep track of the financial transactions of all student clubs and organizations. Clubs or organizations must maintain their accounting through this system. No individual checking or savings account should be maintained for any club. If it is found that any club or organization is not using the authorized accounting system for their financial transactions, it may result in disciplinary action being taken against the club advisor.

The special funds accounting system is maintained for the protection of both the district and the club advisors. Transactions must conform to district guidelines and policies. At the end of each fiscal year, club funds are included as part of the district audit.

Club Sales
All recognized MATC clubs have the opportunity to sell popcorn, baked goods and other items in sales areas located in the cafeteria. Club representatives may reserve sales areas by making arrangements at the service center. A club may reserve an area no more than three times per month and only once in a given week. After a club has completed its three sales days, it is eligible to sign up for three additional times. A table permit must be issued. Special arrangements for clubs located downtown may be made with the Student Life staff in Room D237. Clubs cannot bring commercial businesses on campus to sell for them, and the sales area must bear the name of the sponsoring club.
Athletics & Wellness
MATC athletic programs are designed so that all interested men and women have the opportunity to participate.

Intercollegiate Athletics
MATC is a member of the Wisconsin Technical College Conference (WTCC), the Wisconsin Junior College Athletic Association (WJCAA) and the National Junior College Athletic Association (NJCAA). These groups are the governing bodies which determine rules, regulations and eligibility standards for student athletes. You must be a full-time student during your season of participation. Other rules do apply. The following sports are offered:

<table>
<thead>
<tr>
<th>Men</th>
<th>Women</th>
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</thead>
<tbody>
<tr>
<td>Baseball</td>
<td>Basketball</td>
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<tr>
<td>Basketball</td>
<td>Bowling (Club)</td>
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<tr>
<td>Bowling (Club)</td>
<td>Cheerleading</td>
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<tr>
<td>Cross Country</td>
<td>Cross Country</td>
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<tr>
<td>Golf (fall &amp; spring)</td>
<td>Softball</td>
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<td>Tennis</td>
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<td>Track &amp; Field</td>
<td>Track &amp; Field</td>
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<tr>
<td>Volleyball (Club)</td>
<td>Volleyball</td>
</tr>
<tr>
<td>Wrestling</td>
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</tbody>
</table>

For further information, stop in the Athletic Director’s Office, Room 200, or call 246-6098 or 6099.

Intramural Sports
Intramural programs are open to all MATC students enrolled in one or more degree credits. Information on sports and weekly events is found in the Student Bulletin and other student publications. The following sports are offered:

- Basketball (5-on-5) Winter
- 2-on-2 Basketball Spring
- Coed Bowling Fall
- Coed Softball Spring & Fall
- Coed Volleyball Winter
- Fitness Week Fall
- Coed Soccer Fall
- Super Hoops Winter
- Monthly Special Events

For further information, stop in the Intramural Office, Room 112A, or call 246-6093 or 6699.

MATC Wellness Center
The Wellness Center provides students with recreational opportunities as well as promoting fitness. Any student enrolled for degree credit is eligible to join.

Indoor facilities at Truax include a gymnasium with basketball, volleyball and badminton courts; a running track; a six-lane swimming pool; three racquetball courts; and a weight training room. Outdoor facilities include basketball and volleyball courts, softball and baseball diamonds, tennis courts and soccer fields.

Services include tournaments, aerobic classes, aquatic programs, the use of lockers and showers, and individualized fitness programming (personal trainer).

Fees are $45 for a semester membership or a daily fee of $2. The Wellness Center is self-supporting with fees going directly to pay the staff. (Fees are subject to change.)

Downtown Education Center facilities include a gymnasium, weight-training room, aerobic exercise equipment and locker rooms with showers. Fees are $25 per semester or $1 per day. This membership is not transferable to the Truax Campus.

For more information, stop by the Wellness Office, Room 112A, or call 246-6093.
STUDENT RESOURCES

Alumni Association
The MATC Alumni Association, located in the Administration Building, promotes activities for more than 40,000 graduates of the college. Alumni provide an excellent resource for students seeking jobs. Their financial contributions to the MATC Foundation have assisted many individuals in completing their education. Alumni receive regular communications from MATC, and their feedback is solicited to ensure that curricula are current and appropriate for today's jobs and for the jobs of tomorrow.

Auto Parts Sales
Auto Parts Sales stocks and acquires parts and supplies for the automotive and diesel shops' projects. Also carried are electronics kits and accessories, safety equipment, and hardware. The service is open from 7:30 a.m. to 6:30 p.m., Monday through Friday at the Campus. Staff and students are welcome to use this service.

Barber/Cosmetologist Services
The Barber/Cosmetologist Program, located at the Downtown Education Center, offers all hair, skin and nail services under instructor supervision. These services and others are available to students, staff, faculty and the public. Hours are Monday through Friday from 12:30 to 4 p.m. For appointments call 258-2404.

Bookstores
MATC bookstores sell necessary books and supplies to students and staff at a price which represents cost plus approximately 20 percent and freight. This gives students a discount and still covers the losses from unsold and defective materials. Because the bookstores are nonprofit units, they cannot afford the risks of dealing in used books. Books may not be charged and checks are accepted only in exact amount of payment. To obtain a refund or to exchange books, the books must be returned within 10 days of purchase with a cash register receipt and MATC price tag. Books must be completely unmarked and in new condition. The bookstores also sell Madison Metro Bus passes.

During the academic year, the Truax Bookstore is open from 7:30 a.m. to 7 p.m. Monday through Thursday and 7:30 a.m. to 4 p.m. Friday. The Downtown Education Center bookstore is open from 9 a.m. to 4 p.m., Monday, Thursday and Friday; and noon to 7 p.m. Tuesday and Wednesday.

Used Book Sale
The Used Book Sale at the Truax Campus is a service provided to all MATC students by the Marketing Club. Students can sell their textbooks on consignment or by the wholesale process. Textbooks sold via the wholesale process are those that have been dropped from MATC staff use but are still-current editions. Students may also purchase used textbooks at a reduced price.

The Used Book Sale Office, located in rooms 1401, 141A and 141B, usually begins collecting books for sale during the final exam week of each semester. Check the Student Bulletin or Used Book Sale Office for details on dates and hours of operation. A brochure which describes how the Used Book Sale operates is available in Rooms 1401 or 141A/B.

Child Care
MATC recognizes that accessible, affordable, high quality child care is paramount for student parents and staff to be successful in their educational and professional pursuits. To that end, child-care centers are operated at the Truax and Downtown campuses. Both child-care centers are certified by the city of Madison and licensed by the State Department of Health and Social Services. A parent advisory committee makes recommendations to staff regarding programming and policy.

The Child and Family Centers provide care for children ages 2 through 7 years. The centers also serve as model centers for the two-year Child Care and Development Program and are observed by continuing education students taking certification courses in child care.

For information on registration, fees and hours of operation, parents may contact the centers directly: Truax, 246-6766; Downtown, 258-2424.

Communications
Students may keep current with campus happenings, activities and policies by referring to the following media:
**MATC Catalog**

Published every year, the *MATC Catalog* includes services, resources, policies and procedures, as well as complete program and course offerings. It is available from division and department offices, and in the Student Services area, Room 159. Curriculums may change at any time to assure that instruction is keeping pace with changing technology and workplace requirements. Contact department offices for most current information.

**MATC Timetable**

The *MATC Timetable*, published each semester, lists the current schedule of course offerings as well as fees. It is available in racks on all campuses and from the Office of Registration and Records, Truax Room 159.

**The SLANT**

The *SLANT*, MATC's student newspaper, is published twice a month during the academic year and distributed in racks on all campuses. The newspaper welcomes contributions by student writers, photographers and artists.

**MATC Events Beyond the Classroom**

**MATC Events Beyond the Classroom** is the Student Life publication that includes information on special programs, as well as feature articles on Cultural Diversity, Issues Series and other topics. It is distributed with *The SLANT*, the student newspaper, on all campuses. Stop by the Student Life Office for details.

**Student Bulletin**

The *Student Bulletin* is published each Monday during the academic year. Meeting notices, important communications to students and new policies are among the items included in the *Student Bulletin*, which may be found in wall racks throughout all campuses. Students who wish to submit items should contact the student publications specialist in the Student Life Office, Truax Room 140.

**Bulletin Boards**

Bulletin boards are located throughout district facilities for posting purposes. Separate bulletin boards are designated for recognized student clubs, approved student activities and individual students and staff. The locations of these bulletin boards and posting procedures shall be made known to interested parties by each campus or center administrator.

**Computer Labs**

See Microcomputer Labs, page 40.

**Cracker Barrell**

The Cracker Barrell is a small shop located within the college. It is operated by fashion marketing students and serves MATC students, staff, faculty and nearby residents. Store image is projected throughout - in the decor, customer service and merchandise available. Students design the decor each year, establish the image, create the promotional materials and buy and sell the merchandise, which varies each season. A customer usually finds a good selection of gift items, candy, greeting cards and note papers, bath products, office items, jewelry, CDs and tapes, tote bags, wicker, and plush animals. This unique little shop serves as a laboratory for fashion marketing students and provides the opportunity to try out theories and facts learned in class.

**Dental Hygiene Clinic**

The Dental Hygiene Clinic, located on the fifth floor of the Downtown Education Center, is a teaching institution where dental hygiene students perform oral prophylaxis (cleaning) and other dental services such as x-rays, study models, topical fluoride treatments, sealants and oral hygiene instruction. These services are available to all students of the college for a small fee. For information you can call 258-2400.

The service cannot be construed as a complete dental and oral examination. The interpretation of x-rays and the diagnosis of dental defects are not the purpose of this clinic, but the information obtained by the dental hygiene student is available to the patient's dentist upon request. A dentist makes the proper interpretation of any diagnostic material as required by state law.

**Food Service**

Students and staff of Madison Area Technical College are invited to patronize the college food service facilities, operated by the Culinary Trades Department at the Truax and downtown locations.

The *Cafeteria* at Truax features breakfast items, baked goods, sandwich and salad bar, soups, various entrees and accompaniments, desserts and beverages.

The *Snack Bar* offers typical fast-food fare during the lunch hour.

The *Gourmet Dining Room* features gourmet luncheons on Tuesdays and Thursdays throughout the school year. Reservation tickets are available from the cafeteria cashiers usually up to two weeks prior to each service date. Call 246-6369 for information.

The *Retail Bake Shop* is located across from the Cracker Barrell. Current semester hours are posted at the Bake Shop and in the student and staff bulletins.

The *Downtown Carroll Street Cafe* features a limited hot food menu selection, as well as a salad and sandwich bar, desserts and beverages.

MATC Food Money Coupon Books are available for purchase from the cafeteria cashiers at the Truax and downtown locations. These books contain $25 worth of coupons that can be used at any of the Culinary Trades Department food service facilities.

**STUDENT RESOURCES**
In addition to these dining facilities, there are commercial vending areas throughout the buildings. Direct problems or comments regarding the vending machines to the Bookstore.

**Information Resource Centers (Libraries)**
MATC’s six libraries, the large main library at Truax and five information resource centers at Downtown, Watertown, Fort Atkinson, Portage and Reedsburg campuses, provide services and collections tailored to MATC students’ academic library needs.

MATC libraries offer 600 magazines, 70,000 books and a growing number of computerized indexes and full-text databases to help students efficiently locate needed information. Computer catalogs and delivery service connect all centers to provide students with fast access to titles in all collections. In addition, we now have access to the computer catalogs of UW-Madison, Madison Public Library and many other state libraries, and can borrow materials from these libraries for our students. To help our students use these resources, all locations provide individual assistance and class orientations to collections and services.

The libraries also provide special reserve collections of materials assigned by instructors. In addition, Truax features several special collections: career and job search materials, college information, and a small recreational collection of books and videos, dubbed “Quick Picks” by our student assistants.

The Truax library also provides ample room for studying, including group study rooms, and houses a microcomputer laboratory, a drop-in tutoring service (the Learning Center) and several photocopiers.

**Lost & Found**
Lost and found items are kept at the Truax Information Booth or in Room D117 at the Downtown Education Center.

**Meeting Rooms**
Reservations for meeting rooms and/or rental of facilities must be approved by the campus administrator at all sites except Truax. Call the Truax Facilities Office at 246-6263 for reservation information.

**Microcomputer Labs**
There are many microcomputer resources available for student use. At the Truax Campus, the Information Resource Center has IBM and Macintosh microcomputers available on a sign-up basis. Open times are available in other labs depending on classroom requirements. Check the schedule posted in the various labs for open times. At the Downtown Education Center, students may use the microcomputers available in the Information Resource Center.

**STUDENT RESOURCES**

**Music**

**Jazz Ensemble**
MATC’s Jazz Ensemble has become one of the top jazz groups in the state. From the premiering of new, original jazz works to its featured performance with Maynard Ferguson and his band, the Jazz Ensemble has drawn enthusiastic support from Wisconsin’s jazz buffs. Membership is by audition.

**Community Show Choir**
The Community Show Choir is dedicated to singing popular music, such as Broadway, motion picture and rock. It is open to anyone in the Madison community without an audition.

**Community Jazz Band**
The Community Jazz Band is an adult Big Band jazz ensemble made up of MATC students and members of the community. The group rehearses and performs music from the best jazz composers. No audition is required.

**Optical Dispensary & Vision Screenings**
The Optical Dispensary, located in Room 314 at the Truax Campus, is operated by optometric technician students under instructor supervision and serves students, staff and faculty. Free-of-charge services include adjustments and minor repair of eyewear, and complete vision and eye health screenings, which determine whether an individual requires further eye care from a vision specialist. Vision screenings are available by appointment only. Students and staff may also purchase dress and safety glasses from the newly expanded optical dispensary. Hours for the optical dispensary and vision-screening services are posted each semester and listed periodically in the student and staff bulletins. Call 246-6557 for vision screening appointments or 246-6272 for dispensary hours and information.

**Student Life Service Center**
The Student Life Service Center provides these services: assistance for club fund-raising, balloon bouquets, envelope sales, one-day photo developing, locker rentals, pho-
tocopies, stamps and theater tickets. The center also has information regarding student activities and the Student Development Transcript.

**Recreation Center**
The Recreation Center is a hub for student activity between classes. The Center offers an extensive line of fast food. Entertainment includes three television sets, pool tables, video games and board games. The Recreation Center employs 20 student help and one Rec Center intern. Tournaments are offered on a semester basis.

**Telecommunications**
Telecommunications manages and coordinates video courses, teleconferences, video production and the MATC microwave distribution system.

**Telephones**
Public telephones are located in the corridors throughout college buildings. School telephones are not available for student use. Except for emergencies, messages for students will not be accepted or delivered. The Information Booth is open for incoming calls from 7:30 a.m. to 10 p.m., Monday through Friday. At all other hours, recorded announcements concerning registration, approaching vacations, etc. may be obtained by calling 246-MATC.

MATC TTY/TDD numbers are 246-6663 for Truax and 258-2454 for Downtown.

**Theater**
The Mitby Theater is a state-of-the-art performing arts facility that seats 986 people in a continental seating style. Capable of hosting Broadway shows, lectures, teleconferences and concerts, the theater is used by student performing groups, business and industry, community arts organizations and professional touring artists.

The Mitby Theater Performing Arts Series has 10-12 events throughout the school year. Student tickets to these events are half the general public price. Students are welcome to participate in theatrical offerings, either on stage or in the wings. Stop by the Mitby Theater Box Office (located in the north west hallway) for information on how you can be part of the action. To get tickets or information for theater activities call 246-6006.

**Travel Center**
The Travel Center is a full-service travel agency operated by travel services students. It is open to the public and offers competitive rates for leisure, business and group travel.

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**STUDENT RIGHTS & RESPONSIBILITIES**

**Student Code of Conduct**
MATC is a tax-supported institution which serves a large student body, many community groups and a large number of visitors. It is important for the school and its students that the conduct of all students be governed by a reasonable set of rules and that these rules be enforced. Accordingly, each student is expected to comply with the general standard set out below and to be familiar with all rules and regulations of MATC.

The following principles and rules apply to all students of Madison Area Technical College:

1. Students are expected to comply with all statutes and ordinances.
2. At all times, students are expected to conduct themselves in such a manner as not to interfere with the educational process at MATC.
3. Students are expected to conduct themselves in such a manner as not to endanger the safety or welfare of their fellow students.
4. Students must comply with the following school rules and may be suspended or expelled or be liable to legal procedure as may be appropriate for the following offenses:
   a. Obstruction or disruption of the normal operations of MATC or activities authorized by MATC.
   b. Physical or verbal abuse or detention of any person(s) on MATC property or at MATC activities when such endangers the health, safety or rights of such person(s).
   c. Theft or damage to property of MATC or property of any visitor or member of the MATC community.
   d. Unauthorized entry to or use of MATC property or facilities.
   e. Use, possession or distribution of narcotic or illegal drugs, firearms, explosives, dangerous chemicals, etc. on MATC owned or controlled property or at MATC sponsored activities.
   f. Dishonesty (cheating, plagiarism, etc.) or knowingly furnishing false information to MATC.
   g. Gambling as defined by law.

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**STUDENT RIGHTS & RESPONSIBILITIES**
Any violation of a MATC rule or policy may serve as a basis for one of the following actions: As a first step, a violation will be reported to the president of MATC or his/her designee who will determine what, if any, disciplinary action is appropriate.

The president or his/her designee may temporarily suspend a student pending an investigation when the student's continued presence might endanger the student or others.

If the president or his/her designee determines that suspension or dismissal is appropriate, disciplinary action shall follow the Nonacademic Probation or Dismissal policy.

Note: Students enrolled in the Police Science Program must also comply with the standards as established under Wis. Administrative Code, Law Enforcement Standards Board 3.01(d) (Law Enforcement Code Ethics). Police science students failing to recognize these standards may be withdrawn from one or more classes in the program at any time.

Probation & Dismissal
The District Board has several policies under which a student may be dismissed from the college:

1. Academic Dismissal: A student may be dismissed from a program for failure to achieve a 2.0 grade point average. (See Academic Probation and Dismissal.)

2. Code of Conduct: Students failing to comply with the policies under the Student Code of Conduct may be suspended or dismissed in accordance with such policy.

3. Harassment: If a student violates the policies defined under Harassment, the student may be suspended or dismissed. (See Discrimination and Harassment policy. See also Nonacademic Probation and Dismissal.)

Academic Probation & Dismissal
Probation
A student is placed on probation if less than a 2.0 (C) grade point average is achieved at the end of a semester of enrollment.

Dismissal
A student on probation may be dismissed from a program if less than a 2.0 grade point average is achieved, currently or cumulatively. At the discretion of the division dean/chairperson, a student may remain on probation if the chairperson is convinced that the student is capable of achieving a 2.0 cumulative grade point average at the end of the semester.

Students Admitted on Probation
A student admitted on probationary status may be dismissed from a program if less than a 2.0 grade point average is achieved at the end of the first semester of enrollment. Dismissed students may not enroll for the next succeeding semester or the next school year depending on the program in which they were enrolled.

In addition, the Health Occupations Department has specific policies which apply to particular courses and programs. Copies of these policies are available from instructors and the division dean/chairperson upon request.

Nonacademic Probation & Dismissal
1. When the administration and/or board has reasonable cause to believe that a student has pursued a course of conduct which should require suspension or dismissal, the student is informed of the specific charges in writing by registered mail or personal delivery thereof.

2. The student is notified in writing of the time and place of a hearing, at which time the student may present the case if desired. The student is advised of the action taken by the administration.

3. Pending action on the charges, the status of a student should not be altered or the right to be present on the campus and to attend classes, except for reasons relating to his or her physical or emotional safety and well-being or for reasons relating to the safety and well-being of students, faculty or college property.

4. The student may have, at option, the right to appeal action taken by the administration. A hearing before the MATC Board is held at which time the student is allowed legal counsel if desired. A student who was suspended or dismissed by the administration and who desires to appeal the action must do so by petitioning the board in writing within five days of the date of suspension or dismissal. After the hearing has been held by the board, the student is notified of its decision and a copy of the hearing decision shall be placed in the student file. (Suspension or dismissal actions shall be noted on the academic transcript.)

Student Due Process Procedures

Academic Appeals
1. When a student sincerely thinks the final grade he or she has received in a course is inaccurate or unjustified, he or she should make an appointment with the instructor who issued the grade and explain the reasons for this belief. This process must be initiated within 15 days of receiving the grade. The instructor and the student should make every effort to resolve the issue, for only the instructor can change the grade by submitting a grade change form to the registrar. It is expected that most, if not all, misunderstandings will be resolved at this level.
2. However, if the student and the instructor are not able to reach an agreement, the student may request, no later than 10 days after meeting with the instructor, that the dean/chairperson of the particular division in which the instructor is employed arrange a meeting with the instructor and the dean/chairperson to attempt to resolve the issue. Prior to the meeting, the student shall place in writing a signed statement indicating the reasons for his or her belief and submit copies to the instructor and to the chairperson.

3. Should the issue still be unresolved or should the decision be adverse to the student, the student may request in writing, no later than five days after the meeting with the instructor and the dean/chairperson, that the vice president-Instructional Services call a meeting of the Academic Appeals Committee. The vice president-Instructional Services shall chair the committee which shall be composed of himself/herself, the vice president-Student Services, the dean/chairperson of the particular division and four instructors from the same or a similar instructional field. The student will be notified in writing of the time and place of this hearing, at which time the student may present his or her case. At this hearing, the instructor may also present his or her case. After hearing the cases of the student and the instructor, the Academic Appeals Committee shall make a determination in the matter. The student will be informed in writing of the decision.

4. Any party may have, at option, the right of appeal from the decision of the Academic Appeals Committee. A hearing before the MATC District Board shall be held at which time the party will be allowed legal counsel if desired. Any party who desires to appeal the decision of the Academic Appeals Committee must do so by petitioning the board in writing no later than five days after the receipt of the decision of the Academic Appeals Committee. After the hearing has been held by the board, the party shall be notified in writing of the decision.

Appeal from Academic Actions & Re-admittance
Appeal from academic actions may be made to the Academic Appeals Committee. If a student has been dropped for academic reasons, re-admittance may be sought after a semester has elapsed. This application must be passed on by the Academic Appeals Committee.

Discrimination & Harassment
Administrative Procedures
The Affirmative Action Office of the Madison Area Technical College has primary responsibility for implementing the institution’s discrimination complaint procedure; it is designed to comply with Wisconsin law (Section 38.23(2)(b) Wis. Statutes) prohibiting discrimination against students. The procedure is, therefore, available for complaints by students concerning alleged discrimination or harassment as those terms are described below.

The Affirmative Action Office serves as central intake point for all internal complaints of discrimination and/or harassment. All charges of discrimination/harassment will be investigated by either the Affirmative Action Office or Women’s Initiative Office.

Discrimination
The MATC District is in full compliance with Title VI and VII of the 1964 Civil Rights Acts, the Executive Order 11246, Title IX of the 1972 Education Amendments, Equal Pay Act, Age Discrimination in Employment Act, Title VII and Title VIII—Public Health Service Act, Section 504—1973 Rehabilitation Act, Americans with Disabilities Act, and Wisconsin Fair Employment Law.

It is the policy of the district not to discriminate on the basis of a person’s age, race, creed, color, disability, marital status, sex, national origin, ancestry, sexual orientation, arrest record or conviction record, religion, parental status or pregnancy in its educational programs, admissions, activities or employment practices.

Harassment
Harassment is illegal. It violates the Wisconsin Fair Employment Act, Federal Equal Rights laws, and Title IX of the Education Amendments to the Federal Civil Rights Act.

The District Board, through its commitment to equal rights, will ensure that all employees and students work, learn and study in an environment free of harassment. Harassment infringes upon equal respect in work and academic relationships, causes serious harm to the operation and to the future careers and success of students.

The District Board will take steps necessary to prevent harassment from occurring. Such steps include affirmatively raising the subject, expressing strong disapproval, informing employees and students of their rights to raise and how to raise the issue, and developing methods to sensitize all concerned. District policies and procedures will allow for the resolution or investigation of complaints and will allow for the discipline, discharge or dismissal of students, staff or faculty who have engaged in harassment. Harassment will not be tolerated.
**Definition**

Harassment is illegal if it is based on the following protected group statuses: age, disability, national origin, ancestry, race, color, record of arrest or conviction (which does not relate directly to the job, academic program or student status), religion, creed, sex, sexual preference or marital status, or retaliation for having engaged in a prior equal rights complaint process.

Harassment is unwanted, deliberate or repeated unsolicited comments, slurs, demeaning references, gestures, graphic materials, physical contacts, solicitation of favors, advances or other adverse treatment based on a protected group status when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, student status or academic participation.
2. Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions affecting an individual.
3. The conduct has the purpose or effect of substantially creating an intimidating, hostile or offensive environment which unreasonably affects or interferes with an individual's job performance or other employment or academic opportunities.

**Affirmative Action/Anti-Harassment Committee**

The Affirmative Action/Anti-Harassment Committee:

- reports to the college president;
- is monitored by vice presidents of Human Resources and Student Services;
- reviews and recommends modifications to current affirmative action, anti-harassment and nondiscrimination policies and procedures relating to students and staff;
- reviews and modifies these strategies as necessary;
- assists in the development of affirmative action goals, and information and awareness programs relating to anti-harassment and nondiscrimination throughout the district;
- identifies specific problems and concerns relating to the district's affirmative action, anti-harassment, and nondiscrimination program and services; and
- develops processes to monitor and evaluate district-wide anti-harassment, nondiscrimination and affirmative action efforts, and recommend appropriate ways to address monitoring and evaluation of findings.

**Discrimination & Harassment Complaint Procedure**

Any person who believes that he or she has been discriminated against or harassed may follow either the informal or formal procedure without fear of reprisal and shall be assured a prompt and confidential investigation. Any person who has a complaint brought against him/her shall have the same assurance of a prompt and confidential investigation before any determination of probable cause is made.

**Responsibility of Staff & Faculty**

Under both Wisconsin and federal laws, MATC has a responsibility to address discrimination/harassment which comes to the attention of its administrative or supervisory personnel, whether or not the affected individual files a formal complaint.

Any supervisor or administrator who becomes aware of the discrimination/harassment of any employee or student and any faculty member who becomes aware of the discrimination or harassment of any student shall promptly convey that information either to his or her own supervisor or department chairperson or to a member of the Anti-Harassment Committee. Any supervisor or department chairperson who receives information from a supervisory employee or faculty member shall promptly convey that information to either the president, affirmative action officer or the chairperson of the Anti-Harassment Committee. If no discrimination/harassment complaint is filed, but discriminating/harassing behavior by staff, faculty or students is discovered or brought to the attention of MATC administration, it may investigate and act appropriately to see that the discrimination/harassment ceases. If it judges the discrimination/harassment severe enough to warrant disciplinary action against an individual, it may proceed with such an action as long as the individual's right to due process is protected. Such due process shall conform to applicable provisions of a staff or faculty union contract or the MATC Catalog.

**Informal Procedure**

Any person believing he or she has been a victim of discrimination may discuss problems or concerns with the affirmative action officer in an effort to resolve the matter.

Any person believing he or she has been a victim of harassment may consult with a member of the Anti-Harassment Committee. The committee member will provide information about what constitutes harassment and the harassment policy and procedures, offer consultation, outline options and may draw upon or refer the person to other support and counseling services for assistance.

The committee member will report information on specific allegations of harassment to the committee chairperson. The chairperson or a member specifically designated by
the chairperson may make an effort to resolve the issue informally and in the strictest privacy.

A written record of the number and type of informal complaints received by the chairperson of the committee shall be filed with the affirmative action officer and the women's initiative officer at the end of each academic year. However, the names of the accused shall be held in confidence and not revealed unless a formal complaint is later filed or the matter becomes part of a subsequent formal disciplinary process or legal proceeding.

**Formal Procedure**

A formal complaint of discrimination/harassment may be filed no later than 300 days following the alleged incident of discrimination/harassment. However, the complainant should be aware that the longer one waits, the more difficult it becomes to gather the facts necessary to document and prove that harassment occurred. Therefore, one is strongly urged to file within 40 days of the incident.

Also, individuals should be aware that the filing of a formal complaint at MATC does not protect one's legal rights to complain to state or federal equal rights agencies or to take other legal action. Anyone who wishes to take those courses of action has the responsibility to find out those time limits and comply with them. Waiting too long may jeopardize one's rights.

These steps shall be followed in the event of a discrimination/harassment complaint:

**Step 1.** The complaint must be submitted in writing and signed by the complaining person. The signed complaint shall give in detail the time, place, pertinent facts and circumstances of the alleged discrimination/harassment, and shall be filed with the Affirmative Action Office. Upon request, MATC shall preserve the anonymity of any employee or student who is the aggrieved party and a complainant of discrimination/harassment, until a determination as to probable cause has been made, unless MATC determines that the anonymity will substantially impede the investigation.

For the purpose of mailing written complaints, the college's mailing address is: Affirmative Action Office, Madison Area Technical College, 3550 Anderson Street, Madison, WI 53704.

**Step 2.** A copy of the complaint shall be sent to the person against whom the charge has been brought within 10 working days from the date the Affirmative Action/Women's Initiative Office receives the complaint.

**Step 3.** Within 30 days after the complaint has been filed, the affirmative action/women's initiative officer(s) shall investigate the complaint, attempt to resolve the problem and prepare a written report of the findings. The time period may be extended for justifiable reasons. The investigator(s) will send a written notice to the parties stating the reason for the extension.

The president may assign any other members of the administrative staff to work with the affirmative action/women's initiative officer(s) as co-investigator or conciliator.

In the event that a person files both a discrimination/harassment complaint and some other form of MATC complaint based upon the same set of circumstances, there shall be a consolidated co-investigation by the discrimination/harassment investigator and the administrator responsible for that other complaint process.

If a person against whom a charge has been brought is covered by a collective bargaining agreement, that person may have union representation when interviewed during the investigation.

**Step 4.** After attempting to resolve the complaint, the president/designee shall make a decision within twenty calendar days of receiving the report from the affirmative action/women's initiative officer(s). The complainant and the person against whom the complaint is made shall receive a copy of the decision. The president/designee may order any reasonable and appropriate remedy for the complaining party if there is substantial evidence that the discrimination/harassment did occur.

**Step 5.** The student has the right to appeal the decision of the president to the MATC District Board. A student who desires to appeal the decision must do so by petitioning the board in writing no later than five days after receipt of the decision. A hearing before the board shall be held at such time as the board designates. The student shall be notified accordingly. After the hearing has been held by the board, the student shall be notified in writing, within 30 days, as to their decision.

Employees discriminating against students will be subject to discipline under appropriate MATC employment policies and, as applicable, collective bargaining agreements. Students discriminating against another student will be subject to discipline under the applicable Student Code of Conduct. The district will take other necessary corrective action to remedy any instances where discrimination is determined to have occurred.

**STUDENT RIGHTS & RESPONSIBILITIES**
General Due Process Procedures

For Complaints Other Than Discrimination, Harassment or Academic Appeals

When a student sincerely believes he or she has a valid complaint against any member of the staff (staff meaning any full- or part-time employee), he or she should comply in sequence with the following procedure:

Step 1. Within 15 days of the date of the alleged incident, the student shall make an appointment with this person and explain the nature of the complaint and the reasons for this belief. The staff member involved and the student should make every effort to resolve the issue. It is expected that most, if not all, misunderstandings will be resolved at this level. Students who feel intimidated by the staff member involved may proceed to Step 2. Complaints involving the president which are not resolved at the meeting level should be addressed to the MATC District Board.

Step 2. If the student and the staff person are not able to reach a satisfactory agreement, the student may, no later than 10 days after meeting with the staff person, request that the supervisor of the staff person arrange a meeting with the student, the staff person and the supervisor to attempt to resolve the issue. The student shall place in writing the nature of the complaint and submit copies to the supervisor and the staff person prior to the meeting.

Step 3. Should the issue be unresolved at Step 2 or should the decision be adverse to the student, the student may appeal in writing, no later than five days after the meeting with the supervisor and the staff person, to one of the following administrators.

Complaints concerning instruction should be addressed to the vice president-Instructional Services. Complaints concerning student services should be addressed to the vice president-Student Services. Complaints concerning support staff should be addressed to the vice president-Human Resources. Complaints concerning administrators or chairpersons should be addressed to the president. The particular administrator will call a meeting of the student and the persons involved to attempt to resolve the problem. The resolution and/or decision shall be conveyed in writing to the student.

Step 4. Should the issue still be unresolved after Step 3 or should the decision be adverse to the student, the student may request in writing, no later than five days after receipt of the letter from the particular administrator, that the particular administrator call a meeting of the Appeals Committee. The particular administrator will chair the committee which will consist of a total of seven people: the administrator; three staff persons from the particular area involved, chosen either by the president of the Teacher's Union, if it relates to instruction, the president of the Support Staff Union, if it relates to support staff, or by the president, if it relates to student services, administrators or deans/chairpersons; the president of the Student Senate; and two other senators chosen by the president. The student will be notified in writing of the time and place of this hearing at which time the student may present his or her case. At this hearing, the staff person against whom the complaint is being issued may also present his or her case. All have the right to be represented by legal counsel at their own expense unless otherwise provided for by the MATC District.

After hearing the student and the staff person, the Appeals Committee shall make a determination in the matter. The student and the staff person will be informed in writing of the Appeals Committee decision within 10 days. A copy of the decision shall be sent to the president.

Step 5. Should the decision of the Appeals Committee be unsatisfactory to the student, the president has the option of either attempting to mediate the complaint or of accepting the decision of the Appeals Committee. In either case, the president shall so notify the student of his/her decision in writing within five days of receiving the decision of the Appeals Committee.

Step 6. The student has the right to appeal the decision of the Appeals Committee and/or the president to the MATC District Board. A student who desires to appeal the decision must do so by petitioning the board in writing no later than five days after receipt of the decision. A hearing before the board shall be held at such time as the board designates. The student shall be notified accordingly.

After the hearing has been held by the board, the student shall be notified in writing, within 30 days, as to their decision.

Note: In this procedure, all staff members involved shall keep a record of the times, dates and other pertinent facts relating to the nature of the conferences in which they were involved.

Accommodation of Student Religious Beliefs

Madison Area Technical College recognizes that religion and religious beliefs are an important part of the human experience. In an increasingly pluralistic society, occasions may occur when a conflict exists between classes/academic requirements and sincerely held religious beliefs. This policy describes appropriate actions which should be taken when such a conflict occurs.

MATC shall make reasonable accommodations of a student's sincerely held religious beliefs with regard to all examinations and other academic requirements.
Instructor Notification
Students who are aware of a time conflict between an academic assignment or a class, and a religious observance should notify the faculty, in writing, as soon as possible but no later than five class days in advance of the anticipated absence.

Make-Up Policy
Students shall be provided a means to make-up examinations or other academic requirements in such a way as not to be penalized for having expressed their religious beliefs.

Complaints
1. Informal: If the student and faculty member are unable to agree on the student's written request, the affirmative action officer shall serve as a mediator and will attempt to resolve the disagreement. If attempts at mediation are unsuccessful, the affirmative action officer shall notify the student, in writing, that the informal process is at an end.

2. Formal: Within 10 calendar days of official notification of the end of the informal process, the student may initiate a formal complaint, in writing, with the Affirmative Action Office. The affirmative action officer shall investigate the complaint and prepare a written letter of findings. The Affirmative Action Office will submit the findings to the president who will issue a written decision within 30 calendar days of receipt. The date can be extended beyond 30 calendar days with the agreement of the student.

Appeals
Upon notification of the president's decision, the student may appeal to the MATC District Board, in writing, within 30 calendar days. The board will issue a written decision within 45 calendar days after receipt of the appeal.

Address Change
Notify the Office of Registration and Records in Room 159 of address and phone number changes. The college must have up-to-date information on file in the event of an emergency and for the mailing of Grade Reports and other correspondence. If you are receiving financial aid, also notify the Financial Aid Office.

Alcohol & Drugs
The use, possession or distribution of alcohol on campus is strictly prohibited except at duly authorized events developed in accordance with Board Policy No. 1030.

The Drug Free Schools and Communities Act Amendments of 1989 (Public Law 101-226) requires that all colleges comply with certain standards related to issues surrounding drug abuse prevention on campus. These standards are addressed in MATC District Policies No. 1030, 1108 and 1108A. Specifically, the Drug Free Schools Act requires the following:

1. That standards of conduct for staff and students specifically prohibit the unlawful possession, use, or distribution of illicit drugs and alcohol on property or as any part of any Madison Area Technical College event or activity.

2. A description of the applicable legal sanctions under local, state, and federal law for unlawful possession, use, or distribution of illicit drugs and alcohol.

3. Distribution of information designed to increase knowledge and awareness of health risks associated with the use illicit drugs and alcohol.

4. Referral sources available for the student in need of help for a drug or alcohol related problem. Board Policy No. 1108A states, "Conscientious efforts to seek such help shall not in themselves jeopardize any student's enrollment and will not be noted in the student's records." Any students seeking help for their or someone else's alcohol or drug abuse problem, or who would like to obtain more information, may do so by contacting any of the following:

   - AODA Program Coordinator 246-5291
   - MATC Counseling Center 246-6089
   - School Nurse 246-6027

Bicycle Parking
Bicycle racks are provided at the Truax Campus and Commercial Avenue and Downtown Education Centers.
All bicycles must be parked in these racks. Bicycles found on lawns or chained to stairways, railings, etc. will be removed or detained. No bicycles are to be brought into college buildings. Bicycles must be properly registered with the city. Registration forms may be obtained in the Student Life Office, Room 140.

**Returned Checks**

Returned checks are defined as those returned for insufficient funds, stopped payment, closed account and maker error. Notices are posted at each location in the MATC District where checks are received stating, "...any check returned by their bank because of insufficient funds, account closed or stop payment may be assessed a charge of $15 per check." The charge may be waived only by the financial administrator or controller. The writer of a returned, insufficient-fund check shall be notified in writing by the controller as soon as possible after the check has been returned. The letter shall state that within 15 days the check writer must bring cash, a cashier's check or money order to cover the amount of the check plus the $15 check charge to the business office. If the check was written by or for a student, the controller shall submit a "Hold Academic Record Notice" to the registrar so that all grades and/or transcripts will be placed on the "Hold Academic Records" list until the matter is resolved. The student shall not be allowed to register and/or attend classes until the returned check is cleared.

If the check is not cleared within the appointed time, a second letter shall be sent by the controller stating that payment must be made within 15 days and that the student shall not be permitted to attend classes until the returned check is cleared. The registrar shall be notified, in writing, to inform instructors that the student is not being permitted to attend classes without presenting a "Clear Academic Records" slip.

If the check is not cleared within 15 days from the date of the second collection letter, the matter shall be referred to the board's attorney, small claims court or a collection agency. When a check is placed for collection or if the individual has had more than one returned check in the past calendar year, the controller shall place the individual on the "Hold Academic Records" list and indicate that the individual must pay cash only. Each location where checks are accepted shall be notified of the student's name, address, social security number (if available), amount of check(s) and current date. No checks shall be accepted from that individual for a period of one year from the date the most recent returned check was received from the bank.

**Campus Security**

In compliance with the Student Right-to-Know and Campus Security Act of 1990, MATC-Truxx administra-
public law or obstruct or interfere with the passage of persons through doors or walkways, or interfere with the educational process (see Soliciting, page 51).

Recognized student organizations, individual students and staff may distribute free newspapers or other printed matter in student lounge areas and within the buildings at entrance areas provided they:

1. Obtain a facility permit. The issuer of the permit may not refuse a permit on the basis of content.
2. Clearly label the literature with the sponsoring group’s or individual’s name.
3. Do not impede the normal flow of pedestrian traffic.
4. Do not interfere with the educational process.

Dress Code

Most students at MATC are preparing to seek employment in one or two years. Others will ask for recommendations relative to transferring to other institutions of higher learning. It is the policy of this school that students shall dress in a manner that would be appropriate to the vocation for which they are preparing and in any case be neat in appearance. Both appearance and maturity of behavior are important factors which will influence the faculty members who are called upon to recommend a student for employment or for transfer. For safety and health reasons, shoes or sandals, and shirts are required in MATC facilities.

Emergencies

General: To be located quickly in the event of a family emergency, students should leave their class schedule and room location (including where they usually are between classes) with roommates, parents, babysitters and their division dean/chairperson’s office.

A student emergency notification list containing pertinent information as to whom to notify in the event of an emergency is on file at the Information Booth. Keep your emergency card up-to-date by reporting changes in address and telephone number(s) to the Office of Registration and Records and instructors. Given a health emergency, the person indicated on the emergency card will be notified whenever possible.

Injury or Health Emergency: In case of an injury, accident or health emergency, report immediately to the MATC staff in charge. First aid kits are located throughout the shop and laboratory areas and are provided for use by students and staff when needed. Staff or students trained in first aid who choose to assist in an emergency situation may do so (only to their level of training), but will be providing the assistance on a “good Samaritan” basis.

Should it be the judgment of the injured person, teacher, or close friends of the individual that additional aid is needed, an ambulance should be called immediately. To summon emergency assistance, dial 911 from public pay phones at the Madison campuses – no coins are necessary. Dial 9 + 911 from the designated white emergency phones located in hallways at the Madison campuses for emergency aid – no coins are necessary. Regional campus students should refer to local emergency listings.

Students and employees are advised not to use personal vehicles for transporting ill or injured individuals. The MATC District does not assume financial responsibility for the payment of ambulance or other transportation services for an individual.

Note that whenever an accident occurs, a written report is to be submitted to the vice president-Administration, Room 17 of the Administration Building as soon as possible by the injured individual and the instructor, administrator or employee concerned.

The MATC District does not carry insurance on students for accidents which occur while participating in college activities including instruction. It is incumbent upon students, if they wish to have insurance, to provide such insurance at their own expense.

Building Evacuations: If evacuation of a building is necessary, an alarm will sound over the public address system (a sequence of tones). For their safety, all people must leave the building immediately during an evacuation/fire alarm. Persons should leave the building by the nearest available exit and remain outside until notified that it is safe to re-enter the building. When a building evacuation occurs, do not panic; remain calm and follow all instructions from emergency personnel and MATC staff.

In case of a fire, when a disabled individual who is unable to use the stairs is present, take the individual to the nearest stairwell (out of the way of traffic). Then go immediately to the fire department personnel and notify them of the location of the individual.

Tornado or severe weather warnings: Students should familiarize themselves with designated shelter areas (identified by “Emergency Shelter” signs). If there is a weather warning while the building is occupied, an announcement will be made over the public address system instructing everyone to proceed immediately to the designated shelter areas. Remain in this area until the “all clear” is announced.

Identification Card

See Student Activity Card, page 51.
Lecturers & Speakers Policy

Any proposed invitation extended to the student body for a general lecture or speech requiring the use of district buildings and facilities may be arranged subject to the following conditions: 1) it shall be presented to the president on the forms provided and 2) it shall be scheduled on the MATC District Board meeting agenda at the first meeting thereafter as a request for the use of school facilities.

Lockers

The locker rental period begins the first day of summer school and extends through the last day of final exams in May. Individuals must have a current MATC identification card or registration receipt in order to rent a locker. Individual responsibility includes:

1. The individual is responsible for the security of the contents of his/her assigned locker and shall supply an adequate lock. Combination locks are recommended. There will be a $5 charge for lock cutting.
2. Damaging, defacing or altering an assigned locker will result in fines and/or forfeiture of deposit. The MATC District Board or designee also has the right to assess any costs to the individual for damages and defacing of locker to include, but not limited to, any marks made by tape, glue, markers, pens, etc.
3. Individuals shall not use the assigned locker to contain narcotics or illegal drugs, alcohol, firearms, weapons or weapons paraphernalia, explosives, dangerous or flammable chemicals, etc.
4. Sharing an assigned locker is the sole responsibility of the individual to whom the locker is rented.
5. Lockers are issued with the agreement that the locker is college property. The MATC District Board or designee reserves the absolute right to inspect it at any time for any reason.
6. All lockers must be cleaned and all items, including locks, must be removed by the last day of final exams in May or day of withdrawal. Any lockers not cleaned will prompt a deposit forfeiture and items will be removed and discarded.
7. Locker fees are for the academic year beginning with summer school and extending through spring semester. Locker fees will not be prorated for less than a semester. Current fees may be obtained from the Student Life Service Center.
8. If an individual requests a different locker after assignment has been made and confirmed, a $2 processing fee will be charged. Any other adjustments or charges will be determined by the Student Life staff.
9. A deposit of $10 is required per locker rental. This deposit shall be refunded upon withdrawal or at the end of the semester or school year if the locker is not defaced or damaged, and if it is cleaned. Individuals must apply for refunds at the Student Life Service Center, Room 140D, by bringing in their locker receipt on or before the last day of final exams in May. Refunds will not be made for less than a semester. Individuals may apply for a second semester refund before the second semester begins if they will not be in attendance. If a student produces documentation of 100-percent refund for classes, a full refund of the locker fee will be issued. Individuals must apply for refunds in the Student Life Service Center.

Refunds and deposits will be mailed if a self-addressed, stamped envelope is provided or they may be picked up. Allow at least four weeks to receive any payment due.

Please refer any questions or concerns about lockers to the Student Life Office or call 246-6228. Locker assignments at the Downtown Education Center are available in room D117; there is no charge for usage.

Mail

Students should have their mail sent to their local residences, not to Madison Area Technical College.

Name Change

If a student's name changes, first or last, and they want this change reflected on their academic record, they need to complete a "Change of Name Declaration Card" or the "demographic" portion of the student scheduling document. Students can get these forms from the Office of Registration and Records. First and last name changes require proof of at least one legal form of documentation.

Parking

On-campus parking is available at all campus sites, except the Downtown Education Center.

The cost for parking is established by the MATC District Board. All vehicles parked at the Truax Campus and Commercial Avenue Education Center in designated areas shall display a parking sticker or else be subject to ticketing and removal.

Carpools with four or more individuals do not pay the additional parking fee. Mopeds and bicycles will be provided free parking. Short-term visitor parking is provided off Anderson Street. Long-term visitor parking is available by permit only. Students using State of Wisconsin Disabled Stalls should register with the Parking Office. For parking concerns or questions, please call 246-6031.

Parking and bus information for Downtown Education Center students is located at the Carroll Street entrance.

GENERAL POLICIES
Parking Refunds
When a student is entitled to a 100-percent refund according to the Refund Policy as stated in the MATC Catalog, it will include the per credit parking fee. However, the parking sticker fee is not automatically refunded.

The parking sticker fee is only refundable in the following cases:

1. If you purchase a parking sticker and decide before you put your sticker on your vehicle that you are not going to park in the MATC Truax parking lots, you must return the sticker intact within 2 weeks of purchasing the sticker.
2. If you are receiving a 100-percent refund and return the sticker intact.
3. If the course is canceled and you are not enrolled in any other classes at Truax, you will receive 100-percent refund of all parking fees including the parking sticker fee as long as the sticker is returned. If you have placed it on your vehicle already, please remove and return.

Petitions
General Public: Petitions may be circulated outside school buildings in such a fashion as not to obstruct or interfere with the passage of persons through doors, corridors or walkways, or interfere with the educational process.

MATC-Oriented General Public: Petitions designed to obtain student, faculty or staff opinion as it affects the welfare of MATC may be circulated inside school buildings provided a facility permit is obtained from the MATC District or its authorized representative.

Student-, Staff- or Faculty-Originated: A facility permit will be granted to MATC students, faculty or staff to circulate petitions within the lounge areas and/or main entrances.

Smoking
All MATC education and administrative buildings are maintained as tobacco-free environments. Smoking or the use of tobacco products is not allowed within any MATC facility.

Soliciting
Except as stipulated below, soliciting of any kind is prohibited on the grounds or in school buildings.

Recognized student clubs and organizations, and those sponsoring approved student activities wishing to sell goods or services may do so provided they:

1. Obtain a facility permit.
2. Solicit only in designated areas.
3. Use the proceeds to fund their organizational activities.
4. Clearly identify the sponsoring group to buyers.
5. Clearly label literature with the sponsoring group's name.

The sale of illegal goods and/or services is prohibited. Soliciting for private gain is prohibited.

Student Activity Card
A student activity card is currently issued by the Information Resource Center/library and is available while classes are in session. Anyone taking a class, credit or noncredit, is eligible for a card. This card allows students access to IRC/library services, including checking out materials. A student activity card is good for as long as the student is enrolled; you do not need a new one each semester. Some offices may use the card for student identification, though most require an identification card with a picture. Withdrawing students must return their student activity card. Students not returning to MATC who would like to continue using the library may apply for a "community borrowers card."

Student Employment by MATC
Students employed by MATC must carry a minimum academic load of six semester credits. District-employed students should understand that if their academic load falls below six semester credits, their employment with the district will be terminated. This does not apply to summer work. For summer employment, students must have enrolled for a minimum of six semester credits during the spring semester and must indicate intention to enroll in the succeeding fall semester.

Student Employment Outside MATC
A maximum of 20 hours of outside work per week is suggested for the full-time student. This maximum may be too much for some students. When a student's academic work declines because of outside work, it is suggested that the work load be reduced. Financial aid is available to help students in need.
Visitors

The MATC District Board and staff welcome visitors to the college. If a visitor to the college conducts him/herself in such a way that would endanger the safety or welfare of students, staff or other visitors, or that would interfere with the educational process, the MATC Board authorizes the president and administrative personnel or appropriate designees to:

1. Give warning to persons who shall enter the building for the purposes of soliciting, peddling or loitering by posting signs at all entrances which shall state: "No person may enter these facilities for the purposes of soliciting, peddling, loitering or for illegal purposes."

2. Notify the police whenever they deem it necessary to safeguard the well-being of students, staff, other visitors and property of the MATC District.

3. File a formal complaint and bring charges against such individuals.

Weather

In cases of severe weather, MATC students should monitor local radio and television stations (WIBA-101.5 FM, 1310 AM; WMGM-1480 AM or 98.1 FM; WOLX-94.9 FM; WTSQ-1070 AM; WZEE-104.1 FM or WISC TV-Channel 3). Students can also call 246-6606 to find out whether classes will meet.

MATC seldom closes because of bad weather. Students are urged to use their own judgment as it would relate to their situations considering distance, road conditions, safety and other factors, and determine individually if they should report as usual. Students will not be penalized if they cannot report to work or meet classes as scheduled. They will be given an opportunity to take scheduled examinations at another time. Provisions shall be made by teachers for completing any classroom work on a formal or informal basis.

During class time, emergency weather announcements will direct everyone to shelter areas, which are identified in most facilities. Individuals will be instructed as to the location of these shelters and how to proceed if there is a severe weather emergency.

General Policies

Programs
Accounting

**Associate in Applied Science Degree**

*Business Department; Business and Applied Arts Division*

The Accounting Program provides the educational background and training required for entry positions in private business and industry, governmental agencies and public accounting firms. Job experience and continuing education provide the necessary qualifications for advanced positions in the field of accounting. Keyboard skills and computer literacy are required.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-111 Accounting 1-Principles</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>102-105 Math of Finance</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-134 Business Organization and Management</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>103-130 Microcomputer Applications</td>
<td>2</td>
<td>2.2-3</td>
</tr>
<tr>
<td>103-161 Machine Calculation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>801-151 Communication Skills</td>
<td>3</td>
<td>3</td>
</tr>
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</table>

**SECOND YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-113 Accounting 2-Principles</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>101-121 Tax 1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>102-138 Accounting and Payroll Systems</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-160 Business Law 1</td>
<td>3</td>
<td>3</td>
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<tr>
<td>801-152 Communications Skills 2</td>
<td>3</td>
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**RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-130 Microcomputer Applications</td>
<td>2</td>
<td>2.2-3</td>
</tr>
<tr>
<td>103-161 Machine Calculation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>801-151 Communication Skills</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

One-half of the total 68 credits must be completed at MATC. Minimum grade point average of 2.0.

---

**Accounting Assistant**

**One-Year Diploma** *(New curriculum pending State Board approval)*

*Business Department; Business and Applied Arts Division*

Accounting assistants may work in a small business and be responsible for all aspects of bookkeeping or work in a larger firm under the supervision of an accountant and specialize in a certain area. Accurate records and reports of all business activity are required by industry and governmental agencies.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-111 Accounting 1-Principles</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>101-110 Accounting 1-Principles (Lab)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>102-105 Math of Finance</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>103-130 Microcomputer Applications</td>
<td>2</td>
<td>2.2-3</td>
</tr>
<tr>
<td>103-161 Machine Calculation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>801-151 Communication Skills</td>
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**SECOND YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-113 Accounting 2-Principles</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>101-112 Accounting 2-Principles (Lab)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>101-135 Payroll Accounting-Income Tax</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-160 Business Law 1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>103-132 Lotus-Intermediate</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>801-152 Communication Skills 2</td>
<td>3</td>
<td>3</td>
</tr>
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</table>

**REQUIREMENTS FOR GRADUATION**

One-half of the total 30 credits must be completed at MATC. Minimum grade point average of 2.0.

---

**Administrative Assistant-Information Processing**

**Associate in Applied Science Degree**

*Business Department; Business and Applied Arts Division*

This program provides the educational background for employment in information processing careers with an emphasis on word processing, spreadsheet, database, presentation, and desktop publishing software. With work experience and proven skills, there is opportunity for advancement into supervisory and managerial positions in related areas of office technology. Admission requirement: English Composition, grade of C.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-110 Accounting 1-Principles (Lab)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>101-112 Accounting 2-Principles (Lab)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>101-135 Payroll Accounting-Income Tax</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-160 Business Law 1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>103-132 Lotus-Intermediate</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>106-172 Administrative Office Management</td>
<td>3</td>
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</tbody>
</table>

**RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hours per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-110 Accounting 1-Principles</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>101-112 Accounting 2-Principles</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>101-123 Auditing</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-172 Tax 2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>101-129 Governmental Accounting</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-143 Management Techniques</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>102-161 Business Law 2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>103-132 Lotus-Intermediate</td>
<td>1</td>
<td>1-2</td>
</tr>
</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

One-half of the total 68 credits must be completed at MATC. Minimum grade point average of 2.0.
Second Semester

101-114 Applied Accounting I 3 3-0
106-103 Filing Procedures 2 2-0
106-137 Document Processing 3 (Typing 3) OR 3 2.5-2.5
106-138 Document Processing 4 (Typing 4) (3) (2.5-2.5)
106-184 Information Processing Techniques 3 2-2
106-196 Machine Transcription OR 2 1-2
106-334 Machine Transcription (2) (1.5-1.5)
801-150 Communication Skills 2 3-0

SECOND YEAR

First Semester

106-105 Records and Information Management1 3 3-0
106-138 Document Processing 4 (Typing 4) 3 2.5-2.5
106-188 Information Processing Techniques 3 2-2
809-195 Economic 3 3-0
809-199 Psychology of Human Relations 3 3-0
Elective 3 below 18 18+E

Second Semester

102-160 Business Law I 3 3-0
106-185 Information Processing Management2 3 3-0
106-186 Information Processing Internship2 3 2-0
106-187 Integrated Office Techniques 3 2.5-2.5
801-197 Technical Reporting 3-0
Elective 3 below 18 18+E

RECOMMENDED ELECTIVES

102-134 Business Organization and Management 3 3-0
102-143 Management Techniques 3 3-0
103-132 Lotus-Intermediate 1 1-2
103-140 Desktop Publishing 1 1-2
106-108 Proofreading/Editing 3 3-0
106-132 Typing Workshop-Skillbuilding 2 1-2

Electives must be associate degree (100 level) or college transfer (200 level) courses.

REQUIREMENTS FOR GRADUATION

One-half of the total 70 credits must be completed at MATC. Minimum grade point average of 2.0.

1Offered semester 1 only.
2Offered semester 2 only.

Administrative Assistant-Secretarial

Associate in Applied Science Degree
Business Department; Business and Applied Arts Division

The Administrative Assistant-Secretarial Program prepares individuals in the technical, administrative and interpersonal skills required to perform secretarial duties at both the operational and managerial levels in today's offices. The curriculum also provides the experiences necessary for students to successfully attain the Certified Professional Secretary designation, the highest professional standard of achievement within the field. Admission requirement: English Composition, grade of C.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits</td>
<td>Inc/Lab</td>
</tr>
<tr>
<td>102-160 Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>106-103 Filing Procedures</td>
<td>2</td>
</tr>
<tr>
<td>106-111 Shorthand 1 (Theory)1</td>
<td>3</td>
</tr>
<tr>
<td>106-133 Document Processing 2 (Typing 2)* OR 3</td>
<td>2.5-2.5</td>
</tr>
<tr>
<td>106-137 Document Processing 3 (Typing 3)* (3)</td>
<td>2.5-2.5</td>
</tr>
<tr>
<td>801-151 Communication Skills 1</td>
<td>3</td>
</tr>
<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Semester

101-114 Applied Accounting I | 3 | 3-0 |
102-102 Business Mathematics | 3 | 3-0 |
106-113 Shorthand 2 (Speed Development)2 | 3 | 2-2 |
106-137 Document Processing 3 (Typing 3)* OR 3 | 2.5-2.5 |
106-138 Document Processing 4 (Typing 4)* (3) | 2.5-2.5 |
801-197 Technical Reporting | 3 | 3-0 |
Elective 3 below 18 18+E

SECOND YEAR

First Semester

102-134 Business Organization and Management 3 3-0
103-131 Lotus (9 weeks) 1 1-2
103-140 Desktop Publishing (9 weeks) 1 1-2
106-115 Shorthand 3 (Transcription)1 3 2-2
106-138 Document Processing 4 (Typing 4) 3 2.5-2.5
106-150 Administrative Office Procedures 3 3-0
106-182 Information Processing Concepts1 3 3-0

Second Semester

103-144 Database (9 weeks) 1 1-2
106-116 Shorthand 4 (Administrative Dictation)2 3 2-2
106-195 Career Development/Internship2 3 2-0
809-193 Economics 3 3-0 |
809-199 Psychology of Human Relations 3 3-0 |
Elective 3 below 16 18+E

RECOMMENDED ELECTIVES

101-115 Applied Accounting 2 3 3-0
102-143 Management Techniques 3 3-0
103-132 Lotus-Intermediate (9 weeks) 1 1-2
106-132 Typing Workshop-Skillbuilding 2 1-2
106-196 Machine Transcription 2 1-2

Electives must be associate degree (100 level) or college transfer (200 level) courses.

REQUIREMENTS FOR GRADUATION

One-half of the total 68 credits must be completed at MATC. Minimum grade point average of 2.0.

1Offered semester 1 only.
2Offered semester 2 only.

*Students required to enroll in 106-131, Keyboarding 1, may apply the 3 credits toward elective requirements.

PROGRAM DESCRIPTIONS
Agricultural Equipment Technology

Two-Year Associate Degree

Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

The Agricultural Equipment Technology Program is designed to develop competent and professional agricultural equipment service technicians for entry-level employment in agricultural equipment dealerships. Students will receive specialized hands-on training to learn the latest in tractors, combines and implements. Students will gain technical expertise in hydraulics, power trains, electronics, fuel systems, heating, air conditioning and engine service. They will round out their professional skills with training in management, salesmanship, mathematics and physics. In addition to classroom and laboratory instruction at MATC, students will be expected to obtain and maintain a sponsoring dealer that will provide related work experience during the scheduled internship. This program leads to an associate degree in applied science. Graduates of the program will be qualified for a rewarding career as an agricultural equipment technician.

In conjunction with the program, MATC has entered into an agreement with the John Deere Company to provide a section of the Agricultural Equipment Technology Program specifically for the company and its dealers. This partnership will be known as John Deere Ag Tech. The classroom and laboratory situations, dealer sponsorship, and equipment studied will be John Deere. John Deere Ag Tech students will be required to obtain and maintain a John Deere dealer sponsor while completing the program.

### FIRST YEAR

#### Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>070-160 First Aid/CPR</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>070-175 Power Transmissions</td>
<td>4</td>
<td>2-4</td>
</tr>
<tr>
<td>442-213 Welding, Metals and Tools</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>804-141 Industrial Mathematics 1</td>
<td>4</td>
<td>3-2</td>
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<tr>
<td>806-141 Technical Science 1</td>
<td>3</td>
<td>2-3</td>
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<td>14</td>
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<tr>
<td>070-176 Electrical Systems 1</td>
<td>3</td>
<td>4-4</td>
</tr>
<tr>
<td>070-183 Hydraulics 1</td>
<td>3</td>
<td>4-4</td>
</tr>
<tr>
<td>070-178 Implement Assembly and Delivery 1</td>
<td>3</td>
<td>2-8</td>
</tr>
<tr>
<td>070-187 Occupational Experience 2</td>
<td>2</td>
<td>0-4</td>
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<tr>
<td>412-225 Air Conditioning 1</td>
<td>2</td>
<td>1-2</td>
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<tr>
<td>Elective</td>
<td>3</td>
<td>below</td>
</tr>
<tr>
<td>16</td>
<td>77+E</td>
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#### Summer Session

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>070-181 Combines and Harvesting**</td>
<td>4</td>
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<tr>
<td>070-177 Fuel Systems**</td>
<td>3</td>
<td>36-36</td>
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<tr>
<td>810-151 Communication Skills 1</td>
<td>3</td>
<td>6-75-0</td>
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<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
<td>6-75-0</td>
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<tr>
<td>13</td>
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### SECOND YEAR

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>070-188 Occupational Experience 1</td>
<td>2</td>
<td>0-48</td>
</tr>
<tr>
<td>070-182 Accessories and Electronics 2</td>
<td>3</td>
<td>6-0</td>
</tr>
<tr>
<td>070-191 Shop Operations 2</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>103-130 Microcomputer Applications 2</td>
<td>2</td>
<td>2-4</td>
</tr>
<tr>
<td>Elective</td>
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<td>below</td>
</tr>
<tr>
<td>11</td>
<td>62+E</td>
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#### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>070-179 Tractor Performance</td>
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</tr>
<tr>
<td>070-191 Engine Repair</td>
<td>6</td>
<td>2-8</td>
</tr>
<tr>
<td>801-197 Technical Reporting</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
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<td>809-195 Economics</td>
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#### Summer Session

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<tr>
<th>Course</th>
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<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>070-189 Occupational Experience 1</td>
<td>2</td>
<td>0-48</td>
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#### RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>070-184 Advance Hydraulics/Diagnostics</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>070-185 Equipment Maintenance</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>070-186 Basic Electricity and AC/DC Circuits</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>104-103 Marketing Principles</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>104-104 Selling Principles</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>806-142 Technical Science 2-S</td>
<td>3</td>
<td>3-2</td>
</tr>
</tbody>
</table>

### RECOMMENDED ELECTIVES

1First 9 weeks.
2Second 9 weeks.
*Tillage, planting and seeding equipment.
**Hay forage, combine and harvesting equipment.
***Will be taught as a two-week block prior to summer school.

#### Architectural Technician

Associate in Applied Science Degree

Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division

The architectural area is broad and challenging. It is the purpose of the architect and/or consulting engineer to supply owners with a set of plans and specifications of the structure desired. The architectural technician assists the architect or engineer in the development of plans and specifications, and checks on building erections and alterations. The ASSET test is required for placement in math and English.

### FIRST YEAR

#### Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>614-111 Architectural Theory and Drafting 1</td>
<td>3</td>
<td>3-3</td>
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<tr>
<td>614-121 Construction Materials 1</td>
<td>3</td>
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</tr>
<tr>
<td>614-124 Industrial Computer Applications</td>
<td>1</td>
<td>1.5-5</td>
</tr>
<tr>
<td>801-151 Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>804-151 Technical Mathematics 1</td>
<td>4</td>
<td>5-0</td>
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<tr>
<td>806-151 Technical Science 1</td>
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<td>3-2</td>
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<tr>
<td>17</td>
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</tbody>
</table>

#### PROGRAM DESCRIPTIONS
Auto Body and Paint Technician, Advanced

Two-Year Diploma

Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

The two-year Advanced Auto Body and Paint Technician Program is designed to provide students with skills necessary to enter or advance in the collision-repair industry. Training includes structural damage alignment, repairing and replacing sheet metal panels, welding, plastic repair, and refinishing vehicles to original color match with emphasis on paint mixing, tinting and blending. Considerable time is spent developing hands-on skills that are used on the job. Skills learned in this program are also valuable to individuals choosing to enter professions other than auto body/paint technician.

### REQUIREMENTS FOR SECOND-YEAR STUDENTS

The following courses must be completed prior to entering the second year of the program: 405·330, 405·331, 405·360, 405·361 and 405·363.

Third semester students must purchase an approved auto body tool set before third-semester classes begin.

### REQUIREMENTS FOR GRADUATION

Sixty-one credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

---

**Auto Body and Paint Technician, One-Year Diploma**

Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

This program provides students with the necessary skills for job entry into the metal finishing and painting areas of the auto body and light truck trade. Courses cover welding, panel replacement, metal forming, sheet metal alignment and finishing.

---

### RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>614·115</td>
<td>Introduction to Architectural</td>
</tr>
<tr>
<td>614·135</td>
<td>Building Codes</td>
</tr>
<tr>
<td>614·190</td>
<td>Special Problems</td>
</tr>
</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

Seventy-one credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

---

**PROGRAM DESCRIPTIONS**
Automotive Technician

**Two-Year Diploma**

Agriscience and Technology Department; Agriculture, Apprenticeship, and Technical and Industrial Division

Opportunities for qualified, trained technicians continue to increase. This program is designed to provide students with skills necessary to enter or advance in many automotive industry positions. The technology, diagnosis and repair of automotive and light truck electrical, mechanical and hydraulic systems are studied. Considerable time is spent developing hands-on skills that are used on the job. Skills learned in the program are valuable to individuals choosing to enter professions other than automotive technician.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>404-335 Engine Performance*</td>
<td>6 4-20</td>
</tr>
<tr>
<td>404-340 Minor Repair*</td>
<td>6 6-18</td>
</tr>
<tr>
<td>420-330 Metal Processes 1</td>
<td>2 2-2</td>
</tr>
<tr>
<td>804-356 Communications 1</td>
<td>1 2-0</td>
</tr>
<tr>
<td>804-379 Vocational Mathematics 1</td>
<td>1 2-0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>404-318 Heating and Air Conditioning</td>
<td>2 1-2</td>
</tr>
<tr>
<td>404-339 Brakes and Steering*</td>
<td>5 5-15</td>
</tr>
<tr>
<td>404-341 Suspension and Alignment*</td>
<td>5 5-15</td>
</tr>
<tr>
<td>420-331 Metals Processes 2</td>
<td>42 2-0</td>
</tr>
<tr>
<td>809-356 Human Relations Survey</td>
<td>15 49</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>16 49</strong></td>
</tr>
</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

Sixty-two credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

*Meets for 9 weeks.

---

Automotive Technology

**Associate in Applied Science Degree**

Agriscience and Technology Department; Agriculture, Apprenticeship, and Technical and Industrial Division

Employment opportunities for the automotive technician include all aspects of automotive sales and service businesses, such as technicians and service writers. With proper background and experience, advancement to shop foreman, service manager or other highly responsible positions is possible. Other employment opportunities include working in manufacturing as an engineering aide or as a sales representative for manufacturers of automotive tools and equipment, or operating your own auto repair business. The ASSET test is recommended prior to program acceptance.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>602-102 Service Repair Procedures*</td>
<td>4 4-12</td>
</tr>
<tr>
<td>602-156 Comfort Control Systems</td>
<td>2 1-2</td>
</tr>
<tr>
<td>602-166 Driveability and Fuel Systems*</td>
<td>4 4-12</td>
</tr>
<tr>
<td>804-141 Industrial Mathematics 1</td>
<td>4 3-5</td>
</tr>
<tr>
<td>801-151 Communication Skills 1</td>
<td>3 3-2</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>17 48</strong></td>
</tr>
</tbody>
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**SECOND YEAR**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>602-157 Technical Brake/Steering Systems*</td>
<td>3 2.5-12.5</td>
</tr>
<tr>
<td>602-163 Vehicle Suspension and Alignment*</td>
<td>3 2.5-12.5</td>
</tr>
<tr>
<td>804-142 Industrial Mathematics 2</td>
<td>2 1-2</td>
</tr>
<tr>
<td>801-171 Basic Computer Math</td>
<td>2 1-2</td>
</tr>
<tr>
<td>806-141 Technical Science 1-S</td>
<td>3 3-2</td>
</tr>
<tr>
<td>809-195 Economics</td>
<td>3 3-0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>16 44</strong></td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVES**

- 602-162 Accessories 2 1-2
- 602-180 Occupational Work Experience 1 2 48*
- 602-181 Occupational Work Experience 2 2 48*
- 602-182 Occupational Work Experience 3 2 48*
- 613-100 Metallurgy Principles 3 2-2
- 621-126 Manufacturing Materials Processes 2 1-2

**REQUIREMENTS FOR GRADUATION**

69 credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

*Meets for 9 weeks.

---

**PROGRAM DESCRIPTIONS**
Barber/Cosmetologist

One-Year Diploma
Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division

Graduates receive training in barbering and cosmetology, and may be licensed to practice in either area.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>502-301 Barber/Cosmetology Techniques 1</td>
<td>12</td>
<td>0-24</td>
</tr>
<tr>
<td>502-311 Barber/Cosmetology Theory 1</td>
<td>3</td>
<td>4-2</td>
</tr>
<tr>
<td>502-390 Barber/Cosmetology Science 1</td>
<td>2</td>
<td>4-0</td>
</tr>
<tr>
<td>502-392 Barber/Cosmetology Sales and Advertising</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>801-351 Communications 1</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td>801-352 Communications 2</td>
<td>20</td>
<td>39</td>
</tr>
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<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>502-302 Barber/Cosmetology Techniques 2</td>
<td>12</td>
<td>0-24</td>
</tr>
<tr>
<td>502-312 Barber/Cosmetology Theory 2</td>
<td>3</td>
<td>5-0</td>
</tr>
<tr>
<td>502-391 Barber/Cosmetology Science 2</td>
<td>2</td>
<td>4-0</td>
</tr>
<tr>
<td>502-393 Barber/Cosmetology Sales and Advertising</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>809-356 Human Relations Survey</td>
<td>19</td>
<td>37</td>
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<table>
<thead>
<tr>
<th>Summer Session</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>502-303 Barber/Cosmetology Techniques 3</td>
<td>8</td>
<td>0-25</td>
</tr>
<tr>
<td>502-313 Barber/Cosmetology Theory 3</td>
<td>5</td>
<td>15-0</td>
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</tbody>
</table>

**Requirements for Graduation**
Fifty-two credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for specific occupational courses.

Biotechnology

Laboratory Technician

Associate in Applied Science Degree
Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

The Biotechnology Laboratory Technician Program emphasizes skills and competencies necessary for entry-level employment in biotechnology and related laboratories. The program focuses on the analytical techniques and materials basic to the commercial development of useful products from biological systems and microorganisms. Proficiency in laboratory skills and technologies, as well as effective communications and employment skills are included. Individuals who like the detail, exactness and challenge of laboratory work are encouraged to apply.

Graduates of the program may seek entry-level employment in public or private laboratories for positions titled scientific helper, laboratory assistant, laboratory technician, laboratory tester or laboratory worker. These laboratories are found in universities, pharmaceutical companies, food processing industries, companies performing research and development, and companies involved in plant and animal breeding.

To be admitted to the program, students must demonstrate competence in basic mathematics, science and English usage. Suggested course work for recent high school graduates includes high school algebra, biology, chemistry and vocational agriculture. Competency may be assessed by a combination of testing (ASSET, ACT or equivalent) and/or personal interviews.

<table>
<thead>
<tr>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>in class</td>
</tr>
<tr>
<td>Lec-Lab</td>
</tr>
<tr>
<td>FIRST YEAR</td>
</tr>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>007-100 Introduction to Biotechnology</td>
</tr>
<tr>
<td>007-103 Instrumentation and Introduction to Basic Laboratory Methods</td>
</tr>
<tr>
<td>007-107 Hazardous Materials and Radioisotopes</td>
</tr>
<tr>
<td>806-104 Cell Biology</td>
</tr>
<tr>
<td>806-111 Chemistry 1</td>
</tr>
<tr>
<td>807-104 Chromatography and Introduction to Bioseparation Techniques</td>
</tr>
<tr>
<td>807-105 Fermentation Technology</td>
</tr>
<tr>
<td>807-174 General and Applied Microbiology</td>
</tr>
<tr>
<td>801-351 Communication Skills 1</td>
</tr>
<tr>
<td>806-102 Chemistry 2</td>
</tr>
<tr>
<td>17</td>
</tr>
<tr>
<td>SECOND YEAR</td>
</tr>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>007-121 Applied Biochemistry</td>
</tr>
<tr>
<td>007-122 Protein Biosepartions Methods</td>
</tr>
<tr>
<td>007-123 Cell Culturing</td>
</tr>
<tr>
<td>801-152 Communication Skills 2</td>
</tr>
<tr>
<td>809-107 Contemporary American Society</td>
</tr>
<tr>
<td>Elective</td>
</tr>
<tr>
<td>18</td>
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</tbody>
</table>

Bioprocess Manufacturing Technician

Associate in Applied Science Degree
Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

A two-year program is being developed in this area with a tentative start date of August 1995. Call (608) 246-6101 for details.

Program Descriptions
Second Semester

007-126 Occupational Work Experience 3 0-12
007-127 Introduction to Molecular Biology Technologies 6 2-12
808-195 Economics 3 3-0
809-199 Psychology of Human Relations 3 3-0
Elective 3 below 18 . 3Z+E

RECOMMENDED ELECTIVES

007-129 Research Techniques 1 3 1-3
103-130 Microcomputer Applications 2 2.2-.8
102-132 Lotus-Intermediate 1 1-2
103-135 WordPerfect-Beginning 1 1-2
103-144 dBase 1 1-2
103-330 Microcomputers 1 2.5-2.5
804-201 Intermediate Algebra 3 5-0
804-306 Pre-College Algebra* 3 5-0
806-203 Animal Biology 4 3.2
806-213 Organic Chemistry I 5 4-3
806-214 Organic Chemistry 2 5 4-3
806-215 Botany 4 3-2
806-377 Pre-College Chemistry* 3 3-2

*May be required for persons who have not had high school algebra or chemistry.

Second Year

First Semester

101-118 Management Accounting 4 4-0
102-126 Corporate Finance 3 3-0
104-179 Marketing Techniques 3 3-0
162-101 Principles of Insurance 3 3-0
Elective 3 below

Second Semester

102-104 Business Statistics 3 3-0
102-143 Management Techniques 3 3-0
102-160 Business Law 1 3 3-0
106-172 Administrative Office Management 3 3-0
106-190 Professional Development 1 1-0
Elective 3 below

RECOMMENDED ELECTIVES

101-110 Accounting 1-Problems (Lab) 1 1-1
101-112 Accounting 2-Problems (Lab) 1 1-1
101-123 Tax I 4 4-0
101-125 Cost Accounting 1 3 3-0
101-127 Tax 2 3 3-0
101-137 Computerized Accounting Applications 2 1.5-1.5
101-138 Accounting and Payroll Systems 3 2-2
102-161 Business Law 2 3 3-0
106-136 Typewriting 2 2-2
Electives must be associate degree (100 level) or college transfer (200 level) courses.

REQUIREMENTS FOR GRADUATION
One-half of the total 65 credits must be completed at MATC. Minimum grade point average of 2.0.

---

Business Mid-Management
Associate in Applied Science Degree
Business Department; Business and Applied Arts Division

To be accepted into company training programs in middle management, or for running and operating a business, the Business Mid-Management Program provides a well-rounded study in the fundamentals of business organization, finance, management and related studies. This program provides the student with training necessary for employment and advancement on the job in middle management and allied occupations. Graduates are also trained for positions in such specialty areas as sales, accounting or office operations.

FIRST YEAR

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-111 Accounting 1-Principles</td>
<td>4</td>
<td>4-0</td>
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<tr>
<td>102-105 Math of Finance</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>106-163 Microkeyboarding</td>
<td>2</td>
<td>1.5-1.5</td>
</tr>
<tr>
<td>801-151 Communication Skills I</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-195 Economics</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
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Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-113 Accounting 2-Principles</td>
<td>4</td>
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</tr>
<tr>
<td>102-134 Business Organization and Management</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>103-130 Microcomputer Applications</td>
<td>2</td>
<td>2-2-.8</td>
</tr>
<tr>
<td>801-152 Communication Skills 2</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

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Child Care and Development
Associate in Applied Science Degree
Health Services Department; Health, Human and Protective Services Division

The Child Care and Development Program prepares students to function as teacher-caregivers in early childhood settings. Students may attend one year only if they wish to be child-care assistants rather than teacher-caregivers. The program combines classroom instruction in child care, English and social science with supervised fieldwork in area child-care centers, nursery schools, Head Start programs or family child-care homes.

Graduates become responsible for the care and education of a group of children in the birth-to-6 years age range. They create and maintain safe and healthy play environments, guide behavior, plan and implement learning activities, and work cooperatively with staff and parents.

Individuals interested in child care should have a strong interest in working with children and families. Important aptitudes include the ability to establish positive interpersonal relationships with children and adults, flexibility, good judgment, and effective verbal and written communication skills. Good health and high energy are essential. Admission requirements: high school diploma with a
GPA of 2.0 or GED. Accepted applicants will take the ASSET test, unless they have taken an equivalent test or have successfully completed post-secondary courses. In addition, students must show evidence of a physical examination and must complete a Background Character Verification and Identification Request prior to placement for the Child Care and Development Practicum courses.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lea-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>307-100 Introduction to Early Childhood Care and Education</td>
<td>2</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>307-101 Child Growth and Development 1</td>
<td>3</td>
<td>3-0</td>
<td></td>
</tr>
<tr>
<td>307-103 Understanding and Guiding Children's Behavior 1*</td>
<td>3</td>
<td>3-0</td>
<td></td>
</tr>
<tr>
<td>307-105 Basic Care</td>
<td>3</td>
<td>3-0</td>
<td></td>
</tr>
<tr>
<td>307-106 Child Care and Development Practicum 1*</td>
<td>2</td>
<td>0-8</td>
<td></td>
</tr>
<tr>
<td>307-107 Practicum Seminar 1*</td>
<td>2</td>
<td>2-0</td>
<td></td>
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<tr>
<td>601-151 Communication Skills 1</td>
<td>3</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>18</td>
<td>24</td>
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<tr>
<td><strong>SECOND SEMESTER</strong></td>
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</tr>
<tr>
<td>307-102 Child Growth and Development 2+</td>
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</tr>
<tr>
<td>307-104 Understanding and Guiding Children's Behavior 2+</td>
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<td>3-0</td>
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<tr>
<td>307-108 Practicum 2*</td>
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<td>0-8</td>
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</tr>
<tr>
<td>307-109 Practicum Seminar 2*</td>
<td>2</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>307-114 Activity Planning 2*</td>
<td>3</td>
<td>2-2</td>
<td></td>
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<tr>
<td>307-118 Culture, Class and Gender in the Early Childhood Setting</td>
<td>2</td>
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<tr>
<td>801-198 Speech</td>
<td>3</td>
<td>3-0</td>
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<td><strong>TOTAL</strong></td>
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<td>25</td>
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<table>
<thead>
<tr>
<th>SECOND YEAR</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lea-Lab</th>
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</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>307-110 Practicum 3*</td>
<td>3</td>
<td>0-12</td>
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<tr>
<td>307-111 Practicum/Seminar 3*</td>
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<tr>
<td>307-115 Activity Planning 3*</td>
<td>3</td>
<td>2-2</td>
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<tr>
<td>307-119 Working with Children with Special Needs+</td>
<td>2</td>
<td>2-0</td>
<td></td>
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<tr>
<td>307-120 Play and Play Environments+</td>
<td>2</td>
<td>2-0</td>
<td></td>
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<tr>
<td>801-197 Technical Reporting</td>
<td>3</td>
<td>3-0</td>
<td></td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
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<td><strong>SECOND SEMESTER</strong></td>
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<tr>
<td>307-122 Administration of Group Centers and Day Care Homes</td>
<td>2</td>
<td>2-0</td>
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<tr>
<td>809-197 Contemporary American Society Electives</td>
<td>6</td>
<td>below</td>
<td></td>
</tr>
<tr>
<td><strong>RECOMMENDED ELECTIVES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>307-121 Issues in Infant and Toddler Care and Development</td>
<td>2</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>307-123 Working with Children Who Challenge+</td>
<td>2</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>307-125 Child Care Health Emergencies</td>
<td>2</td>
<td>2-0</td>
<td></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>18</td>
<td>24+E</td>
<td></td>
</tr>
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</table>

**REQUIREMENTS FOR GRADUATION**
Grade of C or better in all 307 courses. Minimum overall GPA of 2.0.

*Co-requisites: courses must be taken at the same time.

Pre-requisites required. Consult faculty.

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**Civil Engineering Technology**

*Public Works Technician*

**Associate in Applied Science Degree**

*Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division*

This program trains technicians to assist civil engineers in planning, scheduling, designing, estimating, surveying and inspecting the construction of highways, bridges, buildings and other structures. Certain options prepare the graduate for a career in land surveying.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lea-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>607-147 Basic Civil Drafting</td>
<td>3</td>
<td>3-3</td>
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</tr>
<tr>
<td>607-155 Introduction to Surveying</td>
<td>4</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>614-124 Industrial Computer Applications</td>
<td>1</td>
<td>1-5</td>
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Students may wish to consider taking the two MATC courses listed below in addition to the 70-credit Civil Engineering Technology Program, since doing so would meet the current educational requirement for land surveyors as stated in Chapter A-6.6 of the Wisconsin Administrative Code.

| **REQUIREMENTS FOR GRADUATION** | | | |
| Seventy credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses. | | | |

---

**PROGRAM DESCRIPTIONS**
Commercial Art
Associate in Applied Arts Degree
Art Department; Business and Applied Arts Division

This program prepares students who are interested in a professional career in a variety of challenging areas. The major career opportunities are illustrator, graphic designer or production artist. Jobs are in advertising agencies, publishing companies, art studios, and advertising and art departments within companies. Graduates can also work as freelance artists. Some aptitudes necessary for success include aesthetic appreciation and creative imagination, a willingness to complete tasks according to technical requirements, and an ability to work under pressure to meet deadlines. Previous courses that may be helpful include art and typewriting or computer skills. Students should have good command of the English language, having earned B grades in English courses.

Computer Information Systems – Midrange Analyst/Programmer
Associate in Applied Science Degree
Business Department; Business and Applied Arts Division

This two-year program meets the specific skills and knowledge requirement of technical and professional jobs within the computer information systems field for an entry-level analyst/programmer. It is designed to meet entry-level educational needs of most segments of the CIS field which utilize midrange and microcomputers. Training blends general educational development and required CIS technical skills. Graduates will be prepared for entry-level analyst/programmer jobs in government, insurance, manufacturing, service, software development, wholesale and retail sales, utilities, banking and accounting.

### PROGRAM DESCRIPTIONS

#### FIRST YEAR

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<th>Semester</th>
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<td>Electives must be associate degree (100 level) or college transfer (200 level) courses.</td>
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<tr>
<td>One-half of the total 65 credits must be completed at MATC. Minimum grade point average of 2.0</td>
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1 Offered semester 1 only. 
2 Offered semester 2 only.
Computer Information Systems – Operations

Associate in Applied Science Degree

Business Department: Business and Applied Arts Division

This program prepares students for highly responsible positions in computer center operations. Each student specializes in a technical core of courses in computer programming, data communications and computer system operations. Technical material is reinforced by a guided on-the-job internship program in an area computer center. Courses in business and general studies are included as preparation for entry into a commercial enterprise. Admission requirement: algebra, grade of C.

FIRST YEAR

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SECOND YEAR

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RECOMMENDED ELECTIVES

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REQUIREMENTS FOR GRADUATION

One-half of the total 65 credits must be completed at MATC. Minimum grade point average of 2.0.

1 Offered semester 1 only.
2 Offered semester 2 only.

Computer Information Systems – Programmer/Analyst

Associate in Applied Science Degree

Business Department: Business and Applied Arts Division

This two-year program meets the specific skills and knowledge requirements of technical and professional jobs within the computer information systems (CIS) field for an entry-level programmer/analyst. It is designed to meet entry-level educational needs of most segments of the CIS field which primarily utilize mainframe computers. Training blends general educational development and required CIS technical skills. The program also applies toward the requirements for the Certificate in Data Processing. Additional education and job experience lead to work in systems analysis. Admission requirement: algebra, grade of C.

FIRST YEAR

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SECOND YEAR

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RECOMMENDED ELECTIVES

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PROGRAM DESCRIPTIONS
RECOMMENDED ELECTIVES

101·113 Accounting Principles 4 4.0
102·134 Business Organization and Management 3 3.0
102·143 Management Techniques 3 3.0
102·160 Business Law I 3 3.0
106·163 Microeconomics 2 1.5-1.5
107·129 Business Operations 4 3.2
107·132 Programming/Operations 3 2.2
107·131 Programming/Assembly for 3GL Programmers 3 2.2
107·135 Programming/BICICS II 3 2.2
107·136 Programming/9-SAS 3 2.2
107·171 Computer Networking & Communications 3 2.2
162·161 Principles of Insurance 3 3.0
804·173 Computer Mathematics (C Programming) 3 3.0
809·177 Computer Networking 3 3.0
612·163 Microkeyboarding 3 3.0
804·173 Computer Mathematics (C Programming) 3 3.0

ELECTIVES must be associate degree (100 level) or college transfer (200 level) courses.

REQUIREMENTS FOR GRADUATION

One-half of the total 66 credits must be completed at MATC. Minimum grade point average of 2.0.

SECOND YEAR

First Semester

106·142 Court and Freelance Reporting 3 3.0
106·143 Court Reporting 3 3.0
106·148 Legal/Technical Reporting II 3 3.0
106·153 CAT Systems 3 2.5-2.5
509·180 Medical Terminology II 2 2.0
Elective 3 below 3.0

Second Semester

106·130 Court Reporting Procedures 3 3.0
106·146 Court Reporting 4 3.0
106·148 Legal/Technical Reporting II 3 3.0
106·151 Court Reporting Internship 3 3.0
509·195 Economics 3 3.0
Elective 3 below 3.0

RECOMMENDED ELECTIVES

106·132 Typing Workshop-Skillbuilding 2 1.2
106·155 Advanced Court Reporting-Skillbuilding 2 0.5
509·181 Medical Terminology II 2 2.0
Electives must be associate degree (100 level) or college transfer (200 level) courses.

REQUIREMENTS FOR GRADUATION

One-half of the total 70 credits must be completed at MATC. Minimum grade point average of 2.0.*

*Offered semester 1 only.

*Offered semester 2 only.

3Graduation from the program requires an actuary typing speed of 60 wpm for five minutes.

4Includes an overview in reporter-related technology including computer-aided transcription, word processing and video applications.

5Graduation from the program requires the following machine shorthand writing speeds: 2-voice, 225 wpm; 4-voice and jury charge, 200 wpm; literary, 180 wpm (all 5-minute takes with 95 percent accuracy).

6Internship placement requires a machine shorthand speed attainment of 200 wpm. The 50-hour requirement for internship will consist of a minimum of 40 hours of actual writing time under the supervision of a qualified reporter.

*Two takes required where applicable.

First Semester

102·160 Business Law I 3 3.0
106·133 Document Processing 2 Typing 2) 3 2.5-2.5
106·137 Document Processing 3 Typing 3) 3 (2.5-2.5)
106·142 Court Reporting I 5 4.5-4.5
801·151 Communication Skills I 3 3.0
809·199 Psychology of Human Relations 3 3.0

Second Semester

106·146 Court Reporting 2 6 2.8
106·152 Court Reporting Transcription 2 2 1.2
106·158 Court Reporting Terminology 2 1 0.2
801·152 Communication Skills 2 3 3.0
809·197 Contemporary American Society 3 3.0

Summer Semester

106·154 Court Reporting Workshop 3 2.2

Court and Conference Reporting

Associate in Applied Science Degree

Business Department: Business and Applied Arts Division

Court and conference reporters record the testimony, charges, opinions, sentences or other proceedings in a court of law, or the proceedings of business and professional conventions by computerized machine shorthand. This work affords interesting mental activity and requires concentration, patience, poise and good health. Promptness and attention to detail are essential traits. It is a profession in which many men and women have found personal satisfaction, stimulation of mind and monetary rewards. The program is approved by the National Court Reporters Association. Admission requirements: Typing speed, 50 wpm; English composition, grade of C.
Culinary Arts

Associate in Applied Science Degree

Culinary Trades Department; Business and Applied Arts Division

The Culinary Arts Program is for individuals wishing to pursue careers within the hospitality field in mid-management positions in food preparation and service areas. Graduates may enter the work force as a chef's assistant, sous chef, broiler chef, garde manger or pantry supervisor. Positions such as executive chef, banquet chef, food service manager or supervisor, catering manager, or restaurant owner may be achieved after acquiring additional experience and/or training. This program is accredited by the American Culinary Federation Educational Institute.

### FIRST YEAR

**First Semester**
- 103-102 Business Mathematics 3
- 511-111 Entrees 1 2
- 511-113 Soup* 1
- 511-115 Baking 1 2
- 511-119 Vegetables/Sauces 1* 1
- 511-105 Sanitation 2
- 511-106 Food Science Theory 2
- 511-108 Baking Theory 2
- 801-151 Communication Skills 1

**Second Semester**
- 101-116 Hospitality Industry Accounting 1 3
- 511-121 Entrees 2 2
- 511-125 Baking 2 2
- 511-129 Vegetables/Sauces 2* 2
- 511-152 Nutrition 2
- 511-175 Computer in Food Service 2
- 801-152 Communication Skills 2
- Elective 2

**SECOND YEAR**

**First Semester**
- 511-104 Introduction to Gourmet Food Preparation 3
- 511-132 Waft Staff Training 1
- 511-118 Food Service Management 3
- 511-150 Food Cost and Purchasing Analysis 3
- 809-195 Economics 3
- 809-199 Psychology of Human Relations 3
- Elective 1

**Second Semester**
- 511-130 Gourmet Foods 4
- 511-135 Dining Room Operations 1
- 511-133 Decorative Foods 2
- 511-185 Food Service Layout/Equipment 2
- 102-134 Business Organization and Management 3
- 809-197 Contemporary American Society 3
- Elective 2

**RECOMMENDED ELECTIVES**
- 511-140 Menu Planning and Writing 1
- 2511-179 Restaurant Law 3

Data Entry Operations

One-Year Diploma

Business Department; Business and Applied Arts Division

As society increases its dependence on computer-generated information, the demand for skilled data entry operators continues to rise. Business firms seek graduates who are able to key data accurately and quickly and who are able to adapt to a variety of equipment and software. In addition to providing instruction in general clerical areas, specialized training on current hardware and software is the objective of this program. Students entering the program should have a good background in arithmetic and keyboarding (typing), and possess good finger dexterity, vision and coordination. Admission requirement: one year of typewriting/keyboarding.

**FIRST YEAR**

**First Semester**
- 101-330 Related Accounting 2
- 102-305 Applied Business Mathematics 2
- 103-305 Data Entry 11 3
- 103-330 Microcomputers 1
- 106-303 Filing Procedures OR 1
- 106-103 Filing Procedures (2) (2-0)
- 106-333 Keyboarding Applications 2 OR 3
- 106-133 Document Processing 2 (Typing 2) OR 3 (2.5-2.5)
- 106-335 Keyboarding Applications 3 (Typing 3) OR 3 (2.5-2.5)
- 801-351 Communications 1

**Second Semester**
- 103-306 Data Entry 21 3 2.5-2.5
- 103-357 Microcomputers 2 3 2.5-2.5
- 106-306 Office Procedures 2 2-0
- 106-308 Proofreading/Editing 2 3-0
- 106-335 Keyboarding Applications 3 (Typing 3) OR 3 2.5-2.5
- 106-137 Document Processing 3 (2.5-2.5)
- 106-376 Job Survey 2 3-0

**REQUIREMENTS FOR GRADUATION**

One-half of the total 31 credits must be completed at MATC. Minimum grade point average of 2.0.

1 Offered only semester 1.
2 Offered only semester 2.

### Dental Assistant

One-Year Diploma

Health Occupations Department; Health, Human and Protective Services Division

The Dental Assistant Program is planned to give students an orientation to the duties of the dental assistant, from general dental office work to the technical phases of chairside assisting, laboratory techniques and radiography. Related instruction runs concurrently with practical instruction throughout the program. Students are provided clinical experience in area dental offices beginning in the
first semester. Some of the aptitudes that may be helpful in this program include an ability to pay attention to details, follow instructions, establish procedures, work under pressure and handle emergency situations.

Admission requirements: 1) one unit of science, with a grade of C or better; 2) assessment test.

Upon completion of this program and prior to employment, dental hygienist graduates are required to successfully complete comprehensive written and clinical examinations given under the direction of the State Dentistry Examining Board, the American Dental Association’s Joint Commission on National Dental Examinations, and a Regional Dental Testing Service.

Entrance requirements: graduation from an accredited secondary school with a college preparatory course or a recognized equivalency test. The applicant will be expected to have better-than-average grades. An ACT or comparable test is required. Students must have successfully completed the following at the high-school level: three to four years of English; two to three years of mathematics (one year of algebra, one year of geometry); one year of chemistry; one year of biology; two years of foreign language (if the applicant did not study foreign language in high school, two additional years of history and/or science, in any combination, is acceptable); and two to three years of social science.

The Dental Hygienist Program is a highly intensive program. It is suggested that students take some of the general studies courses prior to starting the program or during the summer between the first and second years of the program.

**REQUIREMENTS FOR GRADUATION**

A minimum of 2.0 (C) or above in all dental-related courses and a minimum of 1.0 (D) for general studies courses.

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**Dental Hygienist**

**Associate in Applied Science Degree**

**Health Occupations Department; Health, Human and Protective Services Division**

The dental hygienist is a member of the dental health team and is prepared to help individuals maintain oral health and prevent oral diseases. Under the supervision of a dentist, the hygienist inspects the mouth, removes stains and deposits from teeth, applies preventive agents, prepares clinical and diagnostic tests, completes dental x-rays and performs many other services related to mouth care.

Dental hygienists counsel patients about preventive measures such as nutrition, oral hygiene and dental care. The specific educational objective of the dental hygienist program is to help students develop skill and competency to function effectively as dental hygienists under the supervision of a dentist in a dental office or clinic.

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**PROGRAM DESCRIPTIONS**
**Diesel Equipment Technology**

**Associate in Applied Science Degree**

A two-year program is being developed in this area with a tentative start date of August 1995. Call (608) 246-6101 for details.
Dietetic Technician
Associate in Applied Science Degree
Health Occupations Department; Health, Human and Protective Services Division

Approved by the American Dietetic Association, this program prepares students to function as members of health care teams in community nutrition, nutritional care and/or food service management. The program emphasizes the relationship of foods and nutrition to health. Students apply their knowledge in practical experiences during three semesters as affiliates in hospitals, long-term care facilities and community settings. Graduates are eligible to take the ADA credentialing examination to become dietetic technician registered, D.T.R.

Dietetic technicians may work independently or under the direction of registered dietitians in hospitals and long-term care facilities, or assist public health nutritionists with nutrition education and feeding programs in the community. Successful students demonstrate strong verbal and written communication skills, organizational abilities, emotional stability and intellectual curiosity. Admission requirements: an upper-level high school science course, such as chemistry, advanced biology, or physiology and anatomy. Students not meeting this requirement may take pre-college chemistry at MATC.

Drafting-Architectural
One-Year Diploma
Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division

This program provides the student with the necessary background in drawing skills and construction materials to fulfill the job-entry requirements for a wide range of duties in contractors’ offices, building supply companies, manufacturers of building materials and regulatory agencies.

REQUIREMENTS FOR GRADUATION
Thirty-one credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.
**Electron Microscopy**  
**Associate in Applied Science Degree**  
**General Education Division**

The Electron Microscopy Program is a two-year program in which students learn to operate electron microscopes. Both scanning (SEM) and transmission (TEM) electron microscopes are used in the program. The preparation of biological and non-biological samples for observation by TEM or SEM is an important part of the program. Interpretation of sample observations, including metallurgical structures and biological ultrastructures, is included.

Considerable emphasis is placed on computer-image processing, x-ray microanalysis, and maintenance of electron microscopes and related equipment. The entire program stresses a laboratory, hands-on approach to provide a graduating student with confident and proficient job-entry performance.

A minimum of three years of mathematics is required, which must include one year each of algebra and geometry. The science requirement is one year each of biology and chemistry. Students with no previous college experience are required to take the ASSET test and must score above minimum scores as set by the faculty and the divisional dean. Prior to registration, all students are required to consult with a faculty member.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lea-Lab</th>
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<td>Scanning Electron Microscopy</td>
<td>3</td>
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<tr>
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<td>636-112</td>
<td>Transmission Electron Microscopy</td>
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<td>636-115</td>
<td>Photographic and Hazardous Materials Laboratory</td>
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<td>804-151</td>
<td>Technical Mathematics 1</td>
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<tr>
<td></td>
<td>804-172</td>
<td>Introduction to PC Software</td>
<td>2</td>
<td>1-2</td>
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<td>806-111</td>
<td>Chemistry</td>
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<th>Lea-Lab</th>
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<td>Biological Sample Prep for SEM and TBM</td>
<td>3</td>
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<td>636-122</td>
<td>Physical Matters Specimen Prep</td>
<td>3</td>
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<td>804-173</td>
<td>Computer Mathematics</td>
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<td></td>
<td>804-152</td>
<td>Technical Mathematics 2</td>
<td>3</td>
<td>4-0</td>
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<td></td>
<td>806-161</td>
<td>Electricity and Magnetism</td>
<td>3</td>
<td>2-2</td>
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<tr>
<td></td>
<td>801-151</td>
<td>Communication Skills 1</td>
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**SECOND YEAR**

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<td>Advanced Biological Techniques and Ultrastructure Studies</td>
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<td>636-132</td>
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<td></td>
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<td>Laboratory and Microscope Maintenance</td>
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<td>809-195</td>
<td>Economics</td>
<td>3</td>
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<td>801-197</td>
<td>Technical Report Writing</td>
<td>3</td>
<td>3-0</td>
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</table>

**Electronic Servicing**  
**One-Year Diploma**  
**Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division**

This program provides the student with the knowledge and skills necessary to perform repairs on entertainment systems, commercial products, communications equipment and electro-technology machines.

**RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>613-100</td>
<td>Principles of Metallurgy</td>
<td>3</td>
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<tr>
<td>804-175</td>
<td>Image Processing</td>
<td>3</td>
<td>2-2</td>
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<tr>
<td>806-104</td>
<td>Cell Biology</td>
<td>3</td>
<td>2-2</td>
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<tr>
<td>806-244</td>
<td>General Geology</td>
<td>4</td>
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</table>

**REQUIREMENTS FOR GRADUATION**

Thirty credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.
Electronics

Associate in Applied Science Degree
Technical and Industrial Department; Agriculture, Apprenticeship, and Technical and Industrial Division

The electronics industry offers a wide range of job opportunities installing and maintaining electronic equipment in manufacturing, research, development, medicine and communications. Communications and industrial electronics continue to expand, and there is a high demand for technicians and engineering assistants. The ASSET test is required for class registration.

FIRST YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>605-112</td>
<td>DC Fundamentals</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>605-113</td>
<td>Analog Solid State Devices - DC Analysis</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>605-118</td>
<td>Digital Circuit Fundamentals</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>605-171</td>
<td>Applied Electronics Mathematics 1</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>801-151</td>
<td>Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-197</td>
<td>Contemporary American Society</td>
<td>3</td>
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SECOND YEAR

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<th>Course Title</th>
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<tbody>
<tr>
<td>605-114</td>
<td>AC Fundamentals</td>
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<tr>
<td>605-115</td>
<td>Analog Solid State Devices — AC Analysis</td>
<td>3</td>
<td>2-3</td>
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<tr>
<td>605-119</td>
<td>Digital Circuit 2</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>605-172</td>
<td>Applied Electronics Mathematics 2</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>806-152</td>
<td>Technical Science 1</td>
<td>3</td>
<td>3-2</td>
</tr>
<tr>
<td>809-199</td>
<td>Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
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<td>26</td>
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RECOMMENDED ELECTIVES

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>605-150</td>
<td>Electronic Data Transmission</td>
<td>3</td>
<td>2-3</td>
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<tr>
<td>605-151</td>
<td>Troubleshooting and Maintenance</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>605-178</td>
<td>Network and Operating Systems</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>804-231</td>
<td>Calculus 1 and Analytic Geometry 1*</td>
<td>5</td>
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</tr>
<tr>
<td>804-232</td>
<td>Calculus 2 and Analytic Geometry 2*</td>
<td>5</td>
<td>5-0</td>
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</table>

REQUIREMENTS FOR GRADUATION

Seventy-one credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational-specific courses.

All prerequisites and co-requisites are cumulative.

*Recommended for students who intend to continue their education. Students should contact the receiving college or university about transferring credits as soon as they develop their course plans. Courses in the 800 series from the college parallel courses can be used in lieu of required courses.

Emergency Medical Technician – Basic (EMT-B)

Less Than One-Year Diploma
Protective Services Department; Health, Human and Protective Services Division

This course is an entry-level course and meets requirements for licensure in Wisconsin and certification with the National Registry of Emergency Medical Technicians. This course is offered throughout the district.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week in class</th>
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<tr>
<td>531-301</td>
<td>Emergency Medical Technician-Basic</td>
<td>4</td>
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</table>

Emergency Medical Technician – Intermediate (EMT-I)

Less Than One-Year Diploma
Protective Services Department; Health, Human and Protective Services Division

This course builds on the EMT-basic curriculum. The student will learn advanced patient assessment, communication skills and beginning advanced life support interventions. This course meets requirements for certification with the National Registry of Emergency Medical Technicians and the educational requirements for licensure in the state of Wisconsin. Contact the MATC EMS Section Office for course offering and enrollment procedures. Prerequisite: EMT-Basic. Additional requirements may be placed by the Department of Health and Social Services.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>531-350</td>
<td>Emergency Medical Technician-Intermediate</td>
<td>3</td>
<td>1-2</td>
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</table>

Emergency Medical Technician – Paramedic (EMT-P)

Two-year Associate Degree
Protective Services Department; Health, Human and Protective Services Division

The paramedic technician curriculum stresses the integration of the knowledge and skills required to competently perform pre-hospital advanced life support. Graduates are eligible for national certification and state of Wisconsin licensure as an EMT-paramedic. This program is provided...
jointly by Madison Area Technical College and the University of Wisconsin Hospital and Clinics. First year course work can be taken part time, second year is offered to full-time students only.

Admission requirements: 1) high school graduate or equivalent; 2) one year of high school algebra and chemistry or equivalent college/pre-college courses; 3) current Wisconsin EMT licensure or be eligible for Wisconsin licensure and 4) documentation of at least one year of active EMT experience or summary of 50 ambulance transports. Additional requirements may be placed by the Department of Health and Social Services. All potential students must contact the MATC EMS Section Office for strict admission requirements and enrollment procedures.

### FIRST YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<th>Lab</th>
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<tbody>
<tr>
<td>801-151</td>
<td>Communications Skills 1 OR</td>
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<tr>
<td>801-201</td>
<td>English Composition 1*</td>
<td>(3)</td>
<td>(3-0)</td>
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<tr>
<td>806-207</td>
<td>Anatomy and Physiology 1</td>
<td>4</td>
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<tr>
<td>806-199</td>
<td>Contemporary American Society OR</td>
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<td>806-203</td>
<td>Introduction to Sociology*</td>
<td>(3)</td>
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<td>806-209</td>
<td>Psychology of Human Relations OR</td>
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<td>Introduction to Psychology*</td>
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**Elective**

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### SECOND YEAR

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<td>Paramedic Fundamentals</td>
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<td>531-112</td>
<td>Adult Medical Emergencies 1</td>
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<td>6-0</td>
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<td>531-116</td>
<td>Paramedic Pharmacology</td>
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<td>6-0</td>
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<td>531-118</td>
<td>ECG Interpretation for Paramedics</td>
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<td>531-128</td>
<td>Clinical Experience 1</td>
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<td>531-120</td>
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<td>531-122</td>
<td>Advanced Paramedic Procedures</td>
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<td>Advanced Cardiac Life Support for Paramedics</td>
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<td>531-126</td>
<td>Psycho-Social Issues in Emergency Care</td>
<td>1</td>
<td>6-0</td>
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<tr>
<td>531-130</td>
<td>Clinical Experience 2</td>
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<td>0-6</td>
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<table>
<thead>
<tr>
<th>Credits</th>
<th>below</th>
</tr>
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<tbody>
<tr>
<td>13</td>
<td>36</td>
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</table>

### Summer semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>In class</th>
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<tbody>
<tr>
<td>531-132</td>
<td>Field Internship</td>
<td>6</td>
<td>0-12</td>
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</table>

### RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>In class</th>
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<tbody>
<tr>
<td>801-197</td>
<td>Technical Report Writing</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-198</td>
<td>Speech OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>810-204</td>
<td>Fundamentals of Speech*</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>804-201</td>
<td>Intermediate Algebra*</td>
<td>3</td>
<td>5-0</td>
</tr>
</tbody>
</table>

### REQUIREMENTS FOR GRADUATION

Sixty-eight credits with a grade of C or better in each core course. Students must also have at least a 2.0 grade point average in all general education courses.

*Students may meet some or all of the general studies requirements at MATC or at another college prior to entering the EMT-Paramedic Program. Students are encouraged to take college transfer courses for education advancement.

**Note:** Course requirements may be modified or changed.

### Farm Business

#### Production and Management

**Less Than One-Year Diploma**

Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

The objective of the Farm Business Production and Management Program is to meet the needs of persons who are becoming established in the business of farming. Instruction is planned over a six-year period, but individual enrollment is on an annual basis. This program is conducted on a two-fold basis: individual instruction at centers throughout the district and individual on-farm instruction. Group instruction consists of 36 hours yearly and is composed of lecture, demonstrations, field trips and small group instruction. Each of the six courses in the program offers 12 hours of on-farm instruction for each student. These pre-scheduled sessions assist the student in the adoption, application and assessment of the production and management skills taught in group instruction.

Enrollment for this program is open to any individual who is beyond high school age and is actively engaged in or about to enter farming. This includes farm owners, operators, renters, partners, managers and hired persons. Both men and women are encouraged to enroll. Many farm couples attend classes together. Enrollees should plan to attend regularly scheduled group instruction sessions and allow time for individual instruction on their farms. Since training in this program is on a year-round basis, application may be made at any time. It is advised, however, to enroll during the summer or early fall.

All new students entering Farm Business Production and Management must enroll in 090-381, Operating the Farm Business, or demonstrate that they have achieved the course competencies. The five other courses are
sequenced as determined by the district, utilizing its advisory committee(s). To graduate from this program, a student must successfully complete the six required courses, 18 credits.

**COURSES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>090-381</td>
<td>Operating the Farm Business</td>
</tr>
<tr>
<td>090-382</td>
<td>Soils Management</td>
</tr>
<tr>
<td>090-383</td>
<td>Crop Management</td>
</tr>
<tr>
<td>090-384</td>
<td>Livestock Nutrition</td>
</tr>
<tr>
<td>090-385</td>
<td>Livestock Management</td>
</tr>
<tr>
<td>090-386</td>
<td>Farm Records and Business Analysis</td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVE**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>090-387</td>
<td>Farm Business Management (course for graduates)</td>
</tr>
</tbody>
</table>

Note: This program does not qualify for federal veterans' benefits.

---

Farm Business Production and Management — Agridevelopment  
**Less Than One-Year Diploma**  
Agriculture and Technology Department; Agriculture,  
Apprenticeship, and Technical and Industrial Division

The Farm Business Production and Management — Agridevelopment Program provides farm families with intensive basic skills which will better prepare them for farm management. Special programs are planned over several years, but individual enrollment is on an annual basis. This program is composed of discussion, demonstrations, field trips and small group interaction. Pre-scheduled sessions assist the student in the adoption, application and assessment of the production and management skills taught in the program. Dairy, livestock, crop production, and management practices applicable to the family farm are stressed. A special emphasis is placed on farm accounts, business analysis and farm financial management.

The program is open to any individual who is beyond high school age and is actively engaged in or about to start farming. This includes farm owners, operators, renters, partners, managers and hired persons. Both men and women are encouraged to enroll. Enrollees register in Farm Business Production and Management and attend regularly scheduled group sessions.

While program sessions are offered year-round, students are advised to enroll during summer or early fall. Students who have completed the program will be granted advanced standing for course 090-381, Operating the Farm Business, when enrolling in the Farm Business Production and Management Program.

**COURSES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>090-381</td>
<td>Operating the Farm Business</td>
</tr>
<tr>
<td>090-382</td>
<td>Soils Management</td>
</tr>
<tr>
<td>090-383</td>
<td>Crop Management</td>
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<tr>
<td>090-384</td>
<td>Livestock Nutrition</td>
</tr>
<tr>
<td>090-385</td>
<td>Livestock Management</td>
</tr>
<tr>
<td>090-386</td>
<td>Farm Records and Business Analysis</td>
</tr>
</tbody>
</table>

**Note:** This program does not qualify for federal veterans' benefits.

---

Farm Business Production and Management — FmHA Borrower  
**Less Than One-Year Diploma**  
Agriculture and Technology Department; Agriculture,  
Apprenticeship, and Technical and Industrial Division

A 1990 law requires new FmHA direct and guaranteed borrowers, along with those looking for loan renewals, to show the government lender proof of advanced training in crop production, livestock management, and financial analysis and record keeping. In Wisconsin, the FmHA has contracted with the Wisconsin Technical College System to be the sole vendor of this training.

Instruction will consist of 54 hours offered both in the classroom and by visiting the students in a one-on-one instructional setting. The FmHA will monitor farmers' progress. Farmers must contact the technical college within the district they live. Course offerings will be:

**COURSES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>090-383</td>
<td>Crop Management</td>
</tr>
<tr>
<td>090-385</td>
<td>Livestock Management</td>
</tr>
<tr>
<td>090-386</td>
<td>Farm Records and Business Analysis</td>
</tr>
</tbody>
</table>

**Note:** This program does not qualify for federal veterans' benefits.

---

Farm Business Production and Management — Sheep Production  
**Less Than One-Year Diploma**  
Agriculture and Technology Department; Agriculture,  
Apprenticeship, and Technical and Industrial Division

The objective of this program is to meet the needs of persons who are becoming established in the business of raising sheep. Like the Farm Business Production and Management Program, instruction is planned over a six-year period, but individual enrollment is on an annual basis. The program is conducted on a two-fold basis: group instruction at centers within the district and individu-
ual on-farm instruction. Group instruction consists of 36 hours yearly and is composed of lecture, demonstrations, field trips and small group instruction. Each of the six courses offers 12 hours of on-farm instruction for each student. These pre-scheduled sessions assist the student in the adoption, application and assessment of the production and management skills taught in group instruction.

Enrollment for this program is open to any individual who is beyond high school age and is actively engaged in or about to enter farming with a profitable sheep enterprise. This includes farm owners, operators, renters, partners, managers and hired help. Both men and women are encouraged to enroll. Individuals must demonstrate that they perform all or part of the managerial responsibilities involved in a productive sheep farm operation. The farm unit itself must be engaged in or have the ability to be a profitable sheep production unit. This program is not meant for persons who have only a future interest in raising sheep. Enrolees should plan to attend regularly scheduled group instruction sessions and to allow time for individual instruction on their farms.

Since training in this program is on a year-round basis, application to enroll may be made at any time. It is advised, however, to enroll during the summer.

All new students entering this program must be enrolled in 090-381, Operating the Farm Business (Sheep Production) or demonstrate that they have achieved the course competencies. The five other courses are sequenced as determined by the district and its advisory committee(s).

### COURSES

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>090-381 Operating the Farm Business (Sheep Prod.)</td>
<td>3</td>
</tr>
<tr>
<td>090-382 Soils Management/Marketing (Sheep Prod.)</td>
<td>3</td>
</tr>
<tr>
<td>090-383 Crop Management (Sheep Prod.)</td>
<td>3</td>
</tr>
<tr>
<td>090-384 Livestock Nutrition (Sheep Prod.)</td>
<td>3</td>
</tr>
<tr>
<td>090-385 Livestock Management (Sheep Prod.)</td>
<td>3</td>
</tr>
<tr>
<td>090-386 Farm Records and Business Analysis</td>
<td>3</td>
</tr>
<tr>
<td>(Sheep Prod.)</td>
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</tr>
<tr>
<td><strong>RECOMMENDED ELECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>090-387 Sheep Management Update (course for graduates)</td>
<td>3</td>
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</table>

**Note:** This program does not qualify for federal veteran’s benefits.

### Finance

**Associate in Applied Science Degree**

*Business Department; Business and Applied Arts Division*

The Finance Program provides the educational background and training required for entry positions in banks, savings and loan associations, finance companies, credit unions, real estate, insurance, financial planning, government, or mercantile and manufacturing enterprises. Job experience and continuing education provide the qualifications necessary for advancement. Finance relates to the management of, not necessarily the accounting for, monetary affairs. Public finance deals with governmental agencies; corporate finance deals with business enterprise; and personal finance deals with the monetary affairs of individuals. The finance student is encouraged, while successfully completing the core curriculum, to select electives which focus on one of these three areas of finance: public, corporate or personal.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>First Semester</th>
<th>Credit</th>
<th>Hrs per week</th>
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<tbody>
<tr>
<td>101-111</td>
<td>Accounting 1-Principles</td>
<td>4</td>
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</tr>
<tr>
<td>102-105</td>
<td>Mth of Finance</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>102-128</td>
<td>Financial Institutions</td>
<td>3</td>
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</tr>
<tr>
<td>801-151</td>
<td>Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-199</td>
<td>Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
<td><strong>Second Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101-113</td>
<td>Accounting 2-Principles</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>102-150</td>
<td>Personal Finance</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>102-143</td>
<td>Management Techniques</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>102-160</td>
<td>Business Law 1</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>103-130</td>
<td>Microcomputer Applications</td>
<td>2</td>
<td>2-2-8</td>
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<tr>
<td>801-152</td>
<td>Communication Skills 2</td>
<td>3</td>
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<td><strong>SECOND YEAR</strong></td>
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<tr>
<td>101-118</td>
<td>Management Accounting</td>
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<tr>
<td>102-117</td>
<td>Money and Banking</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>102-126</td>
<td>Corporate Finance</td>
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<td>3-0</td>
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<tr>
<td>103-132</td>
<td>Lotus-Intermediate</td>
<td>1</td>
<td>1-2</td>
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<tr>
<td>809-195</td>
<td>Economics</td>
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<tr>
<td>Elective</td>
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<tr>
<td>101-110</td>
<td>Accounting 1-Problems (Lab)</td>
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<td>101-112</td>
<td>Accounting 2-Problems (Lab)</td>
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<tr>
<td>101-127</td>
<td>Tax 2</td>
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<td>3-0</td>
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<tr>
<td>102-161</td>
<td>Business Law 2</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>104-170</td>
<td>Marketing Techniques</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>106-172</td>
<td>Administrative Office Management</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>162-101</td>
<td>Principles of Insurance</td>
<td>3</td>
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<tr>
<td>154-182</td>
<td>Real Estate Law</td>
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<tr>
<td>154-185</td>
<td>Real Estate Brokerage</td>
<td>2</td>
<td>2-0</td>
</tr>
</tbody>
</table>

Electives must be associate degree (100 level) or college transfer (200 level) courses.

**REQUIREMENTS FOR GRADUATION**

One-half of the total 66 credits must be completed at MATC. Minimum grade point average of 2.0.
Fire Protection Technician

**Associate in Applied Science Degree**

*Protective Services Department; Health, Human and Protective Services Division*

The constant changes and growing complexities of modern living and the environment are creating a demand for college-trained people in the fire-service field. Opportunities for graduates exist with municipal fire departments, insurance and government agencies, and in the field of industrial safety. This program of study is designed to meet the needs of personnel currently employed in fire service positions and those desiring preparation for employment. Classes should be taken in the sequence listed.

**REQUIREMENTS FOR GRADUATION**

Sixty-seven credits with a grade of C or better in all 503 courses and an overall grade point average of 2.0 or better.

### FIRST YEAR

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>503-151 Principles of Fire Control</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>503-134 Introduction to Fire Organization</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-151 Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>804-141 Industrial Mathematics 1</td>
<td>4</td>
<td>5-0</td>
</tr>
<tr>
<td>806-141 Technical Science 1</td>
<td>3</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>19</strong></td>
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<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>503-108 Building Construction and Design</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>503-114 Fire Protection Systems</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>801-152 Communication Skills 2</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>804-142 Industrial Mathematics 2</td>
<td>2</td>
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</tr>
<tr>
<td>804-171 Basic Computer Mathematics</td>
<td>2</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

### SECOND YEAR

<table>
<thead>
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<th>Credits</th>
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</tr>
</thead>
<tbody>
<tr>
<td>503-105 Chemistry of Hazardous Materials</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>503-110 Fire Investigation</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>503-112 Fire Prevention</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>801-197 Technical Report Writing</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>17</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>503-125 Fire Service Management</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>503-145 Water Supply Hydraulics</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>503-153 Strategic Operations</td>
<td>4</td>
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</tr>
<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>14+4</strong></td>
</tr>
</tbody>
</table>

### RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>503-106 Hazardous Materials Tactics</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>503-120 Equipment and Apparatus</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

### REQUIREMENTS FOR GRADUATION

**Fire Recruit Academy**

**Less Than One-Year Diploma**

*Protective Services Department; Health, Human and Protective Services Division*

This program offers 200 hours of fire-service education culminating in certification as a state-certified firefighter. It also includes 130 hours and certification as an emergency medical technician. Applications can only be obtained at the Fire Service Education Center.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>503-300 Fire Recruit Academy</td>
<td>5</td>
<td>12-12</td>
</tr>
<tr>
<td>531-340 Emergency Medical Technician-Basic (Fire)</td>
<td>9</td>
<td>36</td>
</tr>
</tbody>
</table>

### Food Service Aide

**Less Than One-Year Diploma**

*Culinary Trades Department; Business and Applied Arts Division*

This semester-long program is for adults who wish to become vocationally trained for successful employment in the food-service industry. The curriculum is targeted for persons with limited English-speaking ability and individuals with limited academic success.

The first quarter consists of classroom instruction while the second quarter includes two four-week field experiences. Instructional activities include the areas of salad and pantry work, deep frying, meat handling, pastry assembly, and banquet and catering set-up and serving. Instruction also includes topics such as communication, human resources, equipment, safety/first aid and sanitation. Persons completing the program may be qualified for entry-level positions such as salad/sandwich preparation person, short-order cook, kitchen helper or bakery helper.

### PROGRAM DESCRIPTIONS

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>518-310 Basic Food Production*</td>
<td>4</td>
<td>0-16</td>
</tr>
<tr>
<td>518-312 Short Order Cookery*</td>
<td>1</td>
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</tr>
<tr>
<td>518-318 Food Service Sanitation**</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>518-334 Bakery Production*</td>
<td>1</td>
<td>0-4</td>
</tr>
<tr>
<td>518-370 Interpersonal Skills**</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>27</strong></td>
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<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>518-318 Food Service Sanitation**</td>
<td>1</td>
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</tr>
<tr>
<td>518-361 Field Experience 1*</td>
<td>1</td>
<td>0-18</td>
</tr>
<tr>
<td>518-362 Field Experience 2*</td>
<td>1</td>
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<tr>
<td>518-370 Interpersonal Skills**</td>
<td>1</td>
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<td><strong>Total</strong></td>
<td><strong>2</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

*These courses are less than one semester in length.

**These courses meet for the entire semester.
Food Service Production

One-Year Vocational Diploma

Culinary Trades Department;
Business and Applied Arts Division

The Food Service Production Program helps students develop skills to pursue a career in the food-service industry within restaurants, bakeries, catering services, delis, hotels, resorts, health care facilities and schools.

The program incorporates bakery, deli and catering components. Graduates of the program are also eligible to receive a certificate of completion from the Retail Bakers of America, a national organization promoting the bakery and deli industry.

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>001-107 Introduction to Horticulture</td>
<td>4</td>
<td>3-2</td>
</tr>
<tr>
<td>001-120 Landscaping Interior</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>001-134 Turf and Lawn Management</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>001-140 Introduction to Landscaping</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>001-143 Garden Plants</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>001-144 Floral Design 1</td>
<td>3</td>
<td>1-4</td>
</tr>
<tr>
<td>001-145 Floral Design 2</td>
<td>3</td>
<td>0-6</td>
</tr>
<tr>
<td>001-148 Garden Plants</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>001-155 Garden Center Operations</td>
<td>3</td>
<td>2-2</td>
</tr>
</tbody>
</table>

Horticulture

Associate Degree Transfer Program

Agriculture and Technology Department; Agriculture, Apprenticeship, and Technical and Industrial Division

These courses are a unique career-access unit at MATC, in cooperation with Gateway Technical College in Kenosha and the Wisconsin-Upper Michigan Florists Association. Satisfactory completion of these courses will allow an individual to enter employment in the field of horticulture at a trained level or to transfer to the Horticulture Program at Gateway Technical College for completion of an associate degree. Additional general education courses in the program, such as Communications Skills 1 and 2, Economics, Contemporary American Society, Psychology of Human Relations, Accounting, and others may be completed at MATC. This is an easy way to start an associate degree in horticulture while remaining a resident of the MATC District. However, this is not a requirement since some students may wish to terminate their training with the courses offered at MATC.

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-102 Business Mathematics</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>104-102 Marketing Principles</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>109-101 Introduction to Leisure Services</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-151 Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

Hospitality and Tourism Management

Associate in Applied Science Degree

Marketing Department;
Business and Applied Arts Division

The hospitality and tourism industry is the fastest growing industry in the world and the second largest industry in Wisconsin. One out of every 10 workers in Wisconsin is employed in the hospitality and tourism industry. Career opportunities are limitless; however, the expectation for greatest growth is in management and supervisory positions. The Hospitality and Tourism Management Program is designed to develop competencies in leadership, problem solving, communications, cost control, and motivational, team-building, human relations and life skills as they apply to the hospitality and tourism industry.

Through a combination of classroom and on-the-job experiences, the program develops highly skilled entry-level employees to perform in any area of the hospitality and tourism industry. Major components of the industry include: lodging, food service, resort operation, sports facility operation, tourism marketing, special events and festivals, and meetings and conventions. Graduates of this program are employed as front office managers, food and beverage directors, restaurant managers, housekeeping managers, directors of convention and visitor bureaus, meeting planners, purchasing managers and hotel general managers.

PROGRAM DESCRIPTIONS
Human Service Associate
Associate in Applied Science Degree

Human Services Department; Health, Human and Protective Services Division

The Human Service Associate Program trains people to provide information, support, care and advocacy in a human service agency. Students acquire the skills needed to work with individuals, groups and communities. They learn to work with people of diverse racial, ethnic and cultural backgrounds.

General education courses included in the program teach students to better understand social problems. During the second year of the program, students have a fieldwork placement in a human service agency.

Some of the aptitudes and interests that are essential for human service students include emotional stability and maturity, an interest in working with people, and an appreciation of cultural diversity.

Admissions requirements: "high school diploma or GED/HSED and ASSET test.

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>520-105 Introduction to Human Services</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>520-106 Orientation to Human Services Populations</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>520-117 Interviewing</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>520-118 Issues in Alcohol and Other Drug Abuse</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-150 Communication Skills 1 OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-201 English Composition 1*</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>809-195 Psychology of Human Relations OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-211 Introduction to Psychology</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Year</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>520-116 Group Work Skills</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>520-120 Community Service Agencies</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>520-130 Social Change Skills</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-197 Technical Reporting</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-197 Contemporary American Society** OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-203 Introduction to Sociology</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>520-136 Counseling Alcoholics and Other Drug Abusers OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>520-141 Intro. to Community Mental Health OR</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>809-156 Aging and Its Social Problems</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
</tbody>
</table>

RECOMMENDED ELECTIVES:
520-136 Counseling Alcoholics and Other Drug Abusers 3 3-0
520-141 Intro. to Community Mental Health 3 3-0
520-150 AODA: Special Populations 3 3-0

REQUIREMENTS FOR GRADUATION
Sixty-six credits with a grade of C or better in each core course and a minimum 2.5 grade point average in all 520 courses and electives. Students must also have at least a 2.0 grade point average in all general education courses.

*College transfer equivalent courses.
**Approved alternate: 809-125, Government Process and Practice.

PROGRAM DESCRIPTIONS
Industrial Maintenance

Two-Year Vocational Diploma

Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division

This entry-level job program prepares individuals for employment as industrial maintenance mechanics, repairers, adjusters and installers of independent equipment or automated systems. The educational objectives focus on electromechanical and automated, computer-controlled, manufacturing machines as they relate to systems operations, applications, installation and modification.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Credits</td>
</tr>
<tr>
<td>414-316 DC/AC Circuits for Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>420-330 Metal Processes I</td>
<td>2</td>
</tr>
<tr>
<td>421-392 Drawing Interpretation for Industrial Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>462-306 Industrial Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>462-316 Maintenance Shop Processes</td>
<td>2</td>
</tr>
<tr>
<td>804-381 Machine Tool Mathematics I</td>
<td>2</td>
</tr>
<tr>
<td>Second Semester</td>
<td></td>
</tr>
<tr>
<td>420-335 Metal Processes for Maintenance</td>
<td>2</td>
</tr>
<tr>
<td>462-303 Industrial Equipment Mechanisms/Industrial Electricity and Controls</td>
<td>5</td>
</tr>
<tr>
<td>462-316 Fluid Distribution Systems</td>
<td>2</td>
</tr>
<tr>
<td>801-356 Communications I</td>
<td>1</td>
</tr>
<tr>
<td>804-381 Machine Tool Mathematics 2</td>
<td>1</td>
</tr>
<tr>
<td>806-363 Science I</td>
<td>2</td>
</tr>
<tr>
<td>809-352 Humart Relations</td>
<td>2</td>
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<tr>
<td>SECOND YEAR</td>
<td></td>
</tr>
<tr>
<td>First Semester</td>
<td></td>
</tr>
<tr>
<td>414-318 Electronic Circuits for Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>414-319 Programmable Logic Controllers</td>
<td>3</td>
</tr>
<tr>
<td>462-308 Hearing and Air Conditioning 1</td>
<td>3</td>
</tr>
<tr>
<td>462-311 Industrial Maintenance Mechanic I</td>
<td>3</td>
</tr>
<tr>
<td>462-312 Business Operations</td>
<td>2</td>
</tr>
<tr>
<td>462-317 Building Service Maintenance</td>
<td>3</td>
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<tr>
<td>Second Semester</td>
<td></td>
</tr>
<tr>
<td>414-321 Interfacing Sensors with Computer Controls</td>
<td>3</td>
</tr>
<tr>
<td>462-309 Hearing and Air Conditioning 2</td>
<td>3</td>
</tr>
<tr>
<td>462-314 Manufacturing Systems, Application and Control*</td>
<td>3</td>
</tr>
<tr>
<td>462-315 Building Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>462-322 Industrial Maintenance Mechanic 2*</td>
<td>3</td>
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<tr>
<td>801-357 Communications 2</td>
<td>1</td>
</tr>
</tbody>
</table>

REQUIREMENTS FOR GRADUATION
Sixty-three credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for specific occupational courses.

*462-314 and 462-322 are Internship Courses.

Insurance Services

Associate in Applied Science Degree

Marketing Department; Business and Applied Arts Division

The Insurance Services Program is designed to meet the entry-level educational needs of most segments of the insurance industry, including customer service representatives, underwriter assistants/coordinators, risk raters/clerks, claims coordinators (property/casualty, commercial and personal lines, health claims), benefits and Medicare/Medicaid coordinators, and sales/marketing representatives for personal lines, commercial lines, property, casualty, life and health. Training blends general educational development and required insurance technical skills. The program is intended to cover entry-level qualifications for life/health and property/casualty positions.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Credits</td>
</tr>
<tr>
<td>101-114 Applied Accounting 1</td>
<td>3</td>
</tr>
<tr>
<td>102-102 Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>103-135 WordPerfect — Beginning</td>
<td>1</td>
</tr>
<tr>
<td>104-102 Marketing Principles</td>
<td>3</td>
</tr>
<tr>
<td>162-101 Principles of Insurance (INS 21)</td>
<td>3</td>
</tr>
<tr>
<td>801-151 Communication Skills I</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td></td>
</tr>
<tr>
<td>104-104 Selling Principles</td>
<td>3</td>
</tr>
<tr>
<td>162-102 Personal Insurance (INS 22)</td>
<td>3</td>
</tr>
<tr>
<td>162-103 Fundamentals of Financial Planning</td>
<td>3</td>
</tr>
<tr>
<td>801-198 Speech</td>
<td>3</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>SECOND YEAR</td>
<td></td>
</tr>
<tr>
<td>First Semester</td>
<td></td>
</tr>
<tr>
<td>102-160 Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>104-160 Sales Management</td>
<td>3</td>
</tr>
<tr>
<td>162-104 Principles of Underwriting (AU 61/62)</td>
<td>3</td>
</tr>
<tr>
<td>162-105 The Claims Environment (AIC 33)</td>
<td>3</td>
</tr>
<tr>
<td>162-106 Commercial Insurance (INS 23)</td>
<td>3</td>
</tr>
<tr>
<td>Second Semester</td>
<td></td>
</tr>
<tr>
<td>104-172 Career Planning</td>
<td>3</td>
</tr>
<tr>
<td>162-107 Life and Health Insurance</td>
<td>3</td>
</tr>
<tr>
<td>809-195 Economics</td>
<td>3</td>
</tr>
<tr>
<td>809-196 Contemporary American Society</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

RECOMMENDED ELECTIVES
162-112 Property Loss Adjusting (AIC 35) | 3 |
162-113 Liability Claims Adjusting (AIC 36) | 3 |

REQUIREMENTS FOR GRADUATION
One-half of the total 64 credits must be completed at MATC. Minimum grade point average of 2.0.

Program Descriptions
Interior Design

Associate in Applied Arts Degrees
Art Department; Business and Applied Arts Division

Graduates of the Interior Design Program are employed by interior design firms, furniture stores, flooring stores, paint and decorating centers, building centers, kitchen and bath design firms, office dealerships, and corporations as in-house interior designers.

Interior designers confer with clients to determine the purpose and function of the environment, style preferences, budget, types of construction, equipment to be installed and other factors which affect planning interior environments. They integrate findings with their knowledge of interior design and formulate plans to be practical, aesthetic and conducive to intended purposes, such as raising productivity or improving the life style of occupants. Interior designers advise clients on interior design factors, such as space planning, the layout and utilization of furnishings and equipment, color schemes and coordination, and the selection of interior components. They estimate material requirements and costs, prepare drawings and materials for presentation to the client for approval and coordinate the implementation of all phases of the design project.

Successful interior designers are creative and visually sensitive individuals who enjoy working with people and the components of interior design. They are organized and decisive with the ability to follow through on all tasks, as well as effective sales-oriented communicators.

SECOND YEAR

First Semester
104-100 Sales
3  3-0
304-132 Kitchen and Bath Design
2  1-3
304-133 Commercial Design
4  2-6
304-135 Lighting
2  1-3
809-199 Psychology of Human Relations
3  3-0
Elective
3  below
17 21+ E

Second Semester
304-142 Professional Practice
3  3-0
304-143 Advanced Interior Design
2  1-3
304-145 Interior Design Internship
3  1-8
809-195 Economics
3  3-0
809-197 Contemporary American Society
3  3-0
Elective
3  below
17 22+ E

RECOMMENDED ELECTIVES
104-194 Visual Merchandising
3  2-2
304-152 Issues in Interior Design
1  1-0
304-154 Commercial CAD
1  0-2
304-155 Kitchen CAD
1  0-2
614-113 Introduction to CAD-Architectural
2  1.5-15
614-114 Applications of CAD
2  1.5-15

REQUIREMENTS FOR GRADUATION
Sixty-eight credits are required for graduation.

Laboratory Animal Technician
Two-Year Associate Degree
Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

This program emphasizes the acquisition of skills and technical information necessary for entry-level positions in the laboratory of those industries and organizations producing or utilizing laboratory animals. Laboratory animals include not only rodents, rabbits, cats and dogs, but also horses, cattle, poultry, primates and any other animals used to gain information.

Graduates of this program will be competent to collect and process samples, perform laboratory tests, administer medications, perform radiography procedures, administer anesthetics, assist in surgical procedures, and perform surgery under the direction of a veterinarian or a qualified scientist. Other routine procedures include humane care, handling and restraint of the animals, maintenance of supplies and equipment, and the collection and processing of data.

Admissions requirements include: 1) high school graduation or equivalency; 2) high school and post-secondary transcripts; and 3) one year of high school algebra, biology and chemistry. Applicants without algebra, biology and/or chemistry can take these courses at MATC, however, they must take them prior to enrollment in occupational courses. Other courses which may be helpful to program success are accounting, agriculture, mathematics, keyboarding and computer courses.
The ACT test or equivalent is required prior to admission. Applicants will take the ASSET test if the ACT or equivalent test has not been taken.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Credits</th>
<th>Lea-Lab</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIRST YEAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Semester</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>091-123</td>
<td>Introduction to Laboratory Animal Science</td>
<td>2</td>
<td>1-3</td>
</tr>
<tr>
<td>091-170</td>
<td>Veterinary Medical Terminology Occupational Preparation*</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>091-171</td>
<td>Animal Care and Management 1</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>801-151</td>
<td>Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>806-105</td>
<td>Animal Biology</td>
<td>4</td>
<td>3-2</td>
</tr>
<tr>
<td>809-199</td>
<td>Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>17</td>
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<tr>
<td>Second Semester</td>
<td></td>
<td></td>
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<tr>
<td>091-115</td>
<td>Zoonosis</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>091-172</td>
<td>Animal Care and Management 2</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>091-174</td>
<td>Laboratory Procedures</td>
<td>3</td>
<td>1-4</td>
</tr>
<tr>
<td>806-110</td>
<td>Technical Chemistry</td>
<td>4</td>
<td>3-2</td>
</tr>
<tr>
<td>809-197</td>
<td>Contemporary American Society Elective</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td></td>
<td></td>
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<td>17</td>
</tr>
<tr>
<td>Summer Semester</td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

| SECOND YEAR |         |         |                       |
|             |         |         |                       |
| First Semester |         |         |                       |
| 091-140 | Animal Anatomy and Physiology 1 | 4 | 2-4 |
| 091-175 | Infectious Diseases | 3 | 3-0 |
| 091-176 | Veterinary Nursing Procedures | 3 | 1-6 |
| 091-178 | Issues in Laboratory Animal Science | 2 | 2-0 |
| 801-197 | Technical Reporting | 3 | 3-0 |
| 809-195 | Economics | 3 | 3-0 |
|             |         |         | 18 | 24 |
| Second Semester |         |         |                       |
| 091-173 | Facility Management Techniques | 3 | 3-0 |
| 091-177 | Animal Anatomy and Physiology 2 | 3 | 2-2 |
| 091-179 | Laboratory Animal Science 2 | 3 | 1-4 |
| 091-180 | Research Animal Surgical Nursing Elective | 4 | 1-6 |
|         |         |         | 3 | below |
|         |         |         | 16 | 19+E |

| RECOMMENDED ELECTIVES*|         |         |                       |
| AND DEVELOPMENTAL COURSES** |         |         |                       |
| 09113 | Animal Nutrition | 2 | 2-0 |
| 091-114 | Animal Behavior | 2 | 2-0 |
| 091-116 | Introduction to Microbiology | 3 | 2-3 |
| 091-117 | Exotic Animal Husbandry | 2 | 2-0 |
| 091-121 | Laboratory Techniques 2 | 4 | 1-6 |
| 103-130 | Microcomputer Applications | 2 | 2-2 |
| 804-201 | Intermediate Algebra | 3 | 5-2 |
| 804-206 | Pre-College Algebra* | 3 | 5-0 |
| 806-377 | Pre-College Chemistry* | 3 | 3-2 |
| 806-111 | Chemistry 1 | 3 | 3-2 |
| 806-112 | Chemistry 2 | 3 | 3-2 |

*May be required for persons who have not had high school algebra or chemistry.
**Electives must be approved by program director.

Legal Transcriptionist

One-Year Diploma

Business Department; Business and Applied Arts Division

In addition to the usual skills and knowledge required of all office workers who do word processing, the legal transcriptionist must have a working knowledge of legal terminology, legal documents, pleadings and procedures necessary in instituting and prosecuting a lawsuit.

Advancement possibilities include legal secretary, legal assistant and certified professional legal secretary.

Students are prepared to work for attorneys, government offices and legal departments of industry. A supervised internship in a legal office is an important part of the training. Admission requirement: typing speed, 45 wpm.

<table>
<thead>
<tr>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>102-260</td>
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<tr>
<td>102-160</td>
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<tr>
<td>103-330</td>
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<td>103-130</td>
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<td>106-319</td>
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<td>106-328</td>
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<tr>
<td>106-349</td>
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<tr>
<td>801-351</td>
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<tr>
<td>Second Semester</td>
</tr>
<tr>
<td>102-261</td>
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<tr>
<td>102-161</td>
</tr>
<tr>
<td>103-357</td>
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<td>106-308</td>
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<tr>
<td>106-375</td>
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</tr>
</tbody>
</table>

REQUIREMENTS FOR GRADUATION

One-half of the total 30-33 credits must be completed at MATC. Minimum grade point average of 2.0.

*Not a beginning typing course; keyboarding knowledge required.
1 Offered semester 1 only.
2 Offered semester 2 only.
Liberal Studies Degrees  
General Education Division

These programs are designed for students who wish to gain a broad, general background and either intend to continue on to a four-year baccalaureate degree or, for economic, social or academic reasons, wish to combine liberal studies with electives from a vocational or technical program.

For students who wish to pursue the first goal, the program covers a span of instruction that generally satisfies the first two years’ requirements for various majors in four-year colleges and universities. If the student has no major field in mind, this program introduces him/her to several areas of study and serves as a broad preparation for transfer.

Students focusing on the second objective are introduced to various ways of examining and understanding the world around them and themselves in relation to that world. At the same time, they may prepare for occupations by taking commercial, technical or industrial electives.

**Associate in Science Degree**  
64 Credits

<table>
<thead>
<tr>
<th>MINIMUM REQUIREMENTS</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>English and Speech</td>
<td>9</td>
</tr>
<tr>
<td>History and Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics and Natural Science</td>
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<td>Humanities</td>
<td>9</td>
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<tr>
<td>Health/Wellness</td>
<td>1</td>
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<tr>
<td>Electives</td>
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</tbody>
</table>

Electives include any college-credit transfer credits beyond minimum requirements and a maximum of six credits in associate degree courses from approved associate of applied arts or applied science degree programs. No more than two credits of health and physical education may be counted in the 64-credit total.

**College Transfer Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>801-201 English Composition 1</td>
<td>3</td>
</tr>
<tr>
<td>801-202 English Composition 2</td>
<td>3</td>
</tr>
<tr>
<td>801-203 Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>801-204 Introduction to Modern Literature</td>
<td>3</td>
</tr>
<tr>
<td>801-213 Survey of British Literature</td>
<td>3</td>
</tr>
<tr>
<td>801-217 Survey of American Literature</td>
<td>3</td>
</tr>
<tr>
<td>801-218 Special Topics in American Literature</td>
<td>3</td>
</tr>
<tr>
<td>801-219 Survey of Western World Literature</td>
<td>3</td>
</tr>
<tr>
<td>801-220 Survey of Western World Literature 2</td>
<td>3</td>
</tr>
<tr>
<td>801-221 Survey of Western World Literature 3</td>
<td>3</td>
</tr>
<tr>
<td>801-222 Literature of the Theatre</td>
<td>3</td>
</tr>
<tr>
<td>801-240 Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>801-245 Newswriting and Reporting</td>
<td>4</td>
</tr>
<tr>
<td>801-247 Feature Writing</td>
<td>4</td>
</tr>
<tr>
<td>801-250 Women in Literature</td>
<td>3</td>
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</table>

**Associate in Arts Degree**  
64 Credits

<table>
<thead>
<tr>
<th>MINIMUM REQUIREMENTS</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>English and Speech</td>
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</tr>
<tr>
<td>History and Social Sciences</td>
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<tr>
<td>Mathematics and Natural Science</td>
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<td>Humanities</td>
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<tr>
<td>Electives</td>
<td>16</td>
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</tbody>
</table>

Electives include any college-credit transfer credits beyond minimum requirements and a maximum of six credits in associate degree courses from approved associate of applied arts or applied science degree programs. No more than two credits of health and physical education may be counted in the 64-credit total.

**Foreign Language**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>802-201 Spanish 1</td>
<td>4</td>
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<tr>
<td>802-212 Spanish 2</td>
<td>4</td>
</tr>
<tr>
<td>802-213 Spanish 3</td>
<td>4</td>
</tr>
<tr>
<td>802-214 Spanish 4</td>
<td>4</td>
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<tr>
<td>802-221 French 1</td>
<td>4</td>
</tr>
<tr>
<td>802-222 French 2</td>
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<tr>
<td>802-223 French 3</td>
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<tr>
<td>802-224 French 4</td>
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**History**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<td>803-204 Making of Modern Europe</td>
<td>3</td>
</tr>
<tr>
<td>803-205 Europe and the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>803-211 American History 1607-1865</td>
<td>3</td>
</tr>
<tr>
<td>803-212 American History 1865 to the Present</td>
<td>3</td>
</tr>
<tr>
<td>803-213 History of the American West</td>
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**Program Descriptions**
<table>
<thead>
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<th>Course Code</th>
<th>Course Name</th>
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<tr>
<td>805-206</td>
<td>Introduction to Computer Use</td>
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<td>805-208</td>
<td>Computer Science (Pascal)</td>
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<td>805-212</td>
<td>College Algebra</td>
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<td>805-213</td>
<td>Trigonometry</td>
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<td>805-229</td>
<td>Mathematical Analysis</td>
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<tr>
<td>805-231</td>
<td>Calculus and Analytic Geometry I</td>
<td>5</td>
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<td>805-232</td>
<td>Calculus and Analytic Geometry II</td>
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<td>805-240</td>
<td>Basic Statistics</td>
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<tr>
<td>805</td>
<td>Music</td>
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<tr>
<td>805-211</td>
<td>New College Singers</td>
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<tr>
<td>805-215</td>
<td>Contemporary Music History</td>
<td>3</td>
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<td>805-227</td>
<td>Music Appreciation</td>
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<td>805-228</td>
<td>History of Music in Film</td>
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<td>805-260</td>
<td>Basic Music Theory</td>
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<td>805-261</td>
<td>Music Theory I</td>
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<td>805-262</td>
<td>Music Theory II</td>
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<td>805-263</td>
<td>Jazz History</td>
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<td>805-264</td>
<td>Great Composers in Music</td>
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<td>805-265</td>
<td>General History of Music</td>
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<td>805-267</td>
<td>Ear Training and Keyboard Theory</td>
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<td>805-273</td>
<td>Broadway Music Theater</td>
<td>2</td>
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<td>805-276</td>
<td>Music Television</td>
<td>3</td>
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<td>805-277</td>
<td>Techniques of Sound Recording</td>
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<td>Animal Biology</td>
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<td>Zoology Concepts</td>
<td>1</td>
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<tr>
<td>806-206</td>
<td>General Anatomy and Physiology</td>
<td>4</td>
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<td>806-207</td>
<td>Anatomy and Physiology I</td>
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<td>806-210</td>
<td>College Chemistry II with Biochemistry</td>
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<td>806-211</td>
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<td>806-213</td>
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<td>806-214</td>
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<td>Botany</td>
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<td>806-217</td>
<td>Botanical Concepts</td>
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<td>806-221</td>
<td>General College Physics I</td>
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<td>General College Physics II</td>
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<td>4.3</td>
</tr>
<tr>
<td>806-230</td>
<td>Human Anatomy</td>
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<td>806-231</td>
<td>Biology of Human Aging</td>
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<tr>
<td>806-241</td>
<td>Earth Science</td>
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<tr>
<td>806-242</td>
<td>Life in the Past</td>
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<td>2.1</td>
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<tr>
<td>806-243</td>
<td>Survey of Astronomy</td>
<td>4</td>
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<tr>
<td>806-244</td>
<td>General Geology</td>
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<tr>
<td>806-245</td>
<td>Weather and Climate</td>
<td>3</td>
<td>3.0</td>
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<tr>
<td>806-246</td>
<td>Survey of Biochemistry</td>
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<tr>
<td>806-265</td>
<td>Microbiology</td>
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<td>806-273</td>
<td>General Microbiology</td>
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<td>Mycology and Parasitology</td>
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<td>Environmental Issues</td>
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<td>807</td>
<td>Physical Education</td>
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<tr>
<td>807-207</td>
<td>Introduction to Triathlon</td>
<td>1</td>
<td>2.0</td>
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<tr>
<td>807-209</td>
<td>Baseball/Conditioning</td>
<td>1</td>
<td>2.0</td>
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</tbody>
</table>

**Program Descriptions**
Machine Tooling Technics
Two-Year Diploma

The Machine Tooling Technics Program provides students with the knowledge and skills necessary to plan and complete a machined product. The student learns to work from blueprints, specifications and shop drawings; select materials to produce each part; set up the operational procedure; produce the part to the dimensions required; and verify conformance of machined workpiece to specifications using instruments such as microscopes, calipers, indicators and gauge blocks. The ASSET test is required prior to registration.

Marketing
Associate in Applied Science Degree

It is estimated that almost a third of all Americans are now employed in marketing-related positions. Marketing is critical to the success of every organization — whether large or small, profit or nonprofit, product or service oriented. To provide quality customer service, these organizations must identify and research target markets, determine customer needs, and establish how products and services can most effectively be distributed, priced and promoted. Graduates of this program have found a wide variety of positions including inside and outside sales representatives, sales managers, order analysts, store managers,
sales promotion assistants, survey research supervisors, telemarketing managers, advertising counselors and parts managers.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lab-Lab</th>
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<tbody>
<tr>
<td>1st Semester</td>
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<tr>
<td>104-101 Career Orientation</td>
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<td>1-0</td>
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<tr>
<td>104-102 Marketing Principles</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>104-104 Selling Principles</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>104-137 Marketing Mathematics</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>801-151 Communication Skills 1</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
<td>3-0</td>
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</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
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</tbody>
</table>

| 2nd Semester             |         |                       |         |
| 101-114 Applied Accounting 1 | 3       | 3-0                   |         |
| 103-125 WordPerfect - Beginning  | 3       | 3-0                   |         |
| 104-110 Supervision Principles  | 3       | 3-0                   |         |
| 104-180 International Marketing  | 3       | 3-0                   |         |
| 104-185 Customer Service Management | 3       | 3-0                   |         |
| 801-198 Speech            | 3       | 3-0                   |         |
|                          | 16      | 16                    |         |

| SECOND YEAR              |         |                       |         |
| 1st Semester             |         |                       |         |
| 104-103 Marketing Information Management | 3       | 3-0                   |         |
| 104-124 Retail Management  | 3       | 3-0                   |         |
| 104-125 Promotion Principles 1 | 3       | 3-0                   |         |
| 809-195 Economics         | 3       | 3-0                   |         |
| 809-197 Contemporary American Society | 3       | 3-0                   |         |
|                            | 18      | 18                    |         |

| 2nd Semester             |         |                       |         |
| 102-160 Business Law     | 3       | 3-0                   |         |
| 104-126 Promotion Principles 2 | 3       | 3-0                   |         |
| 104-160 Sales Management  | 3       | 3-0                   |         |
| 104-172 Career Planning  | 3       | 3-0                   |         |
|                            | 15      | 15                    |         |

RECOMMENDED ELECTIVES
104-106 Small Business Management 2
104-107 Advanced Marketing Principles 3
104-108 Advanced Selling Principles 3
104-165 Marketing Internship 3

REQUIREMENTS FOR GRADUATION
One-half of the total 65 credits must be completed at MATC. Minimum grade point average of 2.0.

Marketing-Fashion Marketing
Associate in Applied Science Degree
Marketing Department; Business and Applied Arts Division

Fashion marketing presents many exciting career opportunities to people who have the ability and interest to create, develop and promote new fashion products and services. Opportunities in retail, wholesale, manufacturing and related marketing fields are available to graduates of the program. Professional courses stress an understanding of marketing activities and a knowledge of fashion products and practices. Field trips to markets and retail centers such as New York, Chicago and Minneapolis as well as guest lecturers enrich class studies and enable students to explore career opportunities. Second-year students receive supervised work experience either in the summer between the first and second year, or in the third semester.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lab-Lab</th>
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<tbody>
<tr>
<td>1st Semester</td>
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<td></td>
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<tr>
<td>103-115 WordPerfect - Beginning</td>
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<tr>
<td>104-102 Marketing Principles</td>
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</tr>
<tr>
<td>104-125 Promotion Principles 1</td>
<td>3</td>
<td>3-0</td>
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</tr>
<tr>
<td>104-195 Fashion Analysis</td>
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</tr>
<tr>
<td>104-197 Apparel Marketing</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>801-151 Communication Skills 1</td>
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<td>3-0</td>
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<tr>
<td></td>
<td>15</td>
<td>15</td>
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| 2nd Semester             |         |                       |         |
| 104-104 Selling Principles  | 3       | 3-0                   |         |
| 104-123 Merchandising     | 3       | 3-0                   |         |
| 104-137 Marketing Mathematica | 3       | 3-0                   |         |
| 104-194 Visual Merchandising | 3       | 3-0                   |         |
| 809-199 Psychology of Human Relations | 3       | 3-0                   |         |
|                          | 15      | 15                    |         |

| Summer Session           |         |                       |         |
| 104-157 Internship       | 3       | 3-0                   |         |
|                          | 9       | 9                     |         |

| SECOND YEAR              |         |                       |         |
| 1st Semester             |         |                       |         |
| 104-110 Supervision Principles | 3       | 3-0                   |         |
| 104-118 Store Operations  | 3       | 3-0                   |         |
| 104-196 Textiles         | 2       | 2-0                   |         |
| 809-195 Economics        | 3       | 3-0                   |         |
|                            | 14      | 14                    |         |

| 2nd Semester             |         |                       |         |
| 104-103 Marketing Information Management | 3       | 3-0                   |         |
| 104-117 Store Management OR | 3       | 3-0                   |         |
| (104-124) (Retail Management) | (3)     | (3-0)                 |         |
| 104-138 Internship 2     | 3       | 3-0                   |         |
| 809-197 Contemporary American Society | 3       | 3-0                   |         |
| 801-198 Speech           | 3       | 3-0                   |         |
|                            | 18      | 28                    |         |

RECOMMENDED ELECTIVES
104-134 Fashion Stylist/Modelling 3
104-185 Customer Service Management 3

REQUIREMENTS FOR GRADUATION
One-half of the total 65 credits must be completed at MATC. Minimum grade point average of 2.0.

Mechanical Design Technician
Associate in Applied Science Degree
Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division

The mechanical design curriculum is based on manufacturing and design of mechanical products or the machines, tools and equipment used in fabrication or assembly. Students acquire extensive skills using computers as a
design tool. The increased use of automation in all industries has triggered a rising demand for trained people in this field. The ASSET test is required for math and English placement.

**Medical Assistant**

**One-Year Diploma**

*Health Occupations Department; Health, Human and Protective Services Division*

The Medical Assistant Program is accredited by the American Medical Association's Commission on Accreditation of Allied Health Education Programs, on the recommendation of the Committee on Accreditation for Medical Assistant Education. The program is designed to orient students to the duties of a physician's office employee, from general office procedures to the technical phases of examining room assisting and elementary medical laboratory techniques. Related instruction runs concurrently with occupational instruction throughout the program.

Occupational experience is provided through placement in a local office/clinic during the last four weeks of the final semester. Graduates are eligible to sit for the national certification examination immediately after graduation.

Aptitudes and interests that are helpful are a genuine interest in medicine and in helping people. A medical assistant is courteous, tactful and well-organized, able to work quickly and accurately under pressure, flexible and able to adjust to diverse personalities, follow directions and adhere to standards. Admission requirements: 1) high school graduate, HSDE or GED; and 2) assessment test.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lec-Lab</th>
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<td>3-3</td>
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<tr>
<td></td>
<td>Manufacturing Processes</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td></td>
<td>Communication Skills 1</td>
<td>3</td>
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<tr>
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<td>Technical Science 1</td>
<td>3</td>
<td>3-2</td>
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<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lec-Lab</th>
</tr>
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<tbody>
<tr>
<td>Second</td>
<td>Intermediate Mechanical Graphics</td>
<td>3</td>
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<tr>
<td></td>
<td>Introduction to Computer-Aided Drifting (MDT)</td>
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<td></td>
<td>Statics and Mechanics</td>
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<td>Manufacturing Materials Processing</td>
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<td>Technical Mathematics 2</td>
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<td>Technical Science 2</td>
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**SECOND YEAR**

<table>
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<tr>
<th>Semester</th>
<th>Course Title</th>
<th>Credits</th>
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<th>Lec-Lab</th>
</tr>
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<tr>
<td>First</td>
<td>Advanced Mechanical Graphics</td>
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<td></td>
<td>Descriptive Geometry</td>
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<td></td>
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<td></td>
<td>Advanced CAD (MDT)</td>
<td>2</td>
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<td></td>
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<td></td>
<td>Strength of Materials</td>
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<td>Economics</td>
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<td></td>
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<tr>
<td></td>
<td>Contemporary American Society</td>
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<td>Elective</td>
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<td><strong>Total</strong></td>
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<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>Second</td>
<td>Advanced Mechanical Graphics</td>
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<tr>
<td></td>
<td>Tool Design</td>
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<td>Machine Design</td>
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<td>Job Orientation</td>
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<td>Technical Reporting</td>
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**RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Costs/Product Analysis</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>Product Development</td>
<td>3</td>
<td>2-4</td>
<td></td>
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<tr>
<td>Principles of Metallurgy</td>
<td>3</td>
<td>1-2</td>
<td></td>
</tr>
<tr>
<td>Basic Computer Mathematics</td>
<td>2</td>
<td>2-1</td>
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</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

Seventy-one credits with a GPA of 2.0 (C) or above, Average of 2.0 (C) or above for occupational specific courses.

*Forty hours per week, last four weeks.*
Medical Coding Specialist

Less Than One-Year Diploma
Health Occupations Department; Health, Human and Protective Services Division

The Medical Coding Specialist Program has been developed to prepare students for employment as entry-level coders in acute and ambulatory health care facilities, insurance companies or government agencies associated with health care reimbursement, medical research and health planning.

The coding professional requires skills in utilizing and interpreting complex medical data. The professional coder assigns and sequences diagnoses and procedure codes using a universally recognized system mandated for payment of health care claims, statistics and medical research. The coder also verifies the codes utilizing computer software. Admission requirements: high school graduate or GED, with above average grades.

**Hrs per week in class**

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Credits</th>
<th>Lee-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>530-301 Pathophysiology/Pharmacology</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td>530-302 Introduction to Medical Records</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>530-303 ICD-9-CM Coding</td>
<td>3</td>
<td>9-0</td>
</tr>
<tr>
<td>530-304 CPT Coding</td>
<td>3</td>
<td>7-1</td>
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<tr>
<td>530-305 Medical Terminology</td>
<td>2</td>
<td>3-0</td>
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<tr>
<td>530-306 Body Structure and Function</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

Must complete all courses and affiliation with 76 percent or better, C grade.

1) Students do not need to complete the entire program in one semester. Students are accepted and admitted for both fall and spring semesters.

2) These courses may only be taken after or concurrent with 530-305, 530-306 and 530-302. Courses 530-303 and 530-304 must be taken together.

---

Medical Laboratory Technician

Associate in Applied Science Degree
Health Occupations Department; Health, Human and Protective Services Division

The Medical Laboratory Technician Program is approved by the National Accrediting Agency for Clinical Laboratory Science. The program prepares individuals for work in medical laboratories under the supervision of medical technologists. An instructional combination of fundamental principles of selected laboratory techniques as well as clinical experience in medical laboratories prepares graduates for work in both public and private laboratories serving the health care sector. The medical laboratory technician/clinical laboratory technician is trained to perform routine laboratory procedures in microbiology, blood banking, clinical chemistry, hematology, serology and urinalysis. The final semester practicum is in hospitals in Madison and throughout the MATC District. The list of hospitals used is available in the program director’s office.

Graduates of the program qualify for both the Board of Registry and the National Certification Agency for Laboratory Personnel certification exams for medical laboratory technicians and clinical laboratory technicians, respectively, under the direction of the American Society of Clinical Pathologists and the American Society for Clinical Laboratory Science.

Aptitudes and interests that may be helpful include an interest in scientific, technical and mathematical applications, and the ability to work under pressure, follow directions accurately and solve problems with confidence.

Admission requirements: 1) high school graduation or GED with a C or better average; 2) the following high school courses with C or better grades – three years of English, one year of chemistry, two years of algebra one year of algebra and one year of geometry; and 3) ACT, SAT or CQT test. Students are accepted and admitted for both fall and spring semester.

**Hrs per week in class**

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
<th>Lee-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>513-100 Introduction to Medical Laboratory Careers</td>
<td>3</td>
<td>1-6</td>
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<tr>
<td>513-101 Clinical Microscopy</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>801-151 Communication Skills 1* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-201 English Composition 1*</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>806-101 General Chemistry*</td>
<td>5</td>
<td>4-2</td>
</tr>
<tr>
<td>806-173 Microbiology*</td>
<td>3</td>
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<td>17</td>
<td>26</td>
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<tr>
<td>Second Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>513-104 Hematology</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>513-111 Clinical Microbiology</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>801-152 Communication Skills 2* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-202 English Composition 2*</td>
<td>(3)</td>
<td>(3-0)</td>
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<tr>
<td>806-106 Anatomy and Physiology*</td>
<td>4</td>
<td>3-2</td>
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<td></td>
<td>17</td>
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<tr>
<td>Summer Session</td>
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<td></td>
</tr>
<tr>
<td>809-197 Contemporary American Society* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-203 Introduction to Sociology*</td>
<td>(2)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations* OR</td>
<td>3</td>
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<td>809-231 Introduction to Psychology*</td>
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<tr>
<td></td>
<td>6</td>
<td>6</td>
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<tr>
<td>SECOND YEAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>513-107 Instrumentation</td>
<td>2</td>
<td>1-2</td>
</tr>
<tr>
<td>513-108 Clinical Immunology</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>513-109 Clinical Chemistry</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>809-195 Economics* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-222 State and Local Government*</td>
<td>(2)</td>
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<tr>
<td>Elective*</td>
<td>3</td>
<td>below</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>24+E</td>
</tr>
</tbody>
</table>
Graduates in this program must have an understanding of principles of a complex nature and perform effectively under all circumstances, as well as be friendly and understanding in dealings with patients and coworkers. These are learned in formal education programs and on-the-job learning experiences. Students who enter this program should be able to provide excellent preparation for secretarial positions in any business. The status of medical assistant-administrative certification can be acquired upon completion of the program.

Medical Office Mid-Management
Associate in Applied Science Degree
Business Department; Business and Applied Arts Division

Health care, the second largest employer in the country, requires trained and experienced medical business personnel. Students who enter this program should be able to concentrate on details, understand and apply instructions and principles of a complex nature and perform effectively under all circumstances, as well as be friendly and understanding in dealings with patients and co-workers. Graduates in this program must have an understanding of patient care needs and good business practices, and an ability to coordinate relationships with professional health personnel and community-health and social-health agencies. These are learned in formal education programs combined with on-the-job learning experiences.

<table>
<thead>
<tr>
<th>RECOMMENDED ELECTIVES</th>
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</thead>
<tbody>
<tr>
<td>103-130 Microcomputer Applications</td>
</tr>
<tr>
<td>806-275 Myology and Parasitology</td>
</tr>
</tbody>
</table>

*Courses which can be taken prior to entering the program, may be taken at the college transfer level. An elective may be any three-credit college transfer course of the student's choice.

**Note:** All courses beginning with 513 must be taken in sequential order.

Medical Office Mid-Management
Associate in Applied Science Degree
Business Department; Business and Applied Arts Division

The Medical Secretary Program prepares the secretary for work in the office of a doctor, clinic, hospital, or for employment wherever a knowledge of medical terminology, professional procedures and ethics is required. It also provides excellent preparation for secretarial positions in any business. The status of medical assistant-administrative certification can be acquired upon completion of the required job experience and written examinations.

**Requirements for Graduation:**
One-half of the total 67 credits must be completed at MATC. Minimum grade point average of 2.0.

1Offered semester 1 only.
2Offered semester 2 only.
*Offered evenings only.

Medical Secretary
Associate in Applied Science Degree
Business Department; Business and Applied Arts Division

The Medical Secretary Program prepares the secretary for work in the office of a doctor, clinic, hospital, or for employment wherever a knowledge of medical terminology, professional procedures and ethics is required. It also provides excellent preparation for secretarial positions in any business. The status of medical assistant-administrative certification can be acquired upon completion of the required job experience and written examinations.

**Requirements for Graduation:**
One-half of the total 67 credits must be completed at MATC. Minimum grade point average of 2.0.

1Offered semester 1 only.
2Offered semester 2 only.
*Offered evenings only.
### Medical Transcriptionist

**One-Year Diploma**

**Business Department; Business and Applied Arts Division**

Successful completion of this program qualifies the student for entry-level employment as a medical transcriptionist wherever machine transcription of medical material is required: hospitals, clinics, doctors' offices, nursing homes, specialty laboratories, transcription services and insurance companies. A medical transcriptionist must possess a thorough knowledge of medical terminology, anatomy, pathology and pharmacology. The status of certified medical transcriptionist can be acquired upon completion of the required job experience and written examinations. Admission requirement: keyboarding, 45 wpm.

#### Requirements for Graduation

One-half of the total 66 credits must be completed at MATC. Minimum grade point average of 2.0.

1. Offered semester 1 only.
2. Offered semester 2 only.

---

### Motorcycle, Marine and Outdoor Power Products Technician

**One-Year Diploma**

**Technical and Industrial Department; Agriculture, Apprenticeship, and Technical and Industrial Division**

This program offers detailed instruction in the operation, maintenance and repair of internal combustion engines and the equipment they power. Students study electrical systems and power trains, and learn techniques in welding, machining, measuring, sharpening and fabrication of metals. Students gain hands-on experience working on outboard motors, stern drives, motorcycles, snowmobiles and chain saws.

#### Requirements for Graduation

Thirty-one credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational-specific courses.

**First Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>400-330</td>
<td>Metal Processes 1</td>
<td>2</td>
<td>3-1</td>
</tr>
<tr>
<td>401-322</td>
<td>Electrical Systems and Power Trains</td>
<td>2</td>
<td>10-8:12</td>
</tr>
<tr>
<td>401-328</td>
<td>Small Engine Lab</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>801-356</td>
<td>Communications 1</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>801-356</td>
<td>Human Relations Survey</td>
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**Second Semester**

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<thead>
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<th>Course Title</th>
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<tbody>
<tr>
<td>420-331</td>
<td>Metal Processes 2</td>
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<tr>
<td>401-322</td>
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<tr>
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<tr>
<td>801-356</td>
<td>Human Relations Survey</td>
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<td>2-0</td>
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</tbody>
</table>

**Electives**

- **One-half of the total 29 credits must be completed at MATC. Minimum grade point average of 2.0.**

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### Program Descriptions
Alternative educational opportunities are offered for licensed practical nurses. Advanced standing in nursing courses may be granted on the basis of prior education and experience, or may be earned through written and skills examinations. Because LPN students are diverse in their educational and work experiences, they are encouraged to contact the Health, Human and Protective Services Office, to seek information early when planning for entry into the Associate Degree Nursing Program.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>510-150 Nursing Fundamentals</td>
<td>7</td>
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<tr>
<td>805-207 Anatomy and Physiology*</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>805-273 Microbiology*</td>
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<td>3.2</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations* OR</td>
<td>3</td>
<td>3.0</td>
</tr>
<tr>
<td>809-231 Introduction to Psychology*</td>
<td>(3)</td>
<td>(3-0)</td>
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**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>510-151 Introductory Medical-Surgical Nursing, Part A</td>
<td>7</td>
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</tr>
<tr>
<td>510-152 Introductory Medical-Surgical Nursing, Part B</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>805-208 Anatomy and Physiology*</td>
<td>4</td>
<td>3-2</td>
</tr>
<tr>
<td>809-233 Developmental Psychology*</td>
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**Summer Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>801-151 Communication Skills* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-201 English Composition*</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>809-197 Contemporary American Society* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-203 Introduction to Sociology*</td>
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<td>(3-0)</td>
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**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>510-153 Intermediate Medical-Surgical Nursing</td>
<td>6</td>
<td>2-12</td>
</tr>
<tr>
<td>510-154 Parent-Child Nursing</td>
<td>4</td>
<td>2-6</td>
</tr>
<tr>
<td>801-152 Communication Skills* OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>810-201 Fundamentals of Speech*</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>Elective*</td>
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<td>3-0</td>
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</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>510-155 Nursing Ethics and Trends</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>510-156 Nursing Management/Psychiatric Nursing</td>
<td>6</td>
<td>2-12</td>
</tr>
<tr>
<td>510-157 Advanced Medical-Surgical Nursing</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>Elective*</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

*Students may meet some or all of the general studies requirements at MATC or another college prior to entering the nursing sequence. Students are encouraged to take college transfer courses for educational advancement. To receive credit for anatomy/physiology and microbiology, these courses must have been taken within five years prior to admission to the nursing program.

**REQUIREMENTS FOR GRADUATION**

To succeed in the program, a student must obtain satisfactory achievement (a grade of C or higher) in major field subjects and support courses. A student must have a minimum of 4 credits in each semester, or one semester of pre-college chemistry with a C or better and a satisfactory score on the MATC chemistry test; or one semester of pre-college algebra with a C or better. Students are encouraged to take college transfer courses for educational advancement.

To succeed in the program, a student must have a minimum of 4 credits in each semester, or one semester of pre-college chemistry with a C or better and a satisfactory score on the MATC chemistry test; or one semester of pre-college algebra with a C or better. Students are encouraged to take college transfer courses for educational advancement.

Students are encouraged to take college transfer courses for educational advancement. To receive credit for anatomy/physiology and microbiology, these courses must have been taken within five years prior to admission to the nursing program.

**PROGRAM DESCRIPTIONS**

**Nursing Assistant**

120-hour Certificate of Completion

Health Occupations Department; Health, Human and Protective Services Division

The Nursing Assistant Program prepares students for employment as nursing assistants. Students will be required to demonstrate the following skills under the supervision of a licensed nurse: communication, basic nursing and personal care skills; attention to client's rights; and care of clients with dementias. The program is recognized by the Wisconsin Department of Health and Social Services as both a nurse-aide training program and competency evaluation program. Upon successful completion of the program, the student is eligible for the Wisconsin Nursing Assistant Registry and, as such, for employment in nursing homes, hospitals, home health agencies and homes for the developmentally disabled.

Applicants will be required to complete a health history form that includes a tuberculosis skin test and/or chest x-ray, if indicated, and a blood specimen to determine immunity from measles and mumps. Evidence of current immunization for diphtheria and tetanus is also required. Admission requirements: none.

**Nursing, Associate Degree**

Associate in Applied Science Degree

Health Occupations Department; Health, Human and Protective Services Division

Accredited by the National League for Nursing and approved by the Wisconsin Department of Regulation, this program prepares practitioners to function with judgment and technical competence while providing nursing care to patients of all ages. Upon completion, students are eligible to write the national licensure exam for certification as a registered nurse. Career opportunities include nursing positions in hospitals, nursing homes, clinics and home health agencies. The program emphasizes self-direction and independence. Helpful attitudes and interests include an interest in people and their welfare; a willingness to follow procedures carefully, understanding that errors may have serious consequences; and an ability to work and communicate with others; to be precise and exact; to work under pressure; and to react quickly in an emergency.

Admission requirements: 1) high school graduation or HSED or GED; 2) two semesters of high school chemistry with a C or better each semester and a satisfactory score on the MATC chemistry test; or one semester of pre-college chemistry with a C or better and a satisfactory score on the MATC chemistry test; or one semester of pre-college chemistry with a C or better and a satisfactory score on the MATC chemistry test; or college chemistry (4 credits) with a grade of C or better; 3) one year high school algebra with a C or better each semester, or one semester of pre-college algebra with a C or better; 4) satisfactory scores on the ACT or on a comparable substitute.
Nursing, Practical

One-Year Diploma

Health Occupations Department;
Health, Human and Protective Services Division

The Practical Nursing Program prepares students as entry-level practitioners. The practical nurse, under the direct supervision of a registered nurse, and/or physician, provides nursing care in those situations relatively free of complexity. The practical nurse assists the registered nurse and/or physician in more complex nursing situations. Instruction is provided via lectures, demonstrations and supervised clinical practice at hospitals and nursing homes within the MATC District. Licensed practical nurses also are employed by clinics, hospice and home health care.

The program has the approval of the Wisconsin State Board of Nursing. Students are admitted to the program in the fall at the Madison campus and in the spring at the Fort Atkinson Campus. A grade of at least C is required in all program courses in order to move from first to second or second to third level within the program. Students may re-enroll in program courses once in order to raise a grade to a passing level. Re-enrollment in program courses will be on a space available basis. Upon completion of the program, the students are eligible to write the national examination leading to licensure as a licensed practical nurse. Admission prerequisites: 1) high school graduation, GED or HSED; and 2) assessment test.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
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</thead>
<tbody>
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Summer Semester (6 weeks)

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<tr>
<td>9-21</td>
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Courses may be taken prior to entering the program on a space available basis.

Occupational Therapy

Associate in Applied Arts Degree

Health Occupations Department;
Health, Human and Protective Services Division

Occupational therapy is a health profession serving persons whose everyday functioning is complicated by developmental disability, physical illness or injury, emotional problems, or aging changes. Occupational therapists use activities designed to: 1) improve the physical, sensory, cognitive, social and emotional skills needed for daily activities; 2) offer alternative approaches and adaptive devices when such capacities are impaired or lost; and 3) ultimately promote a healthy balance and maximum independence in each client’s self-care, work and leisure performance.

This program prepares occupational therapy assistants who collaborate with occupational therapists. OT assistants are employed in community settings providing mental health, residential care and home health services as well as in hospitals and schools. Graduates also serve as activity directors conducting health maintenance activity programs for the elderly in senior centers, day-care centers and nursing homes.

Admission requirements: 1) high school graduate or GED with above-average grades; 2) the following high school courses – one year of biology, one year of chemistry, three to four years of English, two years of mathematics and two years of social studies; and 3) ACT, SAT or CQT scholastic achievement test. Students are accepted and admitted for both fall and spring semesters.

FIRST YEAR

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<th>Credits</th>
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<td>809-199</td>
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Second Semester

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<td>810-242</td>
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Summer Semester

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<td>809-197</td>
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<td>809-203</td>
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PROGRAM DESCRIPTIONS
SECOND YEAR

First Semester
- 514·105 Field Observation 2 0.3
- 514·125 Community Practice 3 1.4
- 514·130 Physical Rehabilitation Practice 4 2.6
- 514·135 Mental Health Practice 4 2.6
- 514·140 Health Care System 2 2.0
- 514·145 Recreation Practice 3 2.2
  18 30

Second Semester
- 514·160 Fieldwork I 5 0.211
- 514·165 Fieldwork 2 5 0.2
- 514·170 Seminar/Practice and Management 2 0.4
  12 44

1 Recommended program elective—may choose other elective course with consent of OTA program director.
2 For full-time students beginning the program in the fall semester, the summer semester comes between the second and third semesters; for full-time students beginning in spring semester, the summer semester comes between the third and fourth semesters.

Note: Curriculum revision in process.

Office Assistant

One-Year Diploma
Business Department; Business and Applied Arts Division

Completion of the Office Assistant Program gives the student an understanding of the general business activities required of all office employees for occupational competence. Students gain a mastery of the skills essential for initial employment and a thorough knowledge of subject matter.

<table>
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<td><strong>Total</strong></td>
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PROGRAM DESCRIPTIONS

Optometric Technician

One-Year Diploma
Health Occupations Department; Health, Human and Protective Services Division

As a member of the vision care team, the graduate technician works under the supervision of an optometrist or ophthalmologist in providing quality vision-care services to patients. Instruction emphasizes the unique duties required of a vision-care technician. The technical training includes optical terminology; optical properties of light; patient pretesting skills such as tonometry, keratometry, visual acuity, color vision, visual field testing and blood pressure; frame and lens selection; eyeglass adjustment; contact lens patient education; ocular anatomy and physiology; visual training and practice management.

Clinical experience — working directly with doctors and patients — is an important part of the curriculum.

People contemplating a career in vision care should enjoy working with people of all ages and be interested in learning and performing a variety of skilled duties. Admission requirements: high school diploma or GED; satisfactory scores on assessment test.
Pharmacy Technician

One-Year Diploma
Health Occupation Department; Health, Human and Protective Services Division

Pharmacy technicians are individuals educated and trained to assist registered pharmacists in institutional and community pharmacies. Pharmacy technicians perform many tasks in the pharmacy, including record keeping, preparation of medications, and distribution and delivery of medications. Students who successfully complete the one-year program will receive a vocational diploma. They will be able to perform the tasks necessary for employment in institutional and community pharmacies.

Admission requirements: 1) high school graduation or equivalent; 2) one year of high school science and math; and 3) assessment test.

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Pharmacy

Associate in Applied Arts Degree
Art Department; Business and Applied Arts Division

The Photography Program is designed to equip the graduate with a solid foundation in technical and aesthetic photographic skills. Graduates may find jobs as assistants in commercial and portrait studios, as technicians in professional photo processing labs, as staff members in corporate or government photo departments, or as members of film or television production crews. Desirable aptitudes and interests include the ability to pre-visualize subject matter, describe visuals in written scripts, engage in effective problem solving and work well under deadlines. Previous courses in art, photography, chemistry, algebra, physics, typewriting or computer skills may be helpful. Students should be proficient in writing, having attained B grades in previous English courses.

FIRST YEAR
First Semester

<table>
<thead>
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<td>Photo Composition</td>
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<td>203-107</td>
<td>Studio Photo 1</td>
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<tr>
<td>203-120</td>
<td>Lighting Techniques</td>
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<td>2.2</td>
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<tr>
<td>801-151</td>
<td>Communication Skills 1</td>
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<td>809-195</td>
<td>Economics</td>
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SECOND YEAR
First Semester

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<td>203-124</td>
<td>Portrait Photography</td>
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<tr>
<td>203-142</td>
<td>Color Photo 2</td>
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<td>203-151</td>
<td>Electronic Imaging</td>
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<td>206-118</td>
<td>Audiovisual Techniques 2</td>
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SECOND YEAR
Second Semester

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<tr>
<td>203-176</td>
<td>Photo Communication</td>
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<td>2.2</td>
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<tr>
<td>203-185</td>
<td>Portfolio Preparation</td>
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<tr>
<td>206-130</td>
<td>Video Production 1</td>
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RECOMMENDED ELECTIVES

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<td>Photo Internship</td>
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PROGRAM DESCRIPTIONS
Police Science

Associate in Applied Science Degree
Protective Services Department; Health, Human and Protective Services Division

The Police Science Program provides the academic and professional training necessary to become a law enforcement officer. This program provides skills in behavioral sciences and written and verbal communication, which are the foundation for equipping a person with the necessary skills of a law enforcement officer.

The goal of the Police Science Program is to educate those seeking a career in law enforcement. The police officer's efficiency and effectiveness will increase through a better understanding of the daily problems of society and knowledge of law enforcement techniques. Police science graduates are prepared for positions in city, county, state and federal law enforcement; as private security guards or investigators; or as correctional officers. Admission requirements: high school diploma, HSED or GED with a grade point average of 2.0 or equivalent.

Employment requirements: pass a physical exam and meet physical fitness standards; have possession of a valid driver's license and a good driving record; have no conviction of a felony offense. Positions require a background security check, psychological testing and mandatory drug testing. An applicant for employment as a law enforcement officer must possess either 1) a two-year associate degree from a Wisconsin technical college or its accredited equivalent from another state or 2) a minimum of 60 fully accredited college-level credits.

Police recruit certification: students graduating with a degree in police science can receive advanced standing for up to 280 of the 400-hour basic recruit training necessary for certification as a sworn law enforcement officer in Wisconsin. In order to meet these requirements, all requirements of the Police Science Program must be met. Students having a grade point average of 3.0 or better may apply for the skills certification courses (120 hours) necessary to complete their training, which makes them eligible for certification. All basic police recruit training is authorized and approved by the Wisconsin Department of Justice, Training and Standards Bureau.

<table>
<thead>
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<th>Credits</th>
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<td>106-163 Microkeyboarding</td>
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<td>504-111 Introduction to Criminal Justice Administration</td>
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<td>504-125 Juvenile Justice</td>
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<td>801-151 Communication Skills 1</td>
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<td>809-199 Psychology of Human Relations</td>
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Second Semester

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<td>504-121 Patrol Procedures</td>
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<td>504-136 Juvenile Law</td>
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<td>801-152 Communication Skills 2</td>
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<td>809-197 Contemporary American Society</td>
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Second Semester

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<tr>
<td>504-143 Criminology for Law Enforcement</td>
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<td>504-165 Police-Community Relations</td>
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<td>504-102 Organization and Administration</td>
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<td>504-160 Constitutional Protection and Interview Procedures</td>
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<tr>
<td>809-195 Economics OR</td>
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<td>809-125 Government: Process and Practices</td>
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RECOMMENDED ELECTIVES (with approval of chairperson)

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<td>533-120 American Sign Language</td>
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<td>809-202 Social Disorganization</td>
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<tr>
<td>809-235 Psychology of Personal Adjustment</td>
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REQUIREMENTS FOR GRADUATION

Grade of a C or better in all 504 courses and an overall grade point average of 2.0 or better.

Police Academy

Students who complete the Police Science Associate Degree of 60 college credits may apply for the 400-hour Basic Recruit Academy Program, which makes them eligible for Law Enforcement Standards Board Certification.
The Printing Program is designed to provide the student with the knowledge and skills required for entry-level positions in the graphic arts industry. Training is provided in all phases of offset lithographic reproduction and quality control. Strong math skills are required and typing skill is desirable.

First Semester
- Graphic Arts Photography (204-301)
- Copy Preparation (204-307)
- Lithographic Preparation (204-306)
- Communications (804-356)

Second Semester
- Copy Preparation (204-302)
- Lithographic Preparation (204-309)
- Quality Control for Graphic Arts (204-302)
- Lithographic Press and Finishing Operations (806-397)

REQUIREMENTS FOR GRADUATION
Thirty-two credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

Printing and Publishing Technology

Associate in Applied Arts Degree
Technical and Industrial Department: Agriscience, Apprenticeship, and Technical and Industrial Division

The Printing and Publishing Program is designed to provide the student with the knowledge and skills required for an entry-level position in the graphic arts industry. Training is provided in all phases of offset lithographic reproduction and quality control. In addition, basic instruction is given in estimating, production planning and general shop management. Strong math skills are required, and typing skill is desirable.

Note: The Printing and Publishing Technology Program curriculum is in the process of revision. Please contact the Technical and Industrial Department for the current course of study.

FIRST YEAR
First Semester
- Copy Preparation Techniques (204-101)
- Lithographic Techniques (204-102)
- Introduction to Printing and Publishing (204-192)
- Communication Skills (801-151)
- Contemporary American Society (809-197)

Second Semester
- Lithographic Techniques (204-105)
- Copy Preparation Techniques (204-123)
- Industrial Orientation (204-194)
- Economics (809-195)
- Psychology of Human Relations (809-199)

RECOMMENDED ELECTIVES
- Copy Preparation Techniques (4)
- Production Procedures (3)

REQUIREMENTS FOR GRADUATION
Sixty-five credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

Radiography

Associate in Applied Science Degree
Health Occupations Department;
Health, Human and Protective Services Division

The radiographer is the producer of medical images for diagnosis of disease. The radiographer's duties include: positioning of patient to obtain proper projection, aligning source (usually x-radiation), making exposure factor selections, processing the image (photographically and electronically), storing and retrieving images.

Graduates of this program are eligible to take the entry-level certification examination and are employable in radiology and medical-imaging departments in hospitals and clinics. Radiographers should be able to follow instructions carefully and work to prescribed standards, and should be able to use good judgment in following procedures and handling problems. They should be interested in work of a technical or scientific nature, and should be willing and able to work under pressure in emergency situations.

Admission requirements: 1) one year and a grade of C or better in algebra, geometry and chemistry/physics; and 2) a satisfactory score on the ACT, SAT, CQF or other comparable test. A program-developed assessment test is highly recommended; it is used for student advising.
### FIRST YEAR

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**RECOMMENDED ELECTIVE**

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*Courses which may be taken prior to entering the program. May also be taken at the College Transfer level.

### Real Estate

**Associate in Applied Science Degree**
Marketing Department; Business and Applied Arts Division

There are numerous career opportunities in residential, commercial and industrial real estate for trained men and women. You may become a broker, appraiser, property manager or mortgage lender. Real estate includes the planning and developing of office buildings, industrial complexes, farms, planned recreational developments, public land acquisitions, shopping centers and the complex field of mortgage lending and finance.

This program explores the basics of the real estate market, property rights, ownership, construction, financing and brokerage as they relate to the American consumer.

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**REQUIREMENTS FOR GRADUATION**

One-half of the total 66 credits must be completed at MATC. Minimum grade point average of 2.0.

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**PROGRAM DESCRIPTIONS**
Recreation Services:
Activity/Fitness Leader

Associate in Applied Science Degree
Marketing Department; Business and Applied Arts Division

The Recreation Services Program is designed to develop activities and resource operation competencies in technical, problem-solving, human relations and life skills that are needed for entry-level employment in public, private and commercial agencies. The program develops an ability to plan, implement and evaluate recreation programs. Trained entry-level students may serve as center directors; pool directors; hotel, motel, resort or cruise ship social directors; YMCA/YWCA program leaders; and health club staff. Job opportunities may also exist in campgrounds, sports centers, ski areas and theme parks.

**FIRST YEAR**

**First Semester**

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<td>Communication Skills</td>
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<td>Facility Operation and Maintenance 1</td>
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<tr>
<td>809-197</td>
<td>Contemporary American Society</td>
<td>3</td>
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<tr>
<td></td>
<td>Elective</td>
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**RECOMMENDED ELECETIVES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>103-135</td>
<td>WordPerfect - Intermediate</td>
<td>1</td>
</tr>
<tr>
<td>103-140</td>
<td>Desktop Publishing</td>
<td>1</td>
</tr>
<tr>
<td>807-2xx</td>
<td>Physical Education Classes</td>
<td>1</td>
</tr>
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</table>

**REQUIREMENTS FOR GRADUATION**
One-half of the total 64 credits must be completed at MATC. Minimum grade point average of 2.0.

Program Descriptions

Recreation Services:
Facility Operations Specialist

Associate in Applied Science Degree
Marketing Department; Business and Applied Arts Division

The program is designed to develop activities and resource operation competencies in technical, problem-solving, human relations and life skills that are needed for entry-level employment in public, private and commercial agencies. The program develops an ability to plan, maintain, develop, operate and protect natural and man-made resource areas, facilities and equipment, and to develop activity programming. Trained entry-level students may serve as groundskeepers, greenskeepers, park rangers, building and grounds supervisors, park resource assistants, and park and recreation specialists. Job opportunities also exist in campgrounds, sports centers, pro shops, ski areas and the Department of Natural Resources.
RECOMMENDED ELECTIVES:
- 001-107 Introduction to Horticulture 4
- 103-136 WordPerfect - Intermediate 1
- 001-143 Garden Plants 3
- 103-140 Desktop Publishing 1

REQUIREMENTS FOR GRADUATION
One-half of the total 65 credits must be completed at MATC. Minimum grade point average of 2.0.

Respiratory Care Practitioner
Associate in Applied Science Degree
Health Occupations Department; Health, Human and Protective Services Division

The Respiratory Care Practitioner Program is fully accredited by the Commission on Accreditation of Allied Health Education Programs and has been preparing graduates at the associate degree level since 1970.

The program prepares practitioners to work with physicians in diagnosing, treating and monitoring patients of all ages with lung diseases or disorders. Respiratory care practitioners are responsible for delivery and monitoring of patients on oxygen, inhaled medications and breathing exercises/treatments, and for the management of patients requiring artificial airways and mechanical ventilation. Thus, respiratory care practitioners are active members of the health care team, especially in emergency rooms and intensive care units. Career opportunities are primarily within hospitals, home health care agencies and clinics.

Emphasis throughout the program is on developing a knowledge and skills foundation that enables students to independently practice assessing and evaluating patients and making recommendations regarding their care. The graduate must be prepared to work under pressure in a highly technical environment at times to perform life-preserving procedures.

Graduates of the Respiratory Care Practitioner Program are immediately eligible to apply for the entry-level certification exam through the National Board for Respiratory Care. Upon successful completion of this exam, the graduate will also be eligible to apply for the NBRC Registry Exam process, to become a Registered Respiratory Therapist. The NBRC Entry-Level Certification Exam also serves as the licensure exam for the State of Wisconsin. Graduates of the program receive a temporary certificate to practice Respiratory Care until they successfully complete the NBRC Entry Level Certification Exam.

Admission requirements: 1) high school graduation or equivalent; 2) one year high school algebra and one year additional high school mathematics with grades of C or better; 3) one year high school chemistry with a grade of C or better, and 4) ACT or SAT (this requirement may be waived if applicant has successfully completed two years of full-time college study).

Students who have not completed two years of high school math or a year of high school chemistry may still be eligible to apply for a fall admission by completing a pre-college algebra and/or pre-college chemistry course through a local technical college with grade(s) of C or better.

PROGRAM DESCRIPTIONS
Small Business Operation
One-Year Vocational Diploma
Marketing Department;
Business and Applied Arts Division

The Small Business Operation Program provides prospective small-business owners/entrepreneurs with the principles involved in planning and operating a small business. Attention is given to small business appraisal and opportunities; developing a written business/marketing plan; and advertising, public relations, direct mail and sales promotion. Marketing concepts include planning, forecasting, segmentation, product strategy, product mix, pricing and distribution. The program also provides an introduction to the basic principles, concepts and theories of retail and non-retail selling, and their application to an actual sales presentation. Special attention is given to personality development and self-image concepts.

First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-330</td>
<td>Related Accounting</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>102-305</td>
<td>Applied Business Mathematics</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>145-301</td>
<td>Employment Development/Resources</td>
<td>1</td>
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</tr>
<tr>
<td>145-302</td>
<td>Small Business Development and Planning</td>
<td>3</td>
<td>3-2</td>
</tr>
<tr>
<td>145-303</td>
<td>Fundamentals of Marketing</td>
<td>3</td>
<td>3-2</td>
</tr>
<tr>
<td>145-304</td>
<td>Fundamentals of Sales</td>
<td>3</td>
<td>3-2</td>
</tr>
<tr>
<td>801-351</td>
<td>Communications 1</td>
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SECOND SEMESTER

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>103-330</td>
<td>Microcomputers I OR</td>
<td>3</td>
<td>1-2</td>
</tr>
<tr>
<td>103-130</td>
<td>Microcomputer Applications</td>
<td>(2)</td>
<td>(1-2)</td>
</tr>
<tr>
<td>145-305</td>
<td>Operations Management</td>
<td>3</td>
<td>3-2</td>
</tr>
<tr>
<td>145-306</td>
<td>Successful Small Business Techniques</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>145-307</td>
<td>Leadership Techniques</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>145-308</td>
<td>Field Experience Seminar</td>
<td>2</td>
<td>1-8</td>
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<td>809-352</td>
<td>Human Relations</td>
<td>2</td>
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REQUIREMENTS FOR GRADUATION

One-half of the total 29(30) credits must be completed at MATC. Minimum grade point average of 2.0.

Supervisory Management
Associate in Applied Science Degree
Marketing Department;
Business and Applied Arts Division

The need for qualified supervisors will continue to grow throughout the 1990s. According to estimates by the Department of Labor, Wisconsin will gain approximately 27,000 jobs annually with a corresponding increase of supervisory management-related positions estimated to be in the vicinity of 16 percent. All types of organizations — whether manufacturing, governmental or service-related — will face increasing demands for trained supervisors. The Supervisory Management Program has been designed specifically to meet this emerging need. The program content will provide supervisory training and education for individuals presently employed in supervisory positions, and also for those desiring to prepare themselves for such positions. This program is offered on a five-year, part-time schedule with classes in late afternoon and evenings to accommodate the working adult.

FIRST YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Hrs per week in class</th>
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</thead>
<tbody>
<tr>
<td>196-191</td>
<td>Principles of Supervision</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-116</td>
<td>Human Behavior at Work</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>196-135</td>
<td>Time Management</td>
<td>1</td>
<td>1-0</td>
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<tr>
<td>196-145</td>
<td>Assertive Management</td>
<td>1</td>
<td>1-0</td>
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<tr>
<td>196-148</td>
<td>Stress Management</td>
<td>1</td>
<td>1-0</td>
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<tr>
<td>196-151</td>
<td>Training Techniques</td>
<td>1</td>
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<tr>
<td>801-151</td>
<td>Communication Skills</td>
<td>3</td>
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SECOND YEAR

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<thead>
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<th>Credits</th>
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<tbody>
<tr>
<td>196-119</td>
<td>Labor Relations</td>
<td>3</td>
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<tr>
<td>196-132</td>
<td>Successful Meetings</td>
<td>1</td>
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<tr>
<td>196-138</td>
<td>Management of Conflict and Change</td>
<td>1</td>
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<tr>
<td>196-141</td>
<td>Effective Listening</td>
<td>1</td>
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<tr>
<td>196-154</td>
<td>Problem Solving and Decision Making</td>
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<tr>
<td>196-192</td>
<td>Fundamentals of Quality</td>
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THIRD YEAR

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<tbody>
<tr>
<td>102-102</td>
<td>Business Mathematics</td>
<td>3</td>
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<tr>
<td>196-122</td>
<td>OSHA and Hazardous Substances</td>
<td>1</td>
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<tr>
<td>196-123</td>
<td>Merit and Workplace Ethics</td>
<td>1</td>
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<tr>
<td>196-190</td>
<td>Leadership Development</td>
<td>3</td>
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<tr>
<td>196-193</td>
<td>Managing Human Resources</td>
<td>3</td>
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FOURTH YEAR

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<tr>
<td>101-114</td>
<td>Applied Accounting</td>
<td>3</td>
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<tr>
<td>103-130</td>
<td>Microcomputer Applications</td>
<td>2</td>
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<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>809-199</td>
<td>Psychology of Human Relations</td>
<td>3</td>
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FIFTH YEAR

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<tbody>
<tr>
<td>102-160</td>
<td>Business Law I</td>
<td>3</td>
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<tr>
<td>196-105</td>
<td>Occupational Trends and Issues</td>
<td>3</td>
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<tr>
<td>801-152</td>
<td>Communication Skills 2</td>
<td>3</td>
<td>3-0</td>
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<td>809-197</td>
<td>Contemporary American Society</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>809-198</td>
<td>Electives</td>
<td>6</td>
<td>below 12</td>
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RECOMMENDED ELECTIVES

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<th>Credits</th>
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<tbody>
<tr>
<td>185-110</td>
<td>Managing for Quality</td>
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<tr>
<td>185-111</td>
<td>Understanding Organizational Change</td>
<td>2</td>
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<tr>
<td>185-112</td>
<td>Employee Involvement</td>
<td>2</td>
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<tr>
<td>185-113</td>
<td>Process Improvement</td>
<td>2</td>
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<tr>
<td>185-114</td>
<td>Statistical Techniques for Process Control</td>
<td>2</td>
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<tr>
<td>185-115</td>
<td>Customer-Focused Quality</td>
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REQUIREMENTS FOR GRADUATION

One-half of the total 64 credits must be completed at MATC. Minimum grade point average of 2.0.

PROGRAM DESCRIPTIONS
Surgical Technician
One-Year Diploma
Health Occupations Department; Health, Human and Protective Services Division

The Surgical Technician Program is accredited by the Commission on Accreditation of Allied Health Education Programs. The program prepares students to function as members of a surgical team. Emphasis is placed on specific functions such as passing instruments, sutures and sponges during surgery, as well as being concerned with surgical asepsis. Throughout the course, lectures and demonstrations are supplemented by experiences in operating rooms, central supply areas, recovery rooms, emergency care and ambulatory services.

In addition to the study of medical-surgical terminology, weights and measures, and moral and legal responsibilities, the student receives training in aseptic technique, principles of operating-room technique, surgical procedures and related professional activities. The student learns the correct techniques for positioning and transporting patients, as well as accepted methods for observing, reporting and recording selected surgical data. Approximately 850 hours are spent in theory, laboratory and clinical practice.

Personal aptitudes that may be helpful include an ability to learn and apply technical knowledge, work under close supervision and follow prescribed procedures carefully, with the realization that errors may have serious consequences. Surgical technicians must be flexible to deal with stressful or emergency situations. They must also be able to stand for extended periods of time and lift heavy items.

Admission requirements: 1) high school graduation, HSED or GED; 2) assessment test of basic math, reading comprehension and writing skills.

Note: In addition to regular tuition, students will be responsible for additional fees, e.g., parking fees for clinical experience, laser eye exam.

<table>
<thead>
<tr>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>in class</td>
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<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Leq-Lab</th>
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<tbody>
<tr>
<td>512-300</td>
<td>1</td>
<td>2</td>
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<tr>
<td>512-303</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>512-310</td>
<td>1</td>
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<td>512-311</td>
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<td>512-315</td>
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<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>512-320</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>512-321</td>
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<td>512-323</td>
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<td>0-24</td>
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</table>

Taxidermy
Less Than One-Year Diploma
Agriscience and Technology Department; Agriscience, Apprenticeship, and Technical and Industrial Division

This program is designed to provide intensive training in taxidermy skills. Through training in the classroom and laboratory, students gain the skills and knowledge necessary in taxidermy. A very large percentage of the training consists of laboratory hands-on instruction working with actual animal mountings. Students graduating from this program are expected to be capable of working as taxidermists, either self employed or as employees in other professional shops.

<table>
<thead>
<tr>
<th>Hrs per week</th>
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<tbody>
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<table>
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<tr>
<th>COURSES</th>
<th>Credits</th>
<th>Leq-Lab</th>
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<tbody>
<tr>
<td>095-301 Basic Taxidermy</td>
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<tr>
<td>095-305 Fish/Fish Painting</td>
<td>4</td>
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<tr>
<td>095-306 Small Mammals</td>
<td>2</td>
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<tr>
<td>095-108 Game Heads</td>
<td>2</td>
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</tr>
<tr>
<td>095-310 Large Mammals and Rug Making</td>
<td>2</td>
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<tr>
<td>095-315 Upland Birds/Waterfowl</td>
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</tbody>
</table>

*These short-term classes are offered either in the evening or on Saturdays. All evening classes total 12 lab hours per week. Saturday classes are nine lab hours per week.

Travel Services
Associate in Applied Science Degree
Marketing Department; Business and Applied Arts Division

The Travel Services Degree Program is designed to develop competencies in sales, customer service, human relations, problem-solving, communications and total quality management, as well as the technical skills needed for travel services operations. Graduates are prepared for careers with airlines, cruise lines, tour operations, travel agencies, hotel/motel resort companies, visitors and convention bureaus, tourist attractions, wholesalers and other travel services organizations.

<table>
<thead>
<tr>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>in class</td>
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<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Credits</th>
<th>Leq-Lab</th>
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<tbody>
<tr>
<td>109-101 Introduction to Leisure Services</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>109-103 Recreation and Leisure in Modern Society</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>109-165 Travel Agency Services</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-151 Communication Skills</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
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Program Descriptions
Second Semester
104-102 Marketing Principles 3 3.0
104-125 Promotion Principles 3 3.0
109-106 Programming and Public Relations 3 3.0
109-167 World Travel Geography 1 3 3.0
109-171 Travel/Recreation Internship Development 1 1.0
801-198 Speech 3 3.0
Elective 3 below 19 16+ E

Summer Semester
109-169 Group Travel Planning 2 1.5

SECOND YEAR
First Semester
103-135 WordPerfect - Beginning OR 1 (1.2)
106-163 Microkeyboarding (2) (1.3)
104-104 Selling Principles 3 3.0
109-120 Tourism Business Planning 3 3.0
109-166 Travel Reservations I 3 3.0
809-195 Economics 3 3.0
809-197 Contemporary American Society 3 3.0
Elective 3 below 15 20+ E

Second Semester
102-160 Business Law 1 3 3.0
109-164 Travel Reservations 2 3 3.0
109-168 Travel Center Operations 3 1.6
109-175 Travel/Recreation Services Internship Practicum (Field Experience) 2 1.5
109-190 Recreation Seminar 1 1-0
Elective 3 below 16(17) 18(19)

RECOMMENDED ELECTIVES:
109-130 Travel Services Marketing 3
109-180 World Travel Geography 2 3

REQUIREMENTS FOR GRADUATION
One-half of the total 67(68) credits must be completed at MATC.
Minimum grade point average of 2.0

Veterinary Technician
Associate in Applied Science Degree
Agriculture and Technology Department; Agriculture, Apprenticeship, and Technical and Industrial Division

Accredited by the American Veterinary Medical Association's Committee on Veterinary Technician Education and Activities, this program is designed to train students to become members of a veterinary medical team. Students will acquire the skills and technical information necessary to assist in the delivery of services to patients and clients under the supervision of a licensed veterinarian. Upon completion of the program, students may become certified veterinary technicians. To obtain certification, graduates must satisfactorily complete the National Written Exam and the Wisconsin Practical Exam administered by the Veterinary Exam Board of the Wisconsin Department of Regulation and Licensing.

Technicians work with veterinarians by collecting histories, assisting with physical examination, collecting laboratory samples and performing laboratory test procedures. Other routine duties include administration of medications, feeding and care of animals, maintenance of sanitation, medical and surgical nursing, inventory control, assisting with anesthetic administration and monitoring, and performing radiographic procedures, client education and client communication.

Admissions requirements include: 1) high school graduation or equivalency; 2) high school and post-secondary transcripts; and 3) one year of high school algebra, biology and chemistry. Applicants without algebra, biology and chemistry can take these courses at MATC; however, they must take them prior to enrollment in occupational courses. Other courses, which may be helpful to program success, are accounting, agriculture, mathematics, keyboarding and computer courses.

The ACT test or equivalent is required prior to admission. Applicants will take the ASSET test if the ACT or equivalent test has not been taken.

Admission preference will be given to those applicants who have occupational experience with animals.

FIRST YEAR

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
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<tbody>
<tr>
<td>091-123 Introduction to Laboratory Animal Science</td>
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<tr>
<td>091-170 Veterinary Medical Terminology</td>
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<td>091-171 Animal Care and Management 1</td>
<td>3</td>
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</tr>
<tr>
<td>809-151 Communication Skills 1</td>
<td>3</td>
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</tr>
<tr>
<td>806-105 Animal Biology</td>
<td>4</td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>17</td>
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Second Semester

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>091-115 Zoonosis</td>
<td>1</td>
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<tr>
<td>091-120 Laboratory Techniques 1</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td>091-172 Animal Care and Management 2</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>806-110 Chemistry</td>
<td>4</td>
<td>3.2</td>
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<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>17</td>
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Summer Semester

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<tr>
<th>First Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>091-158 Internship (8 weeks/320 hours minimum)</td>
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SECOND YEAR

<table>
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<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>091-116 Introduction to Microbiology</td>
<td>3</td>
<td>2.3</td>
</tr>
<tr>
<td>091-125 Veterinary Office Management</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>091-126 Veterinary Operating Room Techniques</td>
<td>4</td>
<td>2.6</td>
</tr>
<tr>
<td>091-140 Animal Anatomy and Physiology</td>
<td>4</td>
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<tr>
<td>801-197 Technical Reporting</td>
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Second Semester

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<thead>
<tr>
<th>First Semester</th>
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</thead>
<tbody>
<tr>
<td>091-121 Laboratory Techniques 2</td>
<td>4</td>
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<tr>
<td>091-151 Clinical and Hospital Techniques</td>
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</tr>
<tr>
<td>091-155 Hospital Supplies and Medicants</td>
<td>3</td>
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<tr>
<td>809-195 Economics</td>
<td>3</td>
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<tr>
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PROGRAM DESCRIPTIONS
RECOMMENDED ELECTIVES
AND DEVELOPMENTAL COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>103-130</td>
<td>Microcomputer Applications</td>
<td>2</td>
</tr>
<tr>
<td>804-201</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>804-302</td>
<td>Mathematical Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>804-306</td>
<td>Pre-College Algebra*</td>
<td>3</td>
</tr>
<tr>
<td>804-380</td>
<td>Mathematics 3</td>
<td>1</td>
</tr>
<tr>
<td>806-111</td>
<td>Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>806-112</td>
<td>Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>806-377</td>
<td>Pre-College Chemistry*</td>
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</table>

Second-year courses from the Laboratory Animal Technician Program may also be used as electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>801-113</td>
<td>Animal Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>801-114</td>
<td>Animal Behavior</td>
<td>2</td>
</tr>
<tr>
<td>801-117</td>
<td>Exotic Animal Husbandry</td>
<td>2</td>
</tr>
<tr>
<td>801-118</td>
<td>Advanced Veterinary Surgical Nursing</td>
<td>2</td>
</tr>
<tr>
<td>801-127</td>
<td>Large Animal Surgical Nursing</td>
<td>1</td>
</tr>
<tr>
<td>801-129</td>
<td>Clinical Rotation</td>
<td>3</td>
</tr>
<tr>
<td>801-166</td>
<td>Veterinary Office Emergencies</td>
<td>1</td>
</tr>
</tbody>
</table>

*May be required for persons who have not had high school algebra or chemistry.
**Electives must be approved by program director.

Visual Communications
Associate in Applied Arts Degree
Art Department; Business and Applied Arts Division

The Visual Communications Program provides training in the areas of art and design, photography, media production, and video and computer graphics, including computer animation techniques. The program brings together the design and production of a variety of media to meet today's communications needs.

Traditional audiovisual formats are produced in the form of video productions, computer-run, multi-image slide shows with soundtracks, overhead transparencies and special effects slides using an optical animation camera.

Computer graphics, including page layout programs, photographic digital imaging and computer animation techniques, are an integral part of visual communications. Presentations are designed to run on the computer screen or be projected for audiences with large screen computer projection systems.

Graduates of the program are employed in a variety of production areas, including business, industry, government, schools, hospitals, TV stations and independent production companies.

Welding
One-Year Diploma
Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division

This program emphasizes hands-on training and the mastery of welding techniques with manual and semi-automatic welding processes. Students develop their technical knowledge of blueprint reading, layout, metal fabrication, metallurgy and manipulative welding skills for potential qualification or certification in oxy-fuel, stick-electrode, gas-metal arc, flux-cored arc and gas-tungsten arc processes in all positions on plate and pipe.

Welders and metal fabricators lay out, shape, form, tack and weld metal assemblies or products according to various welding codes and procedures. They produce fabricated assemblies, perform repair and maintenance welding.
and work on construction projects. During fabrication of these products, students are trained in the use of hand and power tools used in the welding fabrication industry.

**Welding, Industrial Technician**  
**Associate in Applied Science Degree**  
**Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division**

The Industrial Welding Technician Program is designed to provide students with knowledge in manual, semiautomatic, and automatic welding processes in metal fabrication and construction industries. The curriculum provides students with skills training for more than 20 welding processes. Students will study welding processes, codes, procedures, material analysis, testing techniques and programming computer-integrated manufacturing systems. Graduates may seek specialized employment of their choice, which may include production planning, welding, inspection, product control, supervision or training.

**Wood Technics**  
**One-Year Diploma**  
**Technical and Industrial Department; Agriscience, Apprenticeship, and Technical and Industrial Division**

The Wood Technics Program provides the student with the knowledge and skills required for employment in wood and wood-related occupations. The program prepares the students to use equipment and materials in woodworking occupations. Students can select from areas of study in cabinet and furniture making and/or construction and remodeling. Current industrial processes and procedures are emphasized.
### Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>410-331</td>
<td>Cabinet and Furniture Making</td>
<td>10</td>
<td>4-16</td>
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<tr>
<td>410-340</td>
<td>Plastic Laminates</td>
<td>2</td>
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<tr>
<td>410-386</td>
<td>Cabinet Drawing</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>806-363</td>
<td>Science 1</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td></td>
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<td>16</td>
<td>32</td>
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**WOOD TECHNICS/CONSTRUCTION**

### First Semester

<table>
<thead>
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<th>Course Title</th>
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<tbody>
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<td>410-333</td>
<td>Introduction to Construction</td>
<td>10</td>
<td>4-16</td>
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<tr>
<td>410-336</td>
<td>Machine Maintenance</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>410-385</td>
<td>Drawing and Estimating</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>804-379</td>
<td>Vocational Mathematics 1</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>801-356</td>
<td>Communications 1</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td>32</td>
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### Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>403-308</td>
<td>Codes and Regulations</td>
<td>2</td>
<td>4-0</td>
</tr>
<tr>
<td>410-332</td>
<td>Construction and Remodeling</td>
<td>10</td>
<td>4-16</td>
</tr>
<tr>
<td>410-345</td>
<td>Construction Materials and Estimating</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>806-363</td>
<td>Science 1</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td>32</td>
</tr>
</tbody>
</table>

### REQUIREMENTS FOR GRADUATION
Thirty-two credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

*Course sequence begins in fall.
**Course sequence begins in spring.
COURSES

How to read course numbers

Each course has a six-digit number. The first digit identifies the department of the college under which the course is taught. The second and third digits identify the area of instruction. The fourth digit identifies the program within which the course is being taught. The fifth and sixth digits identify the particular course.

The meaning of the fourth digit is particularly important. A fourth digit of "1" indicates a technical associate degree course; "2" indicates a college transfer course; "3" indicates a vocational diploma course; and "5" indicates an apprenticeship course.

Example: 007·103

The first digit - 0 identifies the department as General Education. The second and third digits - 07 - identify the area of instruction as Biological Sciences. The fourth digit - 1 identifies the type of program as technical associate degree. The fifth and sixth digits - 03 - identify the particular course as Biotechnology Laboratory Technician.

001 Horticulture

001·107 Introduction to Horticulture 4 credits

Covers careers in horticulture: plant classification; plant structure and functions; life cycles of plants and reproduction; house plant identification; propagation, and environmental requirements.

001·120 Landscaping-Interior 3 credits

Teaches competencies needed for the rapidly growing field of interior landscaping. Topics covered are choice of plants for various interior environments, how to create a pleasing design, how to keep them looking proper. The business of interior landscaping is discussed, e.g., how to write a contract and solicit a bid. Includes field trips and visits to the best examples of interior landscaping in the metropolitan area.

001·134 Turf and Lawn Management 3 credits

Covers turf grass identification, weeds, turf care and management, diagnosis and treatment of problems with turf, lawn care business, and soliciting bids and writing contracts.

001·140 Introduction to Landscaping 3 credits

Teaches the basic skills involved in landscape design - the principles of design and how to apply them, how to prepare and blueprint a scale drawing, and how to choose plants appropriate for a particular landscape. Class format includes lecture, discussion, lab activities and field trips.

001·143 Garden Plants 3 credits

The study of annuals, perennials, bulbs and roses.

001·144 Floral Design 1 3 credits

Basic principles, elements and mechanics of commercial floral design. The care of floral and foliage materials and the factors involved in selecting floral materials for commercial use is taught. The art of arranging flowers for all types of commercial presentation are emphasized.

001·145 Floral Design 2 3 credits

 Discusses coordination of color and design, styles and retail flower shops. Students construct floral arrangements for weddings, hospitals, home and sympathy use. Mastery of use of live, artificial and dried materials, filling of orders for floral arrangements.

001·155 Garden Center Operations 3 credits

Discusses all aspects of garden center operations, including: identification of factors that contribute to a successful operation; personnel relationships; merchandising strategies; various pricing strategies; and establishing advertising-promotional programs. Also covers procedures used in maintaining high quality plant materials; the identification and classification of pesticides, herbicides and insecticides; the identification, description and uses for fertilizers, soil amendments and mulches; and some determine of the appropriate use for hand and power tools.

007 Biotechnology Laboratory Technician

007·100 Introduction to Biotechnology 3 credits

Includes a discussion of history and trends relative to national, state and local biotechnological industries in Wisconsin; career options and skills needed; technologies used; industrial sectors affected; regulations, patents and trade secrets; and the ethical and moral decisions to be made relative to the use of new technologies.

007·103 Instrumentation and Introduction to Basic Laboratory Methods 3 credits

Covers basic concepts and techniques necessary to work effectively in a laboratory setting. The nature of science experimentation, lab work, and the role of the technician will be discussed. Teaches basic skills, including measuring, weighing, mixing solutions, following and writing protocols, keeping records, making observations and using instrument manuals and catalogs. Also introduces instruments commonly used in the lab, including pH meters, spectrophotometers, filtration devices, centrifuges, computers and microscopes.

007·104 Chromatography and Introduction to Bioseparation Techniques 2 credits

Covers the basics principles governing chromatographic separation methods, applications of chromatographic methods used in biological laboratories and chromatographic techniques. Students complete lab work using a variety of methods, including paper, thin layer, gel, permeation, gas and high performance liquid chromatography. Prerequisites: 007·103, Instrumentation and Introduction to Basic Laboratory Methods; and/or competency in basic laboratory skills are recommended.

007·105 Fermentation Technology 3 credits

Covers basic techniques of fermentation technology, including the principles of isolation, identification, improvement, preservation and growth of industrial important microorganisms. Emphasizes the use of industrial fermentation equipment to obtain various types of products.

007·107 Hazardous Materials and Radioisotopes 3 credits

Alerts students to safe procedures and potential hazards associated with handling chemicals, laboratory animals, cell cultures, viruses and bacteria and other organisms, including those modified by genetic engineering. Introduction to the practical applications and use of radioisotopes in the biotechnology laboratory. Students learn how to handle, monitor, detect and quantify isotopically labeled materials. Also covers procedures for decontamination and disposal of hazardous materials in both normal and accidental situations, and discusses the regulations and the agencies regulating hazardous and radioactive materials.

007·121 Applied Biochemistry 3 credits

Introduction to major chemical constituents of cells including proteins, carbohydrates, lipids and nucleic acids. The structure and kinetics of enzymes, reaction mechanisms, and metabolic pathways are also studied. Prerequisites: 806·111 and 806·112, Chemistry I and II, or equivalent; and 806·103, General Cell Biology or equivalent.

007·122 Protein Bioseparations Methods 3 credits

Introduces the general strategies commonly used to purify proteins. Specific methods to be used include determining specific activities for enzymes, extraction of proteins from bacterial cells, salting out, dialysis, ion exchange chromatography and polyacrylamide gel electrophoresis.

COURSES
070-123  Cell Culturing  3 credits
Covers the basic techniques of plant and animal cell culture. The plant unit includes media preparation, isolation of explants and establishment of callus and suspension cultures, growth factor bioassays, regeneration of whole plants from tissue, obtaining haploid plant cultures, preparation and fusion of plant protoplasts, embryo culture and plant genetic engineering techniques. The animal unit includes media preparation of primary cultures, maintenance of cell lines, measurements of cell viability and growth, freeze preservation and thawing of cultured cells, cell cloning, cell sorting, cell characterization and assays for mycoplasma contamination, fusion for hybridoma cells and monoclonal antibody production.

070-126  Occupational Work Experience  3 credits
Students work in a biotechnology laboratory. Students are supervised by the program instructor(s). Emphasizes the integration of academics and practical experiences toward achieving entry-level laboratory technician positions. Prerequisite: completion of all program courses in the first three semesters of the program.

070-127  Introduction to Molecular Biology Technologies  6 credits
Introduces modern molecular biology technologies that involve DNA, RNA and protein, with an emphasis on DNA techniques. The course blends discussion of concepts and current research with practical lab experiences so that students are both competent in the lab and also understand the context in which modern techniques are performed.

070-129  Research Techniques 1  2/3 credits
Introduction to research and methods in the biological sciences. Scientific method, collection and analysis of data, and literature research are introduced in the first part of the semester. Students then choose or are assigned an original research project involving such methods as protein purification and characterization, immunocytochemical methods, and recombinant DNA technology. Students work both independently and with one another on their projects and consult with the instructor and with scientists from the University of Wisconsin. At the completion of the semester, students prepare papers and give oral presentations on their work using a formal scientific style. This course may be repeated second semester and is available for two or three credits each semester.

070-174  General and Applied Microbiology  5 credits
This survey course includes the structure, function, ecology, nutrition, physiology and genetics of microorganisms, as well as the isolation and use of microorganisms in industrial, agricultural, food and medical microbiology. It also includes an introduction to standard techniques and procedures used in the microbiology laboratory.

070  Agricultural Equipment Technology

070-166  First Aid/CPR  1 credit
A combination of safety, first aid and CPR for emergencies which may occur in the agricultural equipment industry. Prepares students for a standard Red Cross first aid certificate. Presents the didactic and practical content of the American Heart Association's basic life support course.

070-175  Power Transmission  3 credits
Provides a discussion of the operation, power flow, diagnosis, and servicing of collar shift, synchronized power shift transmission, as well as differentials, planetary drives, and wet or dry clutches. Proper use of manuals and specialized service tools is stressed.

070-176  Electrical System  3 credits
A discussion and demonstration of basic laws of electricity on the operation of electrical components and controls of charging and engine cranking systems. Methods of repair, diagnostic testing and troubleshooting of electrical components on agricultural machines are covered.

070-177  Fuel Systems  3 credits
Discussion of the theory of operation, construction, testing, and repair of gasoline engine fuel system components. Also covers the theory of operation, construction and service of diesel engine fuel systems. Reviews diesel engine compression, ignition, theory of combustion, chamber design, and procedures for installing and timing of fuel injection pumps. Discusses the relationship of valve timing, injection and fuel quality to proper combustion. Electronic fuel delivery is discussed as it relates to engine performance.

070-178  Implement Assembly and Pre-delivery  3 credits
Students assemble tillage and planting equipment and perform pre-delivery service checks. The design, principles of operation, adjustment and troubleshooting of seeding, planting and tillage machines are covered.

070-179  Tractor Performance  1 credit
The proper distribution of ballast of agricultural tractors, and techniques and procedures for determining percentage of slippage are demonstrated. Dynanometer operation, engine test procedures and safe operation are demonstrated. Engine performance, test equipment procedures, results and corrections are covered.

070-181  Combing and Harvesting  4 credits
Instruction in the theory of operation, adjustment, and service of grain and forage harvesting machines. Students identify and understand the function of basic components, construction, means of repair and replacement of components. Lab work provides students with hands-on service experience with combines and forage harvesting equipment. Students troubleshoot and diagnose functional and mechanical failures, utilizing measuring tools and machine specifications. Machines covered include self-propelled combines and forage harvesters. Square and round balers, mower conditioners and other machines. Service and adjustment activities include combine cylinder bars, forage harvester knives, blower paddles, bale knots, corn heads, grain platforms, belt splicing, chains, pulleys, sprockets, braiding, and power transmission equipment.

070-182  Accessories and Electronics  4 credits
Includes a review of electrical fundamentals, an introduction to electronics, and the use of digital multimeters for circuit diagnosis. Techniques of circuit diagnosis are demonstrated by using electrical schematics and diagrams. Microprocessor operation including inputs and outputs is explained. All tractor circuits including lighting, accessory, safety, and instrumentation, along with electronic monitoring systems for planting and harvesting equipment, are covered and tested by the student.

070-183  Hydraulics  3 credits
Introduces the fundamentals of fluid power, principles of operation, components, and terminology used to describe hydraulic systems on mobile equipment. The operation, maintenance, service, and system diagnosis are related to tractors and other common agricultural machines. Students are also acquainted with the theory of operation and diagnosis testing of hydrostatic drives found on these machines.

070-184  Advanced Hydraulics  3 credits
Acquaints the student with diagnostic and troubleshooting procedures in solving hydraulic problems found with hydraulic systems. Problems encountered include pump failure, solenoid values and cylinders, as well as other problems of electrical and hydraulic controls.

070-185  Equipment Maintenance  3 credits
Introduction to preventive maintenance for tractors and agricultural tillage, planting and harvesting equipment. A discussion on testing procedures and results is also conducted. Types and application of lubricants as well as maintenance intervals are discussed.

070-186  Basic Electricity and AC/DC Circuits  3 credits
Basic principles of AC and DC circuits are used to study the operation of agricultural electronic equipment. Emphasizes the troubleshooting of electronic monitoring units. Students participate in classroom and laboratory exercises on the basic concepts and laws of alternating and direct current circuits. Ohm's law, and half-wave, full-wave and bridge rectifier currents are studied. The effects of digital input signals are also examined in relation to agricultural machines.

COURSES
070-187 Occupational Experience (Spring Session) 2 credits
Students receive on-the-job experience in the areas of tractor performance and service of transmissions, clutches, and final drives. Other areas covered include setup, tillage and planting equipment.

070-188 Occupational Experience (Fall Session) 2 credits
Students receive on-the-job experience in the areas of combines, corn heads and grain platforms. Other areas covered include fall tillage and planting equipment.

070-189 Occupational Experience (Summer Session) 2 credits
Students receive on-the-job experience in tractor engine repair, air conditioning, electrical and hydraulic system troubleshooting. Other areas covered include service department operation, warranty work and customer contacts.

070-190 Shop Operations 1 credit
The roles and functions of the mechanics service manager, parts department and sales department are studied. Included are new machine delivery procedures, service reports, repair orders, warranty policies, company organizational structures, and a study of the latest procedures and techniques in the industry. Identifying employment opportunities and preparation for seeking employment are also part of the course.

070-191 Engine Repairs 1 and 2 6 credits
Proper diagnosis, disassembly, inspection and repair of all diesel engine components are studied. Four-cycle, in-line four and six-cylinder vee engines used in agricultural equipment are studied in this course. Engine maintenance requirements and operational standards are also covered.

090 Farm Business Production and Management

090-381 Operating the Farm Business 3 credits
Emphasizes the management skills and concepts necessary for students to continue farming with today's changing technology and farm business financing. Builds the foundation for other courses in this program. Special emphasis is given to establishing and recording farm business and family goals. Students organize and maintain farm business records, and interpret and analyze the records to assist in making sound farm business management decisions. Each student's entire farming operation is assessed, and plans are developed for future needs, goals and objectives. Students evaluate goals and objectives upon completion of the course. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are given in this course. Completion of this course is required before any of the following courses may be taken.

090-382 Soils Management 3 credits
Covers preparation and implementation of a land-use plan and helps students understand soil testing procedures and reports. Students receive instruction on making, understanding and implementing fertilizer recommendations and budgets. Covers application of farm manures, chemicals, soil conservation practices, and the management and safe use of farm machinery and equipment. Emphasizes analysis of the farm business and planning of cropping strategies to meet student needs. Includes 12 hours of group instruction and 12 hours of individual on-farm instruction. Prerequisite: 090-381, Operating the Farm Business.

090-383 Crop Management 3 credits
Provides group and individual instruction covering all phases of crop production, management and economics. Specific topics relate to variety selection, planning, pest control, harvesting, storing and marketing. In addition, the farm cropping program is related to the total farm enterprise on a short- and long-term basis. Crop management emphasizes analysis of the farming business and planning cropping practices and strategies to meet student needs. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are provided. Prerequisite: 090-381, Operating the Farm Business.

090-384 Livestock Nutrition 3 credits
This course emphasizes the skills, techniques and concepts necessary for sound feeding management. It covers the determination of feed values; the economics of feed; nutritional terminology and requirements; feed consumption of livestock; breeding; understanding feed tag labels for protein, energy, minerals and vitamins; evaluation of base feed and feeding programs; and metabolic diseases of lactating livestock. Livestock feeding efficiency is measured by use of the farm business analysis. Not part of the course, but also included in this course, is a discussion of how the farm family can deal with stress factors and identify its role in the community. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are provided. Prerequisite: 090-381, Operating the Farm Business.

090-385 Livestock Management 3 credits
The livestock management course provides instruction on the various phases of selection, breeding, herd health, raising of replacement stock, and marketing livestock and livestock products. It includes the selection, operation and maintenance of milking, feeding, ventilation, manure handling, equipment, and farm buildings. In addition, the livestock program is managed through use of the farm business analysis. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are offered. Prerequisite: 090-381, Operating the Farm Business.

090-386 Farm Records and Business Analysis 3 credits
Instruction is provided which emphasizes the practical use of a record system in farm management and financial analysis. It includes the establishment of farm business goals, selection and use of farm records, farm business arrangements, farm estate planning and farm income taxes. Production and financial decisions are based on each student's farm business analysis. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are provided. Prerequisite: 090-381, Operating the Farm Business.

090-387 Farm Business Production and Management – Sheep Production

090-388 Operating the Farm Business – Sheep Production 3 credits
This first-year course emphasizes the management skills and concepts necessary for the sheep production student to continue farming with today's changing technology and farm business financing. Builds the foundation for the other courses in this program. Special emphasis is given to establishing and recording sheep production and family goals. The student organizes and maintains sheep business records, and interprets and analyzes the records to assist in making sound farm business management decisions. Each student's entire farming operation is assessed, and plans are developed for future needs, goals and objectives as they relate to sheep production. Students evaluate goals and objectives upon completion of the course. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are offered in this course. Course completion is required prior to enrollment in any other program course.
090-382 Soil Management - Sheep Production 3 credits
Covers preparation and implementation of a land-use plan and helps students understand soil testing procedures and reports as they relate to sheep production. Students receive instruction on making, understanding, and implementing fertilizer recommendations and budgets. Other topics include the application of farm manures, chemicals, soil conservation practices, and the management and safe use of farm machinery and equipment. Emphasizes analysis of the farming business and planning cropping strategies to meet student needs. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are offered. Prerequisite: 090-381, Operating the Farm Business.

090-383 Crop Management - Sheep Production 3 credits
Covers all phases of crop production, management, and economics as related to sheep production. Specific topics relate to variety, selection, planning, pest control, harvesting, storing, and marketing. In addition, the farm cropping program is related to the total sheep enterprise on a short- and long-term basis. Emphasizes analysis of the farming business and planning cropping practices and strategies to meet student needs. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are offered. Prerequisite: 090-381, Operating the Farm Business.

090-384 Livestock Nutrition - Sheep Production 3 credits
Emphasizes the skills, techniques, and concepts necessary for sound feeding management in sheep production. Includes the determination of feed values; economics of feed; nutritional terminology and requirements; feed consumption of sheep; breeding; understanding feed tag labels for protein, energy, minerals, and vitamins; evaluation of feed value; and feeding programs; and metabolic diseases of lactating ewes. Sheep feeding efficiency is measured by using the farm business analysis. Not part of nutrition, but also covered in this course, is a discussion of how the family can deal with stress factors and identify its role in the community. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are offered. Prerequisite: 090-381, Operating the Farm Business.

090-385 Livestock Management - Sheep Production 3 credits
Covers all phases of sheep production, management, and economics as related to sheep production. Includes selection, operation, and maintenance of the sheep flock, feed, ventilation, manure handling, equipment, and farm buildings. The sheep program is managed through farm business analysis. Includes 36 hours of group instruction and 12 hours of individual on-farm instruction. Prerequisite: 090-381, Operating the Farm Business.

090-386 Farm Records and Business Analysis - Sheep Production 3 credits
Covers the practical use of a record system in farm management and financial analysis. It includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and financial analysis of the farm business. Production and financial decisions are based on each student's farm business analysis. Thirty-six hours of group instruction and 12 hours of individual on-farm instruction are offered. Prerequisite: 090-381, Operating the Farm Business.

090-387 Sheep Production - Update 2 credits
Special emphasis is placed on high-tech business today, not only because of new machinery, equipment, breeding techniques, selective pesticides and breeding, and feeding practices, but also in the use of business skills, computer and marketing methods. Local, state, and federal governments are imposing new rules and regulations, and farm price supports change yearly. All require the sheep producer to make decisions affecting the farm operation. Because of changing production technology and farm management decisions, there is a need for the established farmer to receive up-to-date instruction and information about current practices for farm records and analysis, soils and crop management, and sheep nutrition and management. Specific objectives for this course are modified on a yearly basis to meet the needs of area sheep producers. Prerequisite: 090-381, Operating the Farm Business.

091 Veterinary Technician/Laboratory Animal Technician

091-113 Animal Nutrition 2 credits
Presents information concerning the applied nutrition of the common domestic and laboratory species. Disease and body functions as related to nutrition are stressed. Field trips may be taken. Prerequisite: consent of instructor.

091-114 Animal Behavior 2 credits
Introductory elective course in companion animal behavior. The purpose is to provide veterinary technician students with information that enables them to more effectively deal with their patients and allows professional client assistance. Course includes history of the study of animal behavior, normal canine, feline and avian behavior, and therapy techniques for common behavior problems in dogs and cats.

091-115 Zoos and Zoology 1 credit
Diseases that are transmissible from animal to man have an important public health significance. It is necessary that veterinary technicians have a working knowledge of the etiology, symptoms and transmission of such diseases. They must also know the reporting requirements, the proper handling of diagnostic samples, and means of prevention and control of zoonotic diseases. This course surveys the primary zoonotic diseases with special emphasis on high-exposure diseases that might involve the veterinary technician and/or client. These include viral, bacterial, rickettsial, mycotic and parasitic diseases. Because of the importance of rubies, a field trip to the Department of Hygiene is scheduled. A laboratory/demonstration informs students on the specific problems of rubies in Wisconsin. The fluorescent-antibody method of diagnosis and proper sample handling and shipment of suspected rubies specimens.

091-116 Introduction to Microbiology 3 credits
Emphasizes organisms affecting animal species. General microbiological concepts and principles are covered in lecture and laboratory. Includes taxonomy, biology of microorganisms, pathogenic organisms, sterilization and disinfection, antimicrobial sensitivity testing, immunity, mycology, virology, microbiology of milk, safety and public health. Uses laboratory exercises to supplement lecture material while stressing safety and procedures and materials used to culture and identify organisms.

091-117 Exotic Animal Husbandry 2 credits
Covers basic care and handling of birds, reptiles, small rodents, rabbits, ferrets and guinea pigs. Zoo animal and wildlife rehabilitation are discussed as other areas available to veterinary/laboratory animal technicians.

091-118 Advanced Veterinary Surgical Nursing 2 credits
An elective course offered for those veterinary technician students who wish to expand their surgical nursing knowledge. Designed to show the entire scope of a surgical patient's case from hospital admittance to discharge. Discussion of diagnostic tests, special anesthetic considerations, and specific specialized surgical equipment as they relate to specific types of cases, will be included. Course will consist of lecture-style instruction. Students will participate in a rotation through a surgery schedule to maintain their surgical nursing skills. Field trips may be taken. Prerequisite: 091-158, Internship; 091-126, Veterinary Operating Room Techniques; and 091-140, Animal Anatomy and Physiology.

091-120 Laboratory Techniques 3 credits
Introduction to principles, procedures, and equipment used in hematology, urinalysis and identification of common animal parasites. Emphasizes student proficiency at performing test procedures in the above areas. Prerequisite: 091-170, Veterinary Medical Terminology or consent of instructor.

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091-121 Laboratory Techniques 2 4 credits

Reviews and expands upon the principles, procedures and skills learned in Laboratory Techniques 1 and Introduction to Microbiology, including basic hematology, urinalysis, parasitology and microbiology. Introduces serological procedures and automated laboratory procedures such as hematology and clinical chemistry. Students participate in a rotation through the Wisconsin Animal Health Laboratory to observe the post-mortem, serology, clinical chemistry, and clinical microbiological functions of this laboratory. Prerequisites: 091-120, Laboratory Techniques 1; and 091-116, Introduction to Microbiology; and 806-110, Technical Chemistry or concurrent enrollment, or equivalent.

091-122 Introduction to Laboratory Animal Science 3 credits

Acquaints students with the field of laboratory animal care. Laboratory procedures are used to augment the lecture material. Topics include a short survey of the history of laboratory animal technology and the usage of laboratory animals. The Animal Welfare Act and other regulations pertaining to the care of laboratory animals are emphasized. The husbandry of laboratory animals is covered in depth. Collection of specimens, methods of treatment, restraint methods, anesthesia, surgical assisting techniques, humane euthanasia, and necropsy procedures are discussed and practiced. During this course, students provide care and treatment for a colony of laboratory animals. Methods of record keeping and management are also discussed.

091-125 Veterinary Office Management 2 credits

Introduction to business practices utilized in the modern veterinary hospital. Instruction includes fundamental principles involved in developing good public, client and staff relations; office procedures, including telephone etiquette, appointment scheduling, records management and inventory control; client services and education; marketing practices; personal grooming and hospital attire; job application techniques and advancement opportunities. Emphasizes professional ethics, and involvement in professional organizations is encouraged. Also includes basic principles of accounting procedures and an introduction to computer technology as used in a veterinary office with a computer lab. Prerequisite: 091-118, Internship, or concurrent enrollment, or consent of the instructor.

091-126 Veterinary Operating Room Techniques 4 credits

Covers the study and practical application of sterilization techniques, preparation of the surgical site, operating room conduct, assisting the surgeon, and dental prophylaxis. Also includes the use of disinfectants and anti-infectives in veterinary medicine; comesthetics and some basic uses of surgical instruments; preparation of packs, gowns, gloves; and the use of sterilization equipment: the classification and physical properties of anesthetics used in large and small animal veterinary medicine and surgery. Prerequisites: 091-120, Laboratory Techniques 1; and 091-116, Introduction to Microbiology; and 806-110, Technical Chemistry or concurrent enrollment; and 091-140, Animal Anatomy and Physiology.

091-127 Large Animal Surgical Nursing 1 credit

An elective course for veterinary technician students who want additional hands-on experience in surgical and anesthesia with large animals. Offered in cooperation with the School of Veterinary Medicine at the University of Wisconsin-Madison at an off-campus site. Prerequisite: 091-125, Veterinary Operating Room Techniques, or equivalent. Limited to six students.

091-129 Clinical Rotation 3 credits

Elective fourth-semester course for veterinary technician students who want more practical, hands-on exposure. Offered in cooperation with the School of Veterinary Medicine at the University of Wisconsin-Madison. Students are placed in a rotation through various functional units of the Veterinary Medicine Teaching Hospital of the School of Veterinary Medicine to acquire additional hands-on experience. Limited to six students.

091-140 Animal Anatomy and Physiology 4 credits

Lectures emphasize terminology, functions and organization of the systems as an integrated structural and functional body. Laboratory exercises are directed toward locating and identifying anatomical structures that are parts of the body systems. Cadavers and tissue specimens from common domestic species are dissected and studied in the laboratory. Prerequisite: 806-105, Animal Biology or equivalent, or consent of instructor.

091-151 Clinical and Hospital Techniques 4 credits

Covers the study and practical application of basic clinical techniques that might be expected to perform in a practice. Emphasizes radiographic techniques and medical nursing procedures. Prerequisites: 091-125, Veterinary Operating Room Techniques.

091-155 Hospital Supplies and Medicants 3 credits

Entails a study of drugs and other substances of veterinary medical importance. Basic terminology, usage, measurement, administration, drug inventory and safe storage of drugs is emphasized. Prerequisite: 091-118, Internship, or concurrent enrollment.

091-158 Internship 4 credits

Internship (work experience) is a very important phase of practical training for students enrolled in the veterinary technician program. It generally follows the second semester of classwork in the college summer recess and is conducted during a period of eight weeks (or 320 hours). Placement for this training is with a cooperating veterinarian who is licensed to practice in Wisconsin. The student's work is supervised by assigned instructors. Prerequisite: completion of all first-year courses, or consent of instructors.

091-166 Veterinary Office Emergencies 1 credit

Elective course for students in the veterinary/laboratory animal technician programs. A combination of first aid and CPR for emergencies that may occur in a veterinary practice. Prepares students for a standard Red Cross first aid certificate. Presents the didactic and practical content of the American Heart Association's basic life support course.

091-170 Veterinary Medical Terminology/ Occupational Preparation 2 credits

A knowledge of standard terminology is prerequisite to common understanding and meaningful communication in any field of specialization, and especially so in veterinary medicine. This course teaches acceptable veterinary medical terminology for common clinically recognizable diseases, operations, systems and procedures. Emphasizes word recognition, meaning, appropriate usage, spelling and pronunciation. Understanding word structure and word parts is a helpful tool for analyzing, learning and using a proper medical vocabulary. This course is taught in units by body system and anatomic structure. In addition to medical terms, common medical signs, abbreviations and colloquial vocabulary are taught. The occupational preparation part of the course acquaints veterinary technician students with the college and their career field. Information is presented to help individuals succeed in both.

091-171 Animal Care and Management I 3 credits

Focuses on the animal husbandry and restraint of small companion animals, including dogs, cats and birds. Subject material includes the human-animal bond; animal behavior; acceptable husbandry practices; species, breed and sex identification; health care management; common diseases; reproduction; and proper nutrition in health, disease and stages of the life cycle. Client education is emphasized. The laboratory provides students with the opportunity to practice small animal restraint techniques and basic animal nursing skills.

091-172 Animal Care and Management II 3 credits

Covers husbandry, restraint and nutritional information concerning domestic livestock. Current basic animal husbandry practices are taught with emphasis on selection, breeding, rearing, caring and housing for each kind. Diseases and body functions as related to nutrition are includ-
ed, as well as feeding to prevent malfunction of animal health and production. Restraint of animals utilizing safe and humane physical and chemical methods is emphasized. Prerequisite: 091-171, Animal Care and Management 1; or consent of instructor.

**091-173 Laboratory Management Techniques 3 credits**

Acquaints students with various aspects involved in the management of a laboratory animal facility. Interpersonal relations, stress management and time management principles are taught to help students better prepare themselves. Basic computer operations are covered. Students are also exposed to the various operating protocols and safety procedures they may encounter.

**091-174 Laboratory Procedures 3 credits**

Introduction to principles, procedures and equipment used in hematology, bacteriology, urinalysis and parasitology. Emphasizes the proper collection and handling of samples and student ability to perform test procedures in the above areas. Laboratory exercises supplement lecture materials while stressing safety, procedures and materials used.

**091-175 Infectious Diseases 2 credits**

Infectious diseases are caused by the presence of foreign living organisms in or on an animal's body. The laboratory animal technician must have a working knowledge of the etiology, symptoms and transmission of such diseases, as well as reporting requirements, proper handling of diagnostic samples, and means of prevention and control of infectious diseases. This course surveys the primary infectious diseases with special emphasis on high-exposure diseases that might involve the lab animal technician. These include viral, bacterial, mycotic and parasitic diseases.

**091-176 Animal Nursing Procedures 3 credits**

Instruction and practical application of nursing techniques that a laboratory animal technician might be expected to perform. Areas covered are radiography, electrocardiography, first aid, shock and shock therapy, fluid therapy, and quarantine procedures. Students are introduced to normal and abnormal animal behavior that may be indicative of disease. Lectures are supplemented by laboratory demonstrations and practice of procedures on laboratory animals.

**091-177 Animal Anatomy and Physiology 2 3 credits**

Comparative anatomy and physiology of laboratory animals. Instruction includes procedures for humane euthanasia, necropsy and tissue collection, and histology.

**091-178 Issues in Laboratory Animal Science 3 credits**

Emphasizes the humane care and use of laboratory animals, and examines regulatory agencies and guidelines for laboratory animal facilities. Because of the public awareness of the use of animals for research, extensive discussions focus on the ethics and philosophy of animal use, historical animal use, and public relations and safety procedures.

**091-179 Laboratory Animal Science 2 3 credits**

The study of animal breeding systems and techniques, the isolators and equipment used, and the types of animals used for specific breeding systems. Also covers shipping and receiving of animals, sanitation of animal rooms and cages, and monitoring of the environment and inventory.

**091-180 Research Animal Surgical Nursing 3 credits**

The study and practical application of sterilization techniques, surgical site preparation, operating room conduct, surgeon assistance, and surgery performance. Surgical procedures utilize laboratory animals and are under the direction of an instructor. Includes use of disinfectants and antisepsics, nomenclature and basic uses of surgical instruments, preparation of packs, gowns, gloves, and the classification and physical properties of anesthetics used in surgery.

**095 Taxidermy**

**095-301 Basic Taxidermy 1 credit**

Covers introductory elements of taxidermy: laws, licenses, supplies, use of tools, advertising, bookkeeping, tax laws, collection and care of specimens, specimen measurement, and hazards and safety.

**095-305 Fish/Fish Painting 4 credits**

Includes the entire process of fish mounting and painting. Demonstrates two techniques of making fish bodies and methods of mounting and preparing fish for painting. Students are required to mount a minimum of five game fish (one of which must be trout or salmon) and four panfish. Fish will be air-brushed in high-tech spray painting booths. Prerequisite: 095-301, Basic Taxidermy.

**095-306 Small Mammals 2 credits**

Presents proper mounting techniques and two methods of mounting small mammals. Students are required to mount four small mammals such as squirrels, mink, muskrats and opossum. Prerequisite: 095-301, Basic Taxidermy.

**095-308 Game Heads 2 credits**

Presents proper procedures for preparing, fleshing, tanning, mounting and finishing techniques. Students are required to complete three game head mounts: two white-tailed deer, and students' choice of mule deer, antelope, bear, coyote or fox. Prerequisite: 095-306, Small Mammals.

**095-310 Large Mammals and Rug-Making 2 credits**

Presents techniques needed for mounting large mammals, such as fox, raccoon, coyote and bear. Students learn rug-making techniques. Students are required to complete two mounts: one full life-size and one rug. Prerequisite: 095-308, Game Heads.

**095-315 Upland Birds/Waterfowl 5 credits**

Presents the proper procedures and techniques needed to mount upland birds and waterfowl. Students are required to complete five upland bird mounts: two pheasants, two student choice such as grouse and quail, and one turkey; and four waterfowl mounts: three of various duck species and one goose. Painting of bills and feet will also be covered. Prerequisite: 095-301, Basic Taxidermy.

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**101 Accounting**

**101-110 Accounting 1 - Problems (Lab) 1 credit**

Structured lab designed to reinforce concepts taught in Accounting 1 - Principles. Selected problems will be worked, with an instructor available to answer questions. It is recommended that this course be taken concurrently with 101-111, Accounting 1 - Principles.

**101-111 Accounting 1 - Principles 4 credits**

Introduces the field of accounting. The accounting cycle of journalizing transactions, posting, adjusting and closing entries, as well as the preparation of accounting statements is emphasized for service industries and merchandising concerns. Details of accounting for cash, notes and interest, inventories, fixed assets, depreciation and payroll are studied.

**101-112 Accounting 2 - Problems (Lab) 1 credit**

Structured lab designed to reinforce concepts taught in Accounting 2 - Principles. Selected problems will be worked, with an instructor available to answer questions. It is recommended that this course be taken concurrently with 101-113, Accounting 2 - Principles.

**101-113 Accounting 2 - Principles 4 credits**

Presents the proper procedures for accounting for partnerships and corporations. Additional topics include current and long-term liabilities, statement of cash flows, departmental accounting, manufacturing accounting, analysis of financial statements, introduction to cost accounting, budget preparation and cost-volume-profit analysis. Prerequisite: Grade of C or better in 101-111, Accounting 1 - Principles, or equivalent.

**101-114 Applied Accounting 1 3 credits**

Practical application of accounting principles, basic business terminology, practices and techniques are stressed for students not majoring in accounting. The accounting cycle of journalizing transactions, posting, adjusting and closing entries, as well as the preparation of accounting statements is emphasized.

**101-115 Applied Accounting 2 3 credits**

Presents procedures of accounting for partnerships and corporations. Additional topics include statement of cash flows, departmental accounting, manu-
COURSES

101-116 Hospitality Industry Accounting 1 3 credits
A study in the design and use of specialized accounting and financial control systems in management decision-making for hotels and restaurants.

101-117 Hospitality Industry Accounting 2 3 credits
Procedures of accounting for hotels and restaurants. Additional topics include analysis of hospitality financial statements, statement of cash flows, property and equipment, inventory accounting, and hospitality payroll accounting. Prerequisite: 101-116, Hospitality Industry Accounting 1, or equivalent.

101-118 Management Accounting 4 credits
Emphasizes the managerial use of accounting reports, the problem-solving functions of accounting in relation to current planning and control, performance evaluation, long-range planning, budgets and cost-volume-profit relationships. Prerequisites: 101-111, Accounting 1 - Principles; and 101-113, Accounting 2 - Principles.

101-121 Accounting 3 - Intermediate 4 credits
Includes a discussion and extensive applications of generally accepted accounting principles, study of recent developments and pronouncements in accounting practice, the preparation and interpretation of financial statements, and intensive study of the valuation and presentation of the various accounts: cash, receivables, inventories, operational assets and intangible assets. Prerequisites: Grade of C or better in 101-113, Accounting 2 - Principles; and 102-105, Mathematics of Finance.

101-122 Accounting 4 - Intermediate 4 credits
Emphasizes analysis of financial statements. Generally accepted accounting principles are applied in the preparation, analysis and interpretation of financial statements. Particular emphasis is applied to valuation of current and long-term liabilities and stockholders' equity, timing of the recognition of revenue, and earnings per share. Special topics included are taxes, long-term investments, pensions and leases. Further consideration is applied to errors and their correction, changing price levels and statements of cash flow. Prerequisite: Grade of C or better in 101-121, Accounting 3-Intermediate.

101-123 Tax 1 4 credits
Introduction to federal and state income tax laws with an emphasis on personal taxes. These areas are included: income, deductions, credits, depreciation, gains and losses, and sole proprietorship taxation. The course requires the preparation of a series of individual income tax returns.

101-124 Auditing 3 credits
A study of the auditing code of ethics principles, conventional auditing procedures, and critical issues in the field of auditing. Emphasizes internal control features and preparation of working papers. A short audit case is completed to illustrate various auditing concepts and procedures, and the intensive use of working papers and schedules. Prerequisite: 101-121, Accounting 3-Intermediate, or concurrent registration.

101-125 Cost Accounting 1 3 credits
Areas emphasized include job order cost, process cost, standard costs, joint cost and budgets. Cost-volume-profit relationships and other cost systems used in business decision-making require that students perform accounting procedures to accumulate and record the cost data typical of a business environment. Prerequisite: 101-113, Accounting 2 - Principles.

101-126 Cost Accounting 2 3 credits
A continuation of basic cost/managerial accounting subjects from Cost Accounting 1. In addition, it encompasses direct costing, cost and profit analysis, managerial accounting topics, simulation of cost system, field trips and student reports. Prerequisite: 101-125, Cost Accounting 1.

101-127 Tax 2 3 credits
Introduction to federal income tax laws with emphasis on partnerships, corporations and S-corporations. Includes a unit on tax research and tax administration. One tax research project on individual taxation is completed. A course requirement is the preparation of a tax return for each of the following: a partnership, a corporation and an S-corporation. Prerequisite: 101-123, Tax 1.

101-129 Governmental Accounting 3 credits
Presents applications of generally accepted accounting principles to governmental and nonprofit entities as presented from the point of view of authoritative organizations, voluntary health organizations, and nonprofit entities as covered by the American Institute of Certified Public Accountants. Also covers governmental terminology, budgeting, budgetary accounts and fund accounting. Problem-solving for municipal funds, institutional accounting for education and hospitals, nonprofit trade associations and voluntary health and welfare associations are developed. Cash planning and control and cash reports are studied. Prerequisite: 101-113, Accounting 2 - Principles.

101-135 Payroll Accounting - Income Tax 3 credits
This basic course covers the computation of employee earnings, the recording of payroll journal entries, and the preparation of employer payroll tax returns. Also covers basic income tax return preparation. Prerequisite: 101-111, Accounting 1 - Principles.

101-137 Computerized Accounting Applications 2 credits
Provides practical experience in using a spreadsheet, reviews material covered in previous accounting courses, demonstrates the interlocking relationships that exist, and develops spreadsheet templates that can be used in an employment situation. Students prepare detailed budgets and develop a Business and Financial Plan for managing and operating a business: Prerequisite: 101-111, Accounting 1 - Principles.

101-138 Accounting and Payroll Systems 3 credits
A survey of accounting and payroll systems, procedures and methods, to capture data and report financial information. Principles and problems of accounting and payroll systems, systems design, charting, internal control procedures, forms design and hands-on experience with a microcomputer are emphasized. Prerequisite: 101-111, Accounting 1 - Principles.

101-312 Sole Proprietorship Accounting 3 credits
Principles and procedures of double-entry accounting dealing with service and merchandising businesses of the single-owner system are stressed. Special journals, subsidiary ledgers and related accounting papers are covered in detail. A practice set with business papers is completed. Payroll problems are covered, but not stressed.

101-315 Partnership and Corporation Accounting 3 credits
A continuation of accounting principles and procedures pertinent to partnership and corporation forms of business ownership. Accounting for manufacturing businesses is presented. Prerequisite: 101-312, Sole Proprietorship Accounting, or equivalent.

101-330 Related Accounting 2 credits
Fundamental procedures of double-entry bookkeeping in the complete accounting cycle are covered - journals, ledgers, financial statements, adjusting and closing entries, and the post-closing trial balance. Emphasis is placed on proper cash receipts and disbursements records, current payroll practices, and accounting for a merchandising concern.

102 Business Administration

102-102 Business Mathematics 3 credits
Increases students' knowledge and skill in solving practical financial problems of a business or personal nature through the use of arithmetic and logic. The material included develops a sound base for concurrent or subsequent courses in accounting and other business-related subjects. Solving word (story) problems is emphasized.

102-104 Business Statistics 3 credits
Introduces the theory and application to basic statistical methods. Emphasizes solving practical business problems. Topics include basic
measures, probability, sampling and time series analysis. Prerequisite: 102-105, Mathematics of Finance.

102-105 Mathematics of Finance 3 credits
A review of basic arithmetic and elementary algebra. Emphasizes solving practical word problems through the use of formulas and tables. The material develops a sound base for subsequent or concurrent courses in related business subjects by using an analytical approach to problem solving.

102-110 Business Correspondence Report Writing 2 credits
Provides instruction in the development of business correspondence and business reports. Research, development and formatting of reports for businesses are stressed.

102-114 Business Communications 3 credits
Both written and verbal communications are studied. Applications pertaining to business communications and procedures are stressed.

102-117 Money and Banking 3 credits
This introductory course studies money, the banking system and the role of the Federal Reserve as central banker. Considers the implementations of monetary and fiscal policy through a central bank. Introduces the foundations of Metallism and the framework of Keynesianism. Focus is set on the term structure of interest rates and the interrelationships of interest rates and financial markets. The economy, the banking system and financial markets are studied in the context of current events.

102-118 Introduction to Health Care Systems 3 credits
An orientation to the health care system in the United States, including an introduction to the various health care practitioners and organizations. The organization and administration of a health care facility, including staffing, financing, regulations and public education are stressed. The role of government and third-party financing of health care is presented.

102-121 Financial Management of Health Care 3 credits
Aids students with the basic elements of financial management in hospitals, nursing homes and clinics. Stresses the purpose and use of internal controls to safeguard the assets of the institutions. Collection of receivables, cash flow and third-party reimbursements are emphasized. Emphasizes the department head's role in budget preparation and its importance to the health care facility.

102-123 Environmental Health and Safety 3 credits
Introductory course which emphasizes federal and state health and safety regulatory statutes pertaining to hospitals and nursing homes. State licensure requirements, and federal occupational health and safety requirements are emphasized. Environmental safety requirements of the Joint Commissions on Accreditation of Hospitals are discussed.

102-124 Health Claims Processing 3 credits
Introduces students to terminology and principals of health insurance, and procedures for coding for professional services and diagnoses. Case studies are used to apply proper abstracting, abbreviating and coding techniques to fill out common claim forms. Includes basic vocabulary of insurance, basic principals of coding, and types of insurance.
Prerequisite: 509-180, Medical Terminology I.

102-126 Corporate Finance 3 credits
This intermediate-level course views finance from the perspective of the financial manager. Topics include techniques of financial analysis, forecasting and budgeting, operating and financial leverage, working capital management, the time value of money, cost of capital, long-term debt and stock financing, dividends and retained earnings. Students are expected to apply both principles of accounting and finance.
Prerequisites: 101-111, Accounting 1 – Principles; 101-113, Accounting 2 – Principles; and 102-105, Mathematics of Finance.

102-128 Financial Institutions 3 credits
Introductory-level course which considers the role of financial institutions in the economy. Topics include financial intermediation, the Federal Reserve System, financial markets and instruments, and non-bank financial institutions, including savings and loan associations, credit unions, finance companies, insurance companies, pension funds, mutual funds and government financial institutions.

102-129 Commercial Banking 3 credits
This advanced-level course considers finance from the point of view of a single commercial bank. Topics include the functions and operations of commercial banks, analysis, interpretation and evaluation of financial statements, lending policies and procedures and characteristics of various types of loans. Prerequisites: 101-118, Management Accounting; and 102-126, Corporate Finance.

102-130 Personal Finance 3 credits
This introductory course considers finance from the point of view of the individual or family unit. Topics include budgets, insurance, housing, borrowing, savings, investing and estate planning. Students complete personal finance projects applying the material learned.

102-134 Business Organization and Management 3 credits
This survey course imparts an understanding of the economic and legal environment in which businesses operate, as well as an understanding of the organization and management of business enterprises. An emphasis is placed on business terminology and concepts.

102-136 Personnel Management 3 credits
Designed for mid-management careers, this course combines theory and practice in analysis of the management process. The process of management is described in the sequence of planning, organizing, leading and controlling the causal relationships between managerial action and the effect of that action upon company objectives.

102-140 Corporate Finance and Investments 3 credits
This advanced course starts by reviewing capital budgeting techniques and cost of capital concepts. It finishes by considering alternative investment markets and media. Enhanced familiarity in analysis of corporate financial statements is obtained. Other topics considered: the investment environment, fundamental and technical analysis, timing and diversification strategies, and computer-based investment management.
Prerequisites: 101-118, Management Accounting; and 102-126, Corporate Finance.

102-143 Management Techniques 3 credits
Covers problems facing management and workers, with special emphasis on supervisory personnel and their challenges. Management principles are applied to such topics as the relationship of management to the business, its employees, the owner, other customers and the community. Problem solving at the supervisory level is emphasized.

102-146 Parliamentary Procedure 2 credits
The rules and procedures for effectively conducting a business meeting are covered through lecture and practical exercises. Topics include meeting management in business, duties of officers, agenda development, meeting minutes, formulating effective motions, purpose and strategy of motions, the amending process, voting, nominations, election procedures, action in boards and committees, and bylaws. Demonstration meetings are conducted.

102-160 Business Law I 3 credits
This survey course covers legal principles used in the business world. Topics include contracts, sales, bailments, agency, employment, property law, torts, criminal law, marital property and bankruptcy. The course is taught on a level suitable for an associate degree student.

102-161 Business Law II 3 credits
Advanced course for students who have mastered a basic business law course. More sophisticated business law subject matter is covered, including corporation and partnerships, real estate, insurance, estate planning and consumer protection. Prerequisite: grade of C or better in 102-160, Business Law I.

102-162 Family Law 3 credits
This is a study of the legal concepts related to dissolution of the marriage relationship. Includes the client interview process, preparation of plead-
Course 102-163 Administration of Estates 3 credits
This is a study of the legal concepts related to estate planning, wills, powers of attorney, summary procedures for estate settlement, formal and informal probate, the laws of intestacy, and the preparation of related income and death tax returns. Prerequisite: 102-160, Business Law 1, or concurrent enrollment.

102-165 Bankruptcy and Debt Collection 3 credits
This is the study of bankruptcy procedures, including the preparation and filing of bankruptcy schedules. Also included is the study of procedures for debt collection and the use of small claims court. Prerequisite: 102-160, Business Law 1, or concurrent enrollment.

102-166 Litigation and Legal Research 3 credits
This is the study of law related to litigation, including methods of legal research, investigation, discovery, preparation of pleadings, in-court procedures, file preparation, and post-trial practice. Prerequisite: 102-160, Business Law 1, or concurrent enrollment.

102-189 Medical Office Internship 4 credits
On-site training in a health care facility or organization under the guidance of a preceptor is emphasized. Exposure to the health care environment is stressed to provide as broad a learning experience as possible. Students may be required to perform work duties for the institution or organization.

102-194 Contemporary Issues in Health Care 3 credits
Current topics in the health care field are discussed in seminar style. Special emphasis is given to the student's field of training.

103-305 Applied Business Mathematics 2 credits
A review of practical business mathematics is followed by mathematical problems relevant to accounting, finance, payroll, marketing and other related business problems.

103-333 Principles of Business 2 credits
This fundamental business course introduces students to the various functions and operations of a business enterprise. These functions are approached both from the business and managerial points of view in terms of the marketing, finance, and production of a business. Specific emphasis is given to the marketing and finance aspects. Also considered is the relationship of management to the dynamic business environment.

103-360 Business Law 1 2 credits
This survey course is concerned with legal principles used in the business world. The course is designed for the one-year diploma student.

103-361 Business Law 2 2 credits
Advanced course for students who have mastered a basic business law course. More sophisticated business law subject matter is covered.

103 Business Machines
103-130 Microcomputer Applications 2 credits
Provides advanced knowledge in the operation of the microcomputer using Lotus 1-2-3. Students work on spreadsheet analysis, graphics and database management. Prerequisite: keyboarding speed of 30 wpm.

103-131 Lotus 1 credit
Gives students fundamental knowledge, concepts and skills used in the disk-operating system and spreadsheet software using Lotus 1-2-3. Students work on spreadsheet analysis, graphics and database management. Prerequisite: keyboarding speed of 30 wpm.

103-132 Lotus – Intermediate 1 credit
Builds on fundamentals developed in Lotus – Beginning and provides advanced knowledge in the operation of the Lotus 1-2-3 software. Prerequisite: 103-130, Lotus 1 credit.

103-133 WordPerfect – Intermediate 1 credit
Builds on fundamentals developed in WordPerfect – Beginning and provides advanced knowledge in the operation of the word processing software using WordPerfect. Prerequisite: keyboarding speed of 30 wpm.

103-134 Windows 1 credit
Gives students fundamental knowledge, concepts and skills used in the disk-operating and word-processing systems using Windows. Prerequisite: keyboarding speed of 30 wpm.

103-135 WordPerfect – Beginning 1 credit
Provides advanced knowledge in the operation of the microcomputer using WordPerfect. Prerequisite: keyboarding speed of 30 wpm.

103-136 WordPerfect – Intermediate 1 credit
Builds on fundamentals developed in WordPerfect – Beginning and provides advanced knowledge in the operation of a microcomputer using the word processing software WordPerfect. Prerequisite: keyboarding speed of 30 wpm.

110 Courses
104-100 Sales 3 credits
Sales is an introductory course to the basic principles, concepts and theories of business and non-business selling and their application to an actual sales presentation. Special attention is given to personality/development, self-image concepts and body communication. This course is generally provided to students in the Interior Design Program.

104-101 Career Orientation 1 credit
Students in Career Orientation work through an assessment of their personal skills, qualities, work and academic experiences with the objective of identifying their own strengths and weaknesses; personal goals are established. In addition, sources of information about career opportunities in various industries, companies and marketing jobs are used.

104-102 Marketing Principles 3 credits
Marketing Principles acquaints students with the marketing process and how it operates within a profit/nonprofit organization. The entire marketing mix is examined on a broad scale. Elements in the marketing mix include: marketing segmentation, market research, consumer behavior, product design and planning, pricing policies and strategies, distribution, advertising, sales promotion, and selling. This basic course provides a perspective of marketing as it relates to contemporary living and society's changing needs.

104-103 Marketing Information Management 3 credits
Businesses today need current information on which to base their marketing decisions. Students gather marketing information from primary and secondary sources using many hands-on activities.

104-104 Selling Principles 3 credits
This course acquaints the student with the basic principles and applications of the sales process as they may apply to industrial, wholesale and retail selling situations. This would include prospecting and qualifying, planning and pre-approaching, approaching the customer, the sales presentation/demonstration, handling objections, closing the sale and post-sale service and follow-up.

104-105 Small Business Management 2 credits
The intent of this course is to explore the opportunity for self-employment. Its basic objectives are to identify the characteristics of successful entrepreneurs as well as the business and marketing concepts that need consideration for success. Particular attention is given to factors necessary for evaluating the purchase of a small business as well as those factors necessary for starting a business from scratch. Legal forms of business, accounting, marketing research and financing are also presented.

104-107 Advanced Marketing Principles 3 credits
This course is an expanded look at critical issues/trends in the field of marketing. Importance is placed on understanding as well as analyzing the effect of issues/trends on companies and their marketing efforts. Developing skills in proposal writing and interpreting marketing information are other emphases of this course. The culmination of the course is the creation of an in-depth marketing plan for a selected product, service, company, or organization. Prerequisite: 104-102, Marketing Principles.

104-108 Advanced Selling Principles 3 credits
This course provides the student with current advanced concepts of industrial and service selling. Emphasis is placed on developing and maintaining good account relations, time and territory management, questioning/listening, the salesperson's role as a professional consultant, self-motivation and a positive attitude, related case problems, and advanced role-playing techniques. Prerequisite: 104-104, Selling Principles.

104-110 Supervision Principles 3 credits
This course provides the student with an introduction to the principles, methods and techniques of supervision and their application to case problems. Special attention is given to problem-solving, small group decision-making, teamwork and the supervisor/employee relationship.

104-117 Store Management 3 credits
The students in this course are responsible for managing the Cracker Barrel, a gift shop located on campus. Training in all aspects of store management with special emphasis on customer service, merchandising, financial planning and control, personnel, promotion, security, selling and sales management, and store layout and housekeeping.

104-118 Store Operations 3 credits
The students in this course are responsible for the operation of the Cracker Barrel. Training in all aspects of store operation with special emphasis on selling, merchandising, pricing, loss prevention and visual presentation is stressed. Students are required to attend at least one trade show during the semester to help select merchandise for the store.

104-123 Merchandising 3 credits
Students analyze the buying and merchandising functions in various types of organizations. The principles, procedures and techniques practiced by merchandisers are studied. Students may have the opportunity to interview a buyer, visit a market, participate in a floor move in a local business, compile a resource folder of relevant tools for buyers, or complete a computer simulation.

104-124 Retail Management 3 credits
Designed to introduce students to retail operations and management, familiarization with the types of retail institutions and the requirements for owning or franchising a retail establishment. Other areas covered are determination of a retail target market, trading area analysis and site selection, retail organization and human resource management, buying, handling, financial management of merchandise, development of retail image, customer services and control of retail operations.

104-125 Promotion Principles 1 3 credits
Introduces students to the elements in the promotional mix: advertising, sales promotion and public relations. Emphasis is placed on examining the characteristics, strengths and weaknesses of major media alternatives including radio, television, newspapers, magazines, outdoor and direct response, and in developing an effective media plan. Students will also examine the planning, research and strategy involved in creating advertisements for each of the major media.

104-126 Promotion Principles 2 3 credits
Emphasis is placed on developing the skills and knowledge to effectively utilize sales promotion and public relations tools. Students will have the opportunity to create and present a total promotional campaign coordinating all elements (including advertising) in the promotional mix. Prerequisite: 104-125, Promotion Principles 1; or consent of instructor.

104-134 Fashion Stylist/Modelling 3 credits
Fashion stylists work with photographers to create the images seen in print, video or television, or on the runway of a fashion show. Career opportunities and responsibilities of a photo stylist, freelance fashion coordinator and model are discussed. Basic modeling skills and techniques used in the industry are practiced. Students work before a camera and complete the course with several photos to use in their portfolio.

104-137 Marketing Mathematics 3 credits
Marketing Mathematics reviews basic math functions and demonstrates the major common practical applications of math in the retailing, wholesaling, insurance and real estate industries. Several small business topics are covered including checkbook reconciliation, payroll, business loans, depreciation, taxes, inventory and financial statements.

COURSES
104-138 Internship 2 3 credits
Work experience within an approved fashion business and under the sponsorship of someone in a management position are requirements for this course. Students are required to complete 144 hours of supervised work. Also, career planning skills involving job search strategies, qualification brief writing and videotaped mock interviews help prepare students for full-time work upon graduation.

104-157 Internship 1 3 credits
Internship 1 offers practical work experience to third and fourth semester students in the Fashion area. Experiences that cannot be acquired in the classroom environment provide the student with the opportunity to blend theory with practice in an approved work setting.

104-160 Sales Management 3 credits
Examines principles, philosophies, policies, strategies and tactics used in managing a sales force. Planning and budgeting for sales force activities, organizing a sales department, and operating a sales force including recruiting, selecting, training, compensating, supervising and motivating salespeople are stressed. Also includes analyzing and evaluating sales operations and individual salesperson productivity and effectiveness.

104-165 Marketing Internship 3 credits
Students are assisted in selecting a supervised work experience related to a specific area of marketing. A team consisting of the employer, the student intern and MATC instructor/advise work together to plan the objectives of the work experience as well as evaluate the intern's performance. Prerequisite: two full semesters of course work and an overall GPA of 2.0 or higher.

104-172 Career Planning 3 credits
Students continue their personal assessments and develop a personal portfolio of materials and assignments designed to assist them in future job searches. Major activities include developing a personal contact list, selecting references, writing a cover letter, participating in a videotaped job interview, and preparing a qualifications brief.

104-175 Field Training Seminar 2 credits
Field Training Seminar provides students with an opportunity to integrate their current work experiences with their classroom training to enable them to better analyze classroom theory and improve their ability to succeed on the job.

104-179 Marketing Techniques 3 credits
Offered for Business Division Students. Acquaints students with the marketing process and how it operates within a profit/nonprofit organization. The entire marketing mix is examined on a broad scale. Elements in the marketing mix include: market segmentation, market research, consumer behavior, product design and planning, pricing policies and strategies, distribution, advertising, sales promotion, and selling. This basic course provides a perspective of marketing as it relates to contemporary living and society's changing needs.

104-180 International Marketing 3 credits
Analyzes international market structure. Emphasizes foreign market surveys, trade promotion activities, importing and exporting problems, financial features, channels of distribution, and trade agreements. The overall approach remains a broad conceptual viewpoint blending the marketing concept into the structure of the current world marketplace. The consistent focus is on the environment and the modifications of marketing thinking and practice occasioned by environmental and cultural differences. The course provides the students with a world-wide orientation necessary to an ever-expanding global economy.

104-185 Customer Service Management 3 credits
This course examines the evolution of customer service and quality management for both internal and external customers. Students will have the opportunity to learn firsthand how organizations develop, operate and measure the effectiveness of their customer satisfaction programs. Some specific areas are effective telephone techniques, how to resolve customer problems, and other value-added customer service activities.

104-194 Visual Merchandising 3 credits
The principles and elements of design are incorporated into interior and exterior merchandise presentation. Coordination of the total sales promotion effort is emphasized. Students are required to build many types of displays.

104-195 Fashion Analysis 2 credits
Students work with the elements and principles of design as they relate to fashion promotion and products. Forecasting; creativity and a grasp of the influences and sources of design are major components of the course.

104-196 Textiles 2 credits
People who work in management and merchandising of the apparel business need an understanding of textiles. The focus of this course is on the textile information necessary to work in the apparel business. Once the technical information regarding fabrics and fibers is learned, the student is ready to apply this information to the buying of merchandise and the training of the sales staff.

104-197 Apparel Marketing 3 credits
Students study the types of business enterprises, activities, operations, interrelationships and practices in the fashion industry. Careers in each of these areas are explored. This is a survey course with emphasis on terminology and key sources of information in the industry.

106 Office Technology

106-103 Filing Procedures 2 credits
Covers the rules for filing records alphabetically, and the geographic, numeric and subject methods of records storage. Basic filing supplies and equipment are studied. Procedures for inspecting, indexing, coding, cross-referencing, sorting and filing records are applied. Procedures relating to requisitions, charge outs and follow-up systems to retrieve records are also studied. Computerized filing terminology is included.

106-105 Records and Information Management 3 credits
Covers the role of the records manager and the science of controlling and managing records/information within an organization from creation, distribution, utilization, retention, storage, retrieval, protection and preservation, to final disposition. The integration of related information technologies and current issues in records management are also studied. Prerequisite: 106-103, Filing Procedures.

106-108 Proofreading and Editing 3 credits
Students learn the process of correcting a written message from the recipient's point of view. Emphasis is on content editing - to make sure the message is clear, concise and says what the student wants it to say; copy editing - to check for errors in grammar, punctuation, spelling and usage; and proofreading - to compare the final copy with the final draft to find mechanical errors.

106-111 Shorthand 1 (Theory) 3 credits
Goals for the first semester of shorthand include learning the theory principles of Gregg shorthand, joining of symbols, correct writing techniques, penmanship, mastering brief forms and phrases, dictation skill building, and pre-transcription skills (rapid reading, basic punctuation, grummur, spelling). The minimum end-of-semester dictation speed requirement for two-minute, new-matter material is 50 wpm.

106-113 Shorthand 2 (Speed Development) 3 credits
The second semester of shorthand provides for the reinforcement of shorthand theory, phrases, brief forms and geographic names; accurate and rapid reading; and intensive speed development. Transcription skills (spelling, punctuation, word usage, number expressions, capitalization, possessives/plurals and letter/memo formats) are emphasized and applied during in-line letter development. Prerequisites: 106-111, Shorthand 1. The minimum three-minute dictation speed for students entering the course from Shorthand 1 is 60 wpm.

106-115 Shorthand 3 (Transcription) 3 credits
Content for the third semester of shorthand includes continued shorthand theory refinement, increased reading ability, an introduction to the export shortcuts, dictation speed development, improved decision-making and
increased transcription skills, and further refinement of multiple-letter production. Prerequisites: 106-111, Shorthand 1; and 106-113, Shorthand 2. The minimum three-minute dictation speed for students with no previous shorthand instruction prior to MATC enrollment is 80 wpm.

106-116 Shorthand 4 (Administrative Dictation) 3 credits
The major emphasis during the final semester of shorthand is to record dictation at a speed acceptable for employment and transcribe the dictation into mailable copy. This is achieved through increased dictation/multiple-letter production involving various types of office documents, advanced situations of office-style dictation, increased usage of reference materials, and specialized projects. The minimum end-of-semester speed for three-minute dictation is 90 wpm. Prerequisites: 106-111, Shorthand 1; 106-113, Shorthand 2; and 106-115, Shorthand 3.

106-130 Court Reporting Procedures 3 credits
Professional court and conference reporting procedures necessary for successful employment in the shorthand reporting field are presented. Topics include methods of transcript production, daily copy reporting, using general and legal reference materials, legal citations, professional standards and ethics, reporting technology such as videodisk deposition and computer-assisted transcription (CAT), operating a freelance reporting business, resume preparation, and reporting depositions, commission hearings and business meetings. Prerequisite: 106-144, Court Reporting 2.

106-131 Keyboarding 1 (Typing 1) 3 credits
The typewriter/computer keyboard (alphabetic, number, and symbol keys) is introduced along with development of speed and accuracy skills. Production typing focuses on basic letter styles, envelopes, centering, simple tables, outlines and reports with footnotes. The numeric keypad is also used.

106-132 Typing Workshop - Skillbuilding 2 credits
Nine-week course to develop speed and accuracy skills. Through diagnostic tests and analyses, typing weaknesses are identified and problem areas solved through corrective or developmental practice. Typing techniques are perfected, enabling the individual to eliminate errors and build speed. Prerequisite: 106-131, Keyboarding 1, or equivalent.

106-133 Document Processing 2 (Typing 2) 3 credits
Intermediate course to improve straight-copy speed and accuracy as well as refine knowledge and skill to produce business correspondence, tables, reports and office forms using word processing. The numeric keypad is reviewed. Prerequisite: 106-131, Keyboarding 1, or previous typing experience.

106-135 Typewriting 1 2 credits
This course is for non-secretarial students. Keyboard mastery and control, knowledge of machine parts, simple tabulation, centering and letter setup are emphasized.

106-136 Typewriting 2 2 credits
Intermediate course to improve straight-copy speed and accuracy as well as refine knowledge and skill to produce business correspondence, tables, reports, and office forms using word processing. Prerequisite: 106-135, Typewriting 1, or previous typing experience.

106-137 Document Processing 3 (Typing 3) 3 credits
This advanced course utilizes a variety of WordPerfect features and applications to produce mailable work at marketable speeds and improve decision-making and priority-setting abilities. Learning modules include skill development; numeric keypad review; advanced principles of tabulation, correspondence, manuscript/business reports and business forms; an introduction to machine transcription; and further training in language arts fundamentals. The final straight-copy speed for a five-minute timing with five or fewer errors is a minimum of 50 wpm. Prerequisite: 106-133, Document Processing 2, or equivalent; and 103-135, WordPerfect - Beginning, or equivalent.

106-138 Document Processing 4 (Typing 4) 3 credits
This advanced course integrates the use of the microcomputer with WordPerfect software to efficiently produce documents for an office simulation. Emphasizes effective decision making, priority setting and problem solving. Other areas of emphasis include machine transcription, communication skills, composition and proofreading/editing skills. Prerequisite: 106-137, Document Processing 3, or equivalent.

106-142 Court and Freelance Reporting 3 credits
Students learn the procedures, practices and legal terminology of courts. Heavy emphasis is on court structure and pre-trial procedures. Prerequisite: 106-144, Court Reporting 2.

106-143 Court Reporting 1 5 credits
Basic introduction to machine shorthand, covering theory, keyboard and phonetics necessary for machine dictation and transcription.

106-144 Court Reporting 2 6 credits
Provides dictation materials for reinforcement of machine shorthand theory and abbreviations, for speed and accuracy development in writing and transcribing, and for extensive readback of shorthand notes. Extensive practice on two-voice testimony and an introduction to colloquy, jury charge and literary materials is offered. Outside-of-class machine practice is required. Prerequisite: 106-143, Court Reporting 1. Required entrance speed of 60 wpm (three-minute dictation with 95 percent accuracy).

106-145 Court Reporting 3 3 credits
Continues the speed-building process. Material from courtroom proceedings and depositions is used to build writing vocabulary. Emphasizes writing two- and four-voice testimony. Speed attainment of 200 wpm is the goal. Prerequisite: 106-154, Court Reporting Workshop. Required entrance speed of 140 wpm on testimony dictation (five minute takes with 95 percent accuracy).

106-146 Court Reporting 4 3 credits
A continuation of 106-145, Court Reporting 3. The objective is to write 225 wpm for five minutes on unfamiliar material with at least 95 percent accuracy. Graduation from the program requires the following writing speeds: two-voice, 225 wpm; four-voice and jury charge, 200 wpm; and literary, 180 wpm (five-minute takes with 95 percent accuracy).
Prerequisite: 106-145, Court Reporting 3. Required entrance speed of 180 wpm on testimony dictation (five minute takes with 95 percent accuracy).

106-147 Legal/Technical Reporting 1 3 credits
Introduces specialized practice in writing and transcribing legal material (jury charges, voir dire, expert witnesses, and opening and closing statements) and technical material (literary, congressional and scientific). Introduction to medical material for fluent and accurate readback is stressed. Prerequisite: Required entrance speed of 110 wpm on literary and jury charge material (five minute takes, with 95 percent accuracy).

106-148 Legal/Technical Reporting 2 3 credits
Advanced skill development in writing and transcribing jury charge and literary materials and continuation of medical dictation and transcription. Graduation from the program requires the following writing speeds: jury charge, 200 wpm and literary, 180 wpm (five-minute takes with 95 percent accuracy). Prerequisite: 106-147, Legal/Technical Reporting 1. Required entrance speed of 140 wpm literary and jury charge material (five minute takes, with 95 percent accuracy).

106-150 Administrative Office Procedures 3 credits
Course topics include: the functioning of an office, an executive and a secretary; secretarial ethics; nonverbal communications; processing incoming and outgoing mail; telephone procedures; travel and meeting arrangements; professional growth; time management; sources of information; and secretarial decision making and problem solving.

106-151 Court Reporting Internship 3 credits
Advanced students take dictation in court situations with the assistance and guidance of a qualified reporter. Student performance and work is
evaluated by a working reporter. Internship placement requires attainment of 200 wpm writing speed on two-voice testimony material.

106-152 Court Reporting Transcription 2 credits
Transcription for court reporters focuses on the development of the following minimum requirements: straight copy typing speed of 60 wpm net, transcript production of 10 pages of typed transcript (Q & A) in two hours with at least 95 percent accuracy, and proficiency in transcription mechanics (format, spelling, punctuation, style, proofreading and homophones).

106-153 CAT (Computer-Assisted Transcription) Systems 3 credits
This advanced course uses Premier Power software to transcribe stenographic notes. Each student is required to compile his/her individual global dictionary for use upon graduation from the program. Lecture/discussion groups center around such topics as CAT management, real-time translation and reporter technology.

106-154 Court Reporting Workshop 3 credits
Required during the summer prior to entering the third semester of the Court and Conference Reporting program. The major emphasis of the summer workshop is intense speed and accuracy development on a variety of materials. Prerequisite: Entrance speed of 100 wpm on testimony, literary and jury charge material for three minute dictation with 95 percent accuracy.

106-155 Advanced Court Reporting Skillbuilding 2 credits
Advanced court reporting students receive dictation at speeds ranging from 200 words per minute to 225 wpm, 2-voice testimony; and 200 wpm, 4-voice testimony. Takes are based on 95 percent accuracy. Prerequisite: 106-146, Court Reporting 4.

106-158 Court Reporting Terminology 1 credit
Provides a background in basic legal terminology. Includes the correct spelling, pronunciation and definition of legal terms. In addition to general legal terms, specific areas of law covered are civil actions, criminal process and procedures, and new developments specific to various medical specialties, labor, immigration, foreign accents. Emphasizes practicing efficient keyboarding and word processing skills, refining transcription skills, sharpening ability to quickly and correctly follow directions, and prioritizing work in order to meet deadlines. Prerequisites: 106-170, Medical Document Processing 1; 106-171, Medical Document Processing 2; and 106-173, Medical Document Processing 3.

106-162 Information Processing Concepts 3 credits
Introduces computers and information processing to students. Emphasizes computer terminology, hardware, software, architecture, data communications, networks, security and the computer marketplace.

106-183 Information Processing Techniques 1 3 credits
Gives students fundamental knowledge, concepts and skills used in the disk-operating system and Windows, word processing, and spreadsheet software.

106-184 Information Processing Techniques 2 3 credits
Gives students fundamental knowledge, concepts and skills used in database (Paradox) software working in the Windows environment. Also teaches intermediate and advanced features of spreadsheet (Lotus) software and fundamentals of File Manager. Prerequisite: 106-183, Information Processing Techniques 1.

106-185 Information Processing Management 3 credits
Emphasizes understanding and applying management skills to information processing operations in an organization. Includes the responsibilities of information processing managers and supervisors, feasibility studies, system design, equipment selection, center layout and environment, implementation and system evaluation, writing procedures, budget preparation, selection and training of personnel, productivity standards and evaluation, and management of operations. Also covers the fundamental principles and practices used in office management with an emphasis on human behavior. Prerequisite: 106-183, Information Processing Techniques 1.

106-186 Information Processing Internship 3 credits
This capstone course guides Administrative Assistant – Information Processing Program majors through the career-planning process. It begins with self-analysis and continues through the job search: information sources, resume, cover letter, applications, interviews, follow-ups and job success. Employment testing, salary negotiations, business wardrobe, job offers and job changes are discussed. During the final semester of study, the student works in an approved information processing position under the supervision and guidance of a cooperating employer. Prerequisite: 106-183, Information Processing Techniques 1.

106-187 Integrated Office Techniques 3 credits
Covers utilization of networked computer systems for actual and simulated business applications. Integrates word processing, database, spreadsheet, graphics, presentations, electronic mail, file management, networking and calendaring applications. Prerequisite: 106-183, Information Processing Techniques 1.
106-188 Information Processing Techniques 3 credits
Covers more features of information processing. Windows and DOS platforms with graphics, word processing and spreadsheet software are used. Prerequisite: word processing and spreadsheet knowledge.

106-190 Professional Development 1 credit
Assists students in developing the skills necessary for successful job search and application including preparing resumes, cover letters and applications for employment; developing effective interview techniques; and organizing the job search.

106-195 Career Development/Internship 3 credits
This capstone course guides Administrative Assistant - Secretarial Program majors through the career planning process. It begins with self-analysis and continues through the job search; information sources, resume and cover letter, applications, interviews, follow-ups and job success. Employment testing, salary negotiations, business wardrobe, job offers and job changes are discussed. Students complete a 72-hour affiliation in an approved business office under the supervision and guidance of a cooperating employer.

106-196 Machine Transcription 2 credits
Offers experience in transcribing a wide variety of realistic, typical communications from business organizations and government agencies. Emphasizes the development of the ability to produce accurate, correctly formatted transcripts of dictated communications in an efficient manner; correct spelling, punctuation and grammar principles. Students are required to prioritize work in order to meet specific deadlines.

106-197 Medical Secretary Internship 3 credits
A structured course encompassing areas required for successful job application and maintenance. It also provides a training program that allows students to observe and apply the theory, skills and techniques studied in the Medical Secretary Program. Students complete a 72-hour affiliation in an approved medical facility under the supervision and guidance of a teacher-coordinator and a cooperating experienced medical secretary.

106-303 Filing Procedures 1 credit
Covers the rules for filing alphabetically and the geographic, numeric and subject methods of record storage. Basic filing supplies and equipment are studied. Procedures for inspecting, indexing, coding, cross-referencing, sorting and filing records are applied. Procedures relating to requisitions, charge outs, and follow-up systems to retrieve records are also studied. Computerized filing terminology is included.

106-306 Office Procedures 2 credits
Incorporates the knowledge of basic office procedures with the skills required to perform effectively in the changing office environment. Emphasizes efficient performance of office functions and tasks in conjunction with the use of up-to-date office technology, and effective communication skills so as to perform as a successful office professional.

106-308 Proofreading/Editing 2 credits
Students learn the process of correcting a written message from the recipient's point of view. Emphasis is on content editing — to make sure the message is clear, concise, and says what the student wants it to say; copy editing — to check for errors in grammar, punctuation, spelling and usage; and proofreading — to compare the final copy with the final draft to find mechanical errors.

106-319 Legal Transcription 1 3 credits
Spelling, grammar, punctuation, number expression and capitalization are reviewed at the beginning of this course. Practice transcription applying these principles is provided. Students then transcribe simple legal documents and correspondence, which gradually increase in difficulty. Language skills are emphasized throughout. Prerequisite: 106-330, Microcomputers I, or concurrent enrollment.

106-320 Legal Transcription 2 3 credits
Devoted entirely to the transcription of legal correspondence and documents from dictated tapes in various areas of the law. Appeal briefs with citations are included. Legal applications of spelling, grammar, punctuation, number expression and capitalization are reviewed. Legal document formats and terminology are included. Prerequisite: 106-319, Legal Transcription 1.

106-328 Legal Office Procedures 1 2 credits
Covers the functions of an office, an executive and a secretary, legal and secretarial ethics; notaries public and legal document fundamentals; incoming and outgoing mail processing; time management; filing; and civil procedures. Students also gain experience in secretarial decision making and problem solving. Some field trips may be included.

106-329 Legal Office Procedures 2 2 credits
A continuation of 106-328, this course emphasizes legal procedures and terminology in specialized areas such as family law, probate and real estate. Field trips to courts and court-support offices such as clerk of courts and register of deeds may also be included. Prerequisite: 106-328, Legal Office Procedures 1.

106-331 Keyboarding 1 (Typing 1) 3 credits
For persons desiring to learn the touch system of typewriting, this course covers parts of the machine, mastery of the keyboard, drills for rhythm and accuracy, correct typing habits, simple letter set-up and tabulation, and timed writings.

106-333 Keyboarding Applications 2 (Typing 2) 3 credits
Intermediate course to improve straight-copy speed and accuracy as well as refine knowledge and skill to produce business correspondence, tables, reports and office forms using word processing. Prerequisite: 106-331, Keyboarding 1, or previous typing experience.

106-334 Machine Transcription 2 credits
Gives students experience in transcribing a wide variety of realistic, typical communications from business organizations and government agencies. Emphasis is on developing the ability to produce accurate, correctly formatted transcripts of dictated communications in an efficient manner, using correct spelling, punctuation and grammar principles. Students are required to prioritize work in order to meet specific deadlines.

106-335 Keyboarding Applications 3 (Typing 3) 3 credits
This advanced course utilizes a variety of WordPerfect features and applications to produce readable work at marketable speeds and improve decision-making and priority-setting abilities. Learning modules include skill development; numeric keypad review; advanced principles of tabulation; correspondence, manuscript/business reports and business forms; an introduction to machine transcription; and further training in language arts fundamentals. The final straight-copy speed for a five-minute timing with five or fewer errors is a minimum of 56 wpm. Prerequisites: 106-133, Document Processing 2, or equivalent; and WordPerfect basics.

106-337 Keyboard Skillbuilding 2 credits
Further develops speed and accuracy skills. Through diagnostic tests and analyses, each individual's typing weaknesses are identified and problem areas solved through corrective or developmental practice. Typing techniques are perfected, enabling the individual to eliminate errors and build speed. Prerequisite: 106-331, Keyboarding 1.

106-349 Legal Document Processing 1 3 credits
Reviews general typing principles. Students begin legal document production. Includes intensive skillbuilding, correspondence, tabulation, reports and forms. Proofreading and language skills are also emphasized. Prerequisite: 106-330, Microcomputers I, or concurrent enrollment.

106-350 Legal Document Processing 2 3 credits
Advanced speed and accuracy building are included as well as legal document preparation from standard forms and master information lists. Students compose simple legal documents such as affidavits, summonses and motions. Emphasis is continued on proofreading and language skills. Prerequisite: 106-349, Legal Document Processing 1.

106-365 Medical Office Procedures 3 credits
This 14-week course develops skills for use in a medical office. It is designed to give students fundamental knowledge in the following areas: patient reception, appointment scheduling, recordkeeping, filing, enter-
ing daily transactions, billing and collecting, banking procedures, preparing payroll, handling routine business correspondence, keeping an inventory of supplies, and an introduction to some of the features in an electronic office situation.

106-366 Medical Transcription Techniques and Procedures 2 credits
This course emphasizes the skilled proofreading, editing, formatting, and reference searching techniques needed by the medical transcriptionist/typist to produce the high-quality reports demanded by medical facilities.

106-367 Medical Transcription 1 3 credits
Introduces machine transcription of medical materials. Emphasizes efficient transcription techniques, recognition of key medical terms, correct spelling and punctuation, and specialized formats for medical reports.

106-368 Medical Transcription 2 3 credits
An advanced course in which students transcribe material from many different medical specialties in a variety of formats. Some of the material is dictated by doctors with a variety of foreign accents. Emphasizes efficient, accurate transcription and prudent use of reference materials.
Prerequisite: 106-367, Medical Transcription 1.

106-369 Medical Transcriptionist Internship 2 credits
A structured course encompassing areas required for successful job application and maintenance. It also provides a training program that allows students to observe and apply the theory, skills and techniques studied in the Medical Transcriptionist Program. Students complete a 72-hour affiliation in an approved medical facility under the supervision of a teacher-coordinator and a cooperating, experienced medical transcriptionist.

106-375 Job Survey/Legal Transcriptionist Internship 1 credit
Information on law office job openings and how to apply for them. Also included are resume, application letter and other job-hunting documents preparation. One-third of the course grade is based on successful completion of a 72-hour internship in a law office.

106-376 Job Survey 2 credits
Assists students in assessing their backgrounds and job aspirations, as well as in developing positive self-images. Students learn techniques for planning and organizing their job search; preparing resumes, cover letters and applications for employment; developing successful interview and follow-up skills; and performing successfully on the job.

107 Computer Information Systems (CIS)

107-110 Computer Operations 1 3 credits
Continues 107-112, Computer Operations 1. Expands to a broader scope and deals with the operation of an entire data center. Classroom time is spent studying operating-system concepts (including IBM's MVS), data communications, MVS Job Control Language and Utilities, data center security, contingency planning, equipment and facilities planning, data center management perspectives, storage devices and ethical issues in information systems. Lab time is spent studying and using IBM MVS ICL and Utilities, and ISPF/ISRF. Prerequisites: 107-112, Computer Operations 1; and 107-113, Computer Concepts, or consent of Instructor. Grade of C or better in all CIS courses is required.

107-111 Computer Operations 2 3 credits
Hands-on course dealing with the concepts and principles of computer operations in a multi-programming and data communications environment. Input/output peripheral operations and console operations are studied and practiced. MATC's mainframe computer is used for hands-on operation. Lab time is spent studying and using IBM MVS and JES. Prerequisites: 107-113, Computer Concepts; or consent of Instructor. Grade of C or better in all CIS courses is required.

107-112 Computer Operations 3 3 credits
Introduces programming interactive (or "on-line") systems for a mainframe computer environment. Students learn the features of COBOL command-level CICS (Customer Information Control System) and introductory SQL by developing inquiry, edit, update and menu programs. Prerequisites: grade of C or better in 107-117, Programming 2; 107-117, Systems Analysis and Design 1; and 107-140, Introduction to Interactive Software; or consent of instructor.

107-113 Computer Concepts 3 credits
Beginning course for CIS majors prepares students for further courses in operations, midrange and mainframe curricula. Emphasizes computer information systems terminology, hardware, software, systems analysis and design, procedures, personnel, program design, and business-related issues. Students are introduced to microcomputers and use some microcomputer application software such as DOS, LOTUS 1-2-3, WordPerfect or DBASE.

107-117 Systems Analysis and Design 1 3 credits
Practical, introductory-level systems analysis experience. Emphasis is on the design of physical system elements: file design (sequential, indexed, table, variable length), source documents, report layout, screen design, coded information and inter-record relationships. Processing models include batch sequential, batch random access and interactive systems. The use of a CASE tool to enhance the design experience is integrated throughout the course. Prerequisite: grade of C or better in 107-121, Programming 1, and 107-122, Programming 2 (for CIS-Programmer/Analyst majors) or concurrent enrollment; or 107-129, Batch Programming-Operations (for CIS-Operations majors); or consent of instructor.

107-120 Operating Systems, Services and Facilities 3 credits
Studies the structure and organization of the MVS Operating System and how to work with it. Upon completion, students should have a working knowledge of IBM MVS Job Control Language, have an understanding of the program preparation process, be able to use some IBM utility programs, have the skill of using IBM diagnostic aids, and be able to use ISPF/PDF. Prerequisite: 107-122, Programming 2, grade of C or better; or consent of instructor.

107-121 Programming 1 – COBOL 4 credits
Introduces fundamentals and techniques of the structured computer programming development process. This includes planning and organizing the work, coding, testing, problem solving, and documenting. COBOL is the language used for programming assignments. This is a rigorous course for Computer Information Systems -- Programmer/Analyst Program majors. It requires extensive work outside of class.
Prerequisites: 107-113, Computer Concepts, successful completion or concurrent enrollment; and 107-133, Programming Tools and Techniques. It is recommended that the student have proficiency on a typewriter or computer keyboard or is currently enrolled in 106-163, Microkeyboarding. No previous computer programming experience is required for this course.

107-122 Programming 2 – COBOL 4 credits
A course in structured program development. Students are required to design, code and test batch COBOL programs for business applications of moderate complexity. Major topics of study include: the theory of structured design, structured programming strategies, tools for logical analysis, and testing strategies. Includes an introduction to some advanced features of COBOL programming such as table processing, subprogramming and character manipulation. Prerequisites: grade of C or better in 107-121, Programming 1; 107-113, Computer Concepts; and 107-133, Programming Tools and Techniques; or consent of instructor.

107-125 Programming 3 – CICS 4 credits
Introduction to programming interactive (or "on-line") systems for a mainframe computer environment. Students learn the features of COBOL command-level CICS (Customer Information Control System) and introductory SQL by developing inquiry, edit, update and menu programs. Prerequisites: grade of C or better in 107-122, Programming 2; 107-117, Systems Analysis and Design 1; and 107-140, Introduction to Interactive Software; or consent of instructor.

107-127 Programming 4 – Client/Server Development 4 credits
This course features the concepts, facilities and application of client/server technologies in a multi-platform environment. Currently the environment includes a mainframe Database Management Systems (ADABAS/DBMS), a fourth-generation language (currently NATURAL), PC platform (OS/2), and client/server software (ENTRE) in a business environment. The course studies client/server components and
COURSES
107-181 Relational Database Design 3 credits
Study of the construction of relational databases on a midrange computer system. Activities include: designing a database using the relational database model, implementing a database in normal form and demonstrating a functional database in terms of performance, integrity and security. Prerequisite: grade of C or better in 107-180, Relational Database Coding and in 107-187, Systems Analysis, or consent of Instructor.

107-185 Interactive Computer Applications 3 credits
Introduction to the components of computer applications on a midrange computer system. Activities include: describing the functions of a computer application, documenting computer application functions using an automated design tool and implementing selected application components on a midrange computer system. Prerequisite: no previous computer information systems experience is required for this course.

107-186 Computer Information Systems 3 credits
Introduction to the relationship between business functions and computer information systems. Activities include: describing the components of a business, defining a computer information system, associating computer information systems to business components and documenting a computer information system with an automated design tool. Prerequisite: grade of C or better in 107-185, Interactive Computer Applications, or consent of Instructor.

107-187 Systems Analysis 3 credits
Study of tasks performed during the analysis phases of the Systems Development Life Cycle. Activities include: completing the development of a computer information system through the survey, study, definition and selection phases of the Systems Development Life Cycle; documenting the CIS project development with a CASE tool; applying fact-finding techniques and oral and written communication skills during project development. Prerequisite: grade of C or better in 107-186, Computer Information Systems, and 107-190, Batch Programming, or consent of instructor.

107-188 Systems Design and Implementation 3 credits
Study of tasks performed during the design and implementation phases of the Systems Development Life Cycle. Activities include: completing the development of a computer information system through the design, acquisition, construction and delivery phases of the Systems Development Life Cycle; documenting the CIS project development with a CASE tool; applying fact-finding techniques and oral and written communication skills during project development. Prerequisite: grade of C or better in 107-187, Systems Analysis and in 107-191, Interactive Programming 1, or consent of instructor.

107-190 Batch Programming 4 credits
Introduction to writing structured programs in RPG/400. Activities include: preparing computer programs which incorporate techniques for producing reports, batch maintenance, date validation, multiple inputs and outputs, and table processing; applying structured programming techniques to program development; and producing tested and documented RPG/400 programs according to specifications and standards. Prerequisite: grade of C or better in 107-180, Relational Database Coding or consent of instructor.

107-191 Interactive Programming 1 4 credits
Continuation of the development of structured RPG/400 programs with a focus on interactive programming techniques. Activities include: preparing computer programs which incorporate techniques for producing inquiry, interactive maintenance, data entry and menu applications; applying structured programming techniques to program development; and producing, demonstrating and documenting tested RPG/400 programs developed according to specifications and standards. Prerequisite: grade of C or better in 107-190, Batch Programming; and 107-180, Relational Database Coding, or consent of Instructor.

107-192 Interactive Programming 2 3 credits
Continuation of the development of structured interactive RPG/400 programs with a focus on interactive design techniques. Activities include: preparing computer programs which incorporate techniques for special file handling, the interactive user interface, program efficiency, error handling and recovery; applying structured program design techniques to application development; and producing, demonstrating and documenting tested RPG/400 programs developed according to specifications and standards. Prerequisite: grade of C or better in 107-191, Interactive Programming 1, or consent of instructor.

107-195 Control Language Programming 4 credits
Introduction to the use of a control language to manage system and application functions on an AS/400. Activities include: describing the organization of the OS/400 operating system; applying the functions of command language to system management; and writing control language programs for application and system control functions. Prerequisite: grade of C or better in 107-180/Relational Database Coding, or consent of instructor.

107-197 Computer Networking and Communications 3 credits
Introduction to workstation, LAN and midrange computer connectivity. Include: identifying network hardware and software options, generating a LAN server, connecting a network to a LAN server and demonstrating the functionality of a computer network. Prerequisite: grade of C or better in 107-113, Computer Concepts, or consent of instructor.

109 Hospitality and Tourism, Recreation Services, Travel Services

109-101 Introduction to Leisure Services 3 credits
Introduces new students to the broad spectrum of the leisure industry. Typical career areas include food service, lodging, travel/tourism and recreation. The course explores educational options and program career opportunities. Historical and operational perspectives of career areas are presented.

109-103 Recreation and Leisure In Modern Society 3 credits
Introduction to the relationship between business functions and computer information systems. Activities include: describing the components of a business, defining a computer information system, associating computer information systems to business components and documenting a computer information system with an automated design tool. Prerequisite: grade of C or better in 107-185, Interactive Computer Applications, or consent of Instructor.

109-106 Programming and Public Relations 3 credits
This course provides an investigation of planning, organizing, conducting and evaluating recreation experiences, support systems and public relations in private, public and commercial agencies.

109-107 Recreation Safety 2 credits
This course combines the American Red Cross Standard First Aid and the American Heart Association Basic Life Support courses. It also provides training in more advanced emergency care techniques for emergencies more likely to be encountered by recreation professionals. Upon successful completion of this course, students will receive certification in Standard First Aid (from the Dane County Chapter of the American Red Cross) and in Basic Life Support (from the American Heart Association/Wisconsin Affiliate).

109-120 Tourism Business Planning 3 credits
Examines the historical development and growth of profit-oriented commercial tourism. An overview of the tourism, travel, recreation and hospitality industries is followed by focusing on starting, marketing and managing a tourism enterprise. All students become entrepreneurs by creating their own commercial tourism business plan. Trends in tourism and their implications for the future are also investigated.

109-124 Fundamentals of Food Preparation 2 credits
A survey of quantity food preparation fundamentals and techniques for the non-chef student. Students will have an understanding of how to prepare basic menu items using a variety of methods and equipment, basic principles of plate presentation and the essentials of timing and coordination of service. Prerequisite: This should be taken simultaneously with 51-101, Principles of Sanitation.
109·125 Hospitality and Tourism Management 3 credits
Introduces the basic theories and principles of management in the hospitality and tourism industry. Designed to offer a balanced combination of theory and practical application. Students are challenged to analyze their current skills and develop a personal management philosophy appropriate to the service industry.

109·129 Hospitality and Tourism Marketing 3 credits
Focuses on the application of sound marketing practices. Emphasizes the unique aspects of marketing in the hospitality and tourism industries. Provides a variety of marketing tools designed to develop businesses in food service, lodging and travel/tourism.

109·130 Travel Services Marketing 3 credits
Discusses practical application of basic marketing principles in the travel industry. Target marketing, travel product positioning, creative marketing strategies, identifying traveler needs and personal selling are emphasized.

109·131 Room Division Operations 3 credits
The basic understanding of organization and operational functions of the rooms division of a lodging facility. Investigation of the organization, performance and evaluation of the front desk, reservations, housekeeping and telephone systems as essential components of the success of the operation and guest satisfaction are studied.

109·132 Beverage Mixology 1 credit
Describes the origin, use and process of making beers, wines and spirits. Teaches the different characteristics of various alcoholic beverages, how to serve them and what types of foods they complement. Students learn how to build and mix several different cocktails. Prerequisite: students must be 21 years of age, or consent of instructor.

109·133 Beverage Merchandising 2 credits
Designed to develop an understanding of how to market, sell and serve alcoholic beverages in taverns, restaurants and lounges. Includes the study of the production and nature of drugs, wines and spirits. The student will also acquire a knowledge of sales forecasting, accounting, effective pricing and cost control for a beverage operation.

109·134 Hotel/Restaurant Cost Control 3 credits
Students are prepared to identify, apply and interpret the concepts and techniques of cost control in the hospitality industry. Identification of factors influencing the cost of operating a hospitality operation is emphasized. Students will be able to select and apply specific methods, procedures and systems to control costs, and analyze the application, theory and concepts. In addition, students will be able to forecast and prepare budgets and income statements, and complete a break-even analysis.

109·135 Recreation Activities 3 credits
This course provides developmental activities involving music, dramatics, games, dance, outdoor recreation, travel, hobbies, volunteer activities, and social and special events. Projects will be planned, implemented and evaluated.

109·136 Hospitality and Tourism Law 3 credits
A preventive approach to the laws and liabilities, as well as responsibilities imposed and granted to owners/operators of hotels, restaurants and travel facilities. Instruction includes a review of precedent-setting court decisions, legal fundamentals, negligence doctrines, civil rights issues and the relationship between the provider and the guest/client.

109·138 Lodging Environments 2 credits
The fundamentals of housekeeping management. Stresses employee training, recordkeeping and management responsibilities. Includes development of staff, controlling costs, layout and design of hotel rooms, OSHA requirements and professional growth.

109·141 Hospitality and Tourism Internship Seminar 1 credit
A discussion and analysis of the field experience for hospitality and tourism students. Topics of discussion include: interviewing skills, cover letters, resumes, business ethics, professional appearance and dressing. Students have an opportunity to discuss current issues with industry representatives.

109·155 Facility Operation and Maintenance 1 3 credits
An introduction to basic land-side development, building and structure maintenance, and turf and grounds management. Equipment acquisition and care, and staff and work scheduling are also covered.

109·156 Facility Operation and Maintenance 2 3 credits
A study of recreation facilities risk management, quality control, visual management, operational guidelines and statutory requirements. Budgeting, purchasing and fiscal operations are studied. Practical application of equipment, operation and maintenance as well as appropriate operation certification will be examined. Prerequisite: 109·155, Facility Operation and Maintenance 1.

109·157 Hospitality and Tourism Internship (Field Experience) 2 credits
Provides on-the-job field experience that is required for graduation from the Hospitality and Tourism Management Program. Requirements include fifteen hours per week of work experience, a written report analyzing four major management responsibilities, and a professional oral presentation of the written report. Note: enrollment is limited to students who have successfully completed two semesters in the Hospitality and Tourism Management Program.

109·160 Special and Social Recreation 3 credits
An overview of various special populations and an understanding of their needs relative to recreational pursuits. The special populations studied include: mentally retarded, mentally ill, alcoholic and drug-dependent, physically disabled, sensory-impaired, economically deprived, racial minorities, aging and youth.

109·164 Travel Reservations 2 3 credits
Provides students with a working knowledge of simulated and live airline reservation computer systems. Introduces students to basic PNR (Passenger Name Record) construction and modification, reading and utilizing fare displays, DRS (Data Retrieval System) and pricing and ticketing basics. Prerequisite: 109·165, Travel Agency Services; and 109·166, Travel Reservations 1.

109·165 Travel Agency Services 3 credits
Provides sophisticated information about major segments of the travel industry - cruises, tours, ground transportation, accommodations and air transportation. Students evaluate different types of cruises and passengers. The various aspects of tour development, sales and management are studied in detail. Introduces how travel is sold in the marketplace, focusing on essential skills needed to close the travel sale. Office policies and procedures, money management and business communications are also covered.

109·166 Travel Reservations 1 3 credits
Introduces the production of airline and associated service tickets. The study of the Official Airline Guide, the explanation of airline reservation procedures and the production of ticket by hand. This course is critical to the understanding of ticketing procedures and is a prerequisite to the online reservation system introduced in 109·164, Travel Reservations 2.

109·167 World Travel Geography 1 3 credits
Geography is the study of the world - the oceans, the continents, the countries and the people. Students explore each country as a potential travel destination. Study includes maps of the world, locating resources, topography and attractions. Students experience the sights, sounds and tastes of diverse societies as they investigate the weather and climate to determine the best time to visit.

109·168 Travel Center Operation 3 credits
Introduction to the actual operation of a travel agency in the in-house MATC Travel Center. Students interview travel customers, utilize various travel planning guides and resources, organize travel arrangements, make reservations, collect monies and conduct the MATC-designated travel agency for ticketing. Students are responsible for customer follow-through, including receipt and delivery of travel documents. Prerequisite: Interview and consent of instructor.

COURSES
109-169 Group Travel Planning 2 credits
Introduction to the operation of a group travel department. This required summer course provides research into a variety of destinations, planning detailed itineraries and negotiating with travel suppliers. Students consult with MATC group organizers in the selection of the appropriate travel package and assist in the development of a strategic marketing plan. Prerequisite: Interview and consent of instructor.

109-171 Travel/Recreation Internship Development 1 credit
Students analyze their job skills and career needs in order to develop targets for internship field experience. The process of establishing contractual internship opportunities is examined in detail, including developing a resume, conducting informational interviews and utilizing competency analysis. Problem-solving and negotiating are also examined.

109-175 Travel/Recreation Services Internship Practicum (Field Experience) 2 credits
Directly related to 150 hours of work experience in the fields of travel and recreation. Examines the student’s practical experience as well as hypothetical case studies from the viewpoint of decision-making and problem-solving. Several approaches are developed and tested by field study and reference material research.

109-177 Hospitality Industry Purchasing 2 credits
Focuses on the techniques used to manage the purchasing function in a hospitality operation. Primary concern is providing high quality products, in the appropriate quantities, at the most favorable price. Study also includes distribution systems, identifying sources, developing supplier relationships and negotiating techniques.

109-178 Meeting and Special Events Planning 2 credits
This course provides students with both theoretical and hands-on experience planning, setting up and managing a major statewide convention. Emphasis is on developing and implementing proper procedures to ensure professional results.

109-179 Food Service Equipment 2 credits
Focuses on purchasing food service equipment, layout and design of a food service operation, identifying energy requirements, and matching production goals with capacities of related equipment. Also included is a discussion of the advantages and disadvantages of purchasing new vs. used equipment. Students will be able to select and purchase all equipment used in a food service operation.

109-180 World Travel Geography 2 credits
Focus on two major travel destinations: Europe and the Caribbean. Students will explore, in detail, the attractions, sightseeing, modes of travel, accommodations, food, natural resources, topography, weather/climate, people and other physical and cultural aspects of each country. Prerequisite: 109-167, World Travel Geography 1, or consent of instructor.

109-190 Recreation Seminar 1 credit
Designed to assist the graduating student with job placement. Self-evaluation and job-related skills, interests, attributes and achievements are discussed. The course reviews how to target job possibilities and write resumes, and includes practical interviewing. The concept of job networking is also stressed.

145 Small Business Operations

145-301 Employment Development/Resources 1 credit
Students will have an understanding of the job-seeking process, including resources, networking, strategies, qualifications briefs, written communications, interviews, job offers, negotiation and gener al “starting off on the right foot” from both the employer and employer point of view. Students will experience the employment development process via collection, evaluation and development of human resources materials.

145-302 Small Business Development and Planning 3 credits
Provides an introduction to prospective small business owners to the principles involved in planning and operation. Attention is given to small business appraisal and opportunities. Emphasis will be placed on factors that contribute to a successful business operation.

145-303 Fundamentals of Marketing 3 credits
Explores the concepts of marketing and how it relates to the everyday operation of a small business. Specific marketing concepts studied include planning, forecasting, segmentation, product strategy, product mix, pricing strategy, distribution and promotion styles. Other marketing concepts studied include global marketing, ethics and society needs.

145-304 Fundamentals of Sales 3 credits
Provides an introduction to the basic principles, concepts and theories of business and non-business selling, and their application to an actual sales presentation. Special attention is given to the successful completion of the steps of a sale.

145-305 Operations Management 3 credits
Small-business management strategies are applied to policies and operations. Included are applications to budgeting, marketing potentials, forecasting, layout, staffing, work flow, scheduling and general business applications.

145-306 Successful Small Business Techniques 2 credits
Developing and refining the marketing and promotion plans for a small business. Topics for discussion include merchandise/service resources, budgeting, study of competition, market segmentation, pricing, promotion, non-media ways to get customers to your business, and strategic planning.

145-307 Leadership Techniques 2 credits
Applied applications of leadership and supervision techniques are studied using case problems. Emphasis is placed on problem solving, goal setting, teamwork and personal interrelationships.

145-308 Field Experience Seminar 2 credits
Employment in an approved occupation related to the student’s future business plans is a prerequisite. Reports and discussion in class are coordinated with student employment. Employee appraisal, evaluation and harmony on the job will also be topics of discussion. The course requires a minimum of 144 hours of employment.

162 Insurance Services

162-101 Principles of Insurance (INS 21) 3 credits
Covers basic principles of insurance. Also provides an overview of the nature and operation of the insurance business as well as an introduction to insurance contracts.

162-102 Personal Insurance (INS 22) 3 credits
Analyzes personal loss exposures and personal insurance coverages, including homeowners and other dwelling coverages, personal liability, inland marine, auto, life, health and government programs.

162-103 Fundamentals of Financial Planning 3 credits
Covers basic principles of how to meet a client’s need through financial planning. Develops an understanding of the time value of money, income tax planning, insurance planning and retirement planning. Also reviews regulations applying to financial planning.

162-104 Principles of Underwriting (AU 61/62) 3 credits
Covers a broad understanding of the underwriting function in insurance: decision making, coverage analysis, reinsurance, pricing analysis of underwriting information/financial analysis, communications and the changing environment.

162-105 The Claims Environment (AIC 33) 3 credits
Illustrates how the claims representative’s role is determined by policyholders and other customers. The insurance policy, the insurance company and its management, and the law. The student appreciates the importance of good communication skills in skillful claims work.

162-106 Commercial Insurance (INS 23) 3 credits
Covers in some detail the most commonly purchased property and liability insurance policies (business income, general liability, crime, worker’s
compensation, etc.). Emphasizes understanding of important contract provisions.

162-107 Life and Health Insurance 3 credits
Designed to provide a broad understanding of life and health insurance, and related areas. Also explores guiding principles of various employee benefits.

162-108 Insurance Pre-Licensing - Life 1 credit
Satisfies the requirement of eight hours of insurance law and ethics along with twelve hours of life product information as a prerequisite to writing the state examination by the Office of the Commissioner of Insurance.

162-109 Insurance Pre-Licensing - Health 1 credit
Satisfies the requirement of eight hours of insurance law and ethics along with twelve hours of health product information as a prerequisite to writing the state examination by the Office of the Commissioner of Insurance.

162-110 Insurance Pre-Licensing - Property 1 credit
Satisfies the requirement of eight hours of insurance law and ethics along with twelve hours of property product information as a prerequisite to writing the state examination by the Office of the Commissioner of Insurance.

162-111 Insurance Pre-Licensing - Casualty 1 credit
Satisfies the requirement of eight hours of insurance law and ethics along with twelve hours of casualty product information as a prerequisite to writing the state examination by the Office of the Commissioner of Insurance.

162-112 Property Loss Adjusting (AIC 35) 3 credits
Covers all significant aspects of property loss claims other than auto. Another focus of the course is on learning the role of the insurance policy language in determining the rights and duties of policyholders and insurers, and in shaping and guiding the investigation and adjustment of first party losses.

162-113 Liability Claims Adjusting (AIC 36) 3 credits
Focuses on the process of evaluating and settling bodily injury claims. Primary emphasis is on understanding and being able to determine legal liability in given situations by organizing an appropriate investigation. Also provided is a review of some laws that affect the handling of liability claims.

185 Quality Improvement

185-110 Managing for Quality 2 credits
Examines the manager's role in a quality-focused organization. Students will be introduced to the four basic functions of management as practiced in an environment that focuses on employee participation. The fundamental concepts of Crosby, Deming and Juran will be presented. The concept of teamwork and teamwork, variation and implementation strategies are introduced.

185-111 Understanding Organizational Change 2 credits
Analyze the process of organizational change. Shows students how to be agents for change, and how to deal with resistance to change. Students will understand how to implement and standardize project improvements. An organizational model for total quality improvement will be presented.

185-112 Employee Involvement 2 credits
Explores the importance of groups in improving quality and productivity. The stages of group development and factors that affect group performance will be identified. Students will also be introduced to team building, team facilitation and conflict resolution.

185-113 Process Improvement 2 credits
Introduces the concept of prevention and control to the traditional method of detection. A seven-step model for problem solving will guide students through the improvement process. At each step they will learn to apply the basic quality improvement tools in order to prompt inquiry and make decisions.

185-114 Statistical Techniques for Process Control 2 credits
Designed to familiarize students with the fundamental concepts of central location, variation and normal distribution. Variables and attribute control charts will be presented as tools for monitoring process stability. The application of these techniques in both service and manufacturing organizations will be discussed.

185-115 Customer Focused Quality 2 credits
Defines the customer-supplier relationship. It will describe how to identify customer needs, enhance service delivery systems and evaluate customer satisfaction. Product safety, reliability and warranty responsibility will also be discussed.

194 Real Estate

194-175 Real Estate Investment 3 credits
An in-depth introduction to principles of real estate investment. Compares real estate to other forms of investments, and teaches students how to calculate the benefits and determine the disadvantages of owning real estate. The course has a comprehensive overview of real estate investment, fundamentals, market analysis, investment decisions, investment process, financial management, property management, and related areas. This course meets the educational requirement for the Wisconsin Real Estate Salesperson's License Law.

194-180 Real Estate Law 4 credits
Designed to acquaint students with the legal aspects of real estate as well as Wisconsin real estate law and to prepare them for the Wisconsin Real Estate Salesperson's License Exam. It covers topics such as the law of agency, legal descriptions, real estate contracts, mortgages, land contracts, consumer-protection laws, landlord-tenant laws, fair-housing ordinances and various other subjects related to the real estate profession. It is particularly oriented toward Wisconsin laws.

194-182 Real Estate Finance 3 credits
An analysis of the various aspects of real estate finance with an emphasis on the types of instruments used, sources of funds, procedures involved and the role of the federal government. The course includes financial activities outside the classroom designed to demonstrate lending policies, problems and rules involved in financing real property, including residential, multi-family, commercial and special-purpose properties.

194-183 Real Estate Brokerage 2 credits
Covers market analysis, sales, planning, staff compensation and sales management including selection, training and supervision. The course is oriented toward real estate brokerage in Wisconsin and fulfills the educational requirements for the Real Estate Broker's License in Wisconsin.

194-186 Real Estate Appraisal 1 4 credits
A rudimentary knowledge of the uniform standards of professional appraisal practice and the techniques for property evaluation (principally residential). This course meets the educational requirements for the Wisconsin Appraisal License.

194-187 Real Estate Appraisal 2 3 credits
A continuation of Real Estate Appraisal 1, this course explains the fundamentals and techniques of narrative report writing with emphasis on market, cost and income approaches to the valuation of income property.

194-190 Property Management and Development 1 3 credits
Provides a practical, hands-on approach to the process of managing real estate. Major topics include an overview of the rental, accounting, maintenance and information functions of the property manager. Also included is information on condominiums, low-income housing and the construction process.

194-191 Property Management and Development 2 3 credits
An overview of the management and development of commercial and industrial properties such as shopping centers, warehouses, industrial parks, garages and all other non-residential forms of income property.

COURSES
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<tbody>
<tr>
<td><strong>196 Supervisory Management</strong></td>
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<tr>
<td><strong>196-105 Occupational Trends and Issues</strong></td>
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<tr>
<td>Designed to summarize the major areas in supervisory management training through the active discussion of current topics. The course will focus attention on problems confronting supervisors in today's complex technological world utilizing the student's experience, academic preparation and problem-solving abilities.</td>
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| **196-116 Human Behavior at Work**            | 3 credits |
| Offers a detailed study of human behavior in the workplace and how this behavior affects organizations. It will explore such areas as morale, motivation, job satisfaction and productivity. Practical application is emphasized through the use of role play, case study and group discussions. |

| **196-119 Labor Relations**                   | 3 credits |
| Provides the student with an understanding of the concepts, history, issues and trends necessary to work with labor unions. It examines major pieces of legislation that explains labor relations laws and regulations. Integration of actual grievance cases by the students is encouraged as well as a focus on current trends in actual organizational settings. |

| **196-120 OSHA and Hazardous Substances**     | 1 credit |
| Intended to acquaint students with an elementary understanding of the Occupational Safety and Health Act, and its purpose and enforcement. The course will provide an overview of OSHA standards, recordkeeping requirements and other regulatory provisions necessary to insure the student work environments consistent with the law. |

| **196-121 Morale and Workplace Ethics**       | 1 credit |
| Designed to help the student understand key concepts and principles in personal and business ethics and to clarify personal values in preparation for dealing with moral issues in real-life situations. The results should be a clearer understanding of what is personally important and a greater tolerance of others' values. |

| **196-122 Successful Meetings**              | 1 credit |
| Sensitizes students to organizing, planning, implementing and evaluating meetings. Includes instruction on learning when to hold meetings and the most efficient use of time during the gathering. The course also is designed to inform students of various meeting techniques to improve their effectiveness. |

| **196-123 Problem Solving and Decision Making** | 2 credits |
| Sensitizes students to the area of decision making and problem solving for use in their daily lives. Includes the development of a better understanding of what processes take place in making decisions, techniques for better decision-making habits and proven theories to improve the effectiveness of decisions. |

| **196-124 Time Management**                  | 1 credit |
| Time management is self-management. Shows the management skills needed to be gained in terms of increased leisure time through prioritizing, goal-setting and delegating. Identifies strategies to recognize and avoid time wasters, thereby improving supervisory effectiveness. |

| **196-125 Management of Conflict and Change** | 1 credit |
| Designed to provide students with the skills necessary to effectively deal with conflict and change. It will focus on conflict as it relates to supervision in the workplace, exploring such areas as conflict identification, management, resolution and the role of change in an organization. Group activity, role playing and discussion will be emphasized. |

| **196-126 Effective Listening**               | 1 credit |
| Designed to provide supervisors with an understanding of the communication process through an emphasis on effective listening. It encompasses identification of poor listening habits and barriers to communication, and methods for improvement of communication skills. |

| **196-127 Stress Management**                 | 1 credit |
| Course is designed to give supervisors the skills necessary to deal effectively with stress. The course focuses on understanding and identifying the sources of stress and applying practical methods to reduce stress. The goal is to improve individual effectiveness by lessening the likelihood of job-related health problems. |

| **196-128 Training Techniques**               | 1 credit |
| Intended to familiarize the student with five training functions which include analyzing, designing, developing, conducting and evaluating. It will also examine different training methods and techniques and learning theories. It will provide hands-on training experience for students by giving them opportunities to make training presentations. |

| **196-129 Problem Solving and Decision Making** | 1 credit |
| Sensitizes students to the area of decision making and problem solving for use in their daily lives. Includes the development of a better understanding of what processes take place in making decisions, techniques for better decision-making habits and proven theories to improve the effectiveness of decisions. |

| **196-130 Leadership Development**            | 3 credits |
| Designed to identify effective leadership techniques, assess individual leadership strengths and weaknesses and build leadership skills. Focuses on the leader as a communicator, team builder and goal setter. Also emphasizes the development of leadership traits to enhance effectiveness in roles as teacher/trainer, problem solver and results achiever. These activities are conducted in an informal setting that stresses group interaction through the use of real, personal and work situations for the practical application of concepts. |

| **196-131 Principles of Supervision**         | 3 credits |
| An introductory course in management theory and application extended to increase supervisory effectiveness. The content is applicable to any supervisory setting and focuses on the application of management principles to the solution of real job problems. Cases are analyzed by students to illustrate basic principles. The course explores the required knowledge, skills and abilities of supervisory positions and examines each of the books of management, planning, organizing, directing, coordinating, controlling and decision making. |
201-111 Illustration 2 2 credits
One-color through full-color illustration is covered. Emphasis is placed on developing strong concepts and understanding how artwork is reproduced. Exploration of personal style and exposure to the history of illustration are also important components of this course. Prerequisites: 201-102, Design Fundamentals; 201-103, Drawing Fundamentals; 201-112, Color Media; and 201-106, Illustration 1.

201-112 Color Media 3 credits
An understanding of color is achieved through the study and application of color systems and theory. A wide range of tools, techniques and media are used on a variety of assignments. Prerequisite: 201-102, Design Fundamentals.

201-117 Illustrative Figure Drawing 3 credits
Incorporates traditional figure-drawing techniques and approaches with a concern for illustrative usage and figure indication for design and layout situations. Prerequisite: 201-103, Drawing Fundamentals.

201-112 Graphic Design 1 3 credits
Develops two-dimensional design concepts as they relate to the professional design field. Assignments include the development of logos, corporate identity and page designs. Prerequisites: 201-109, Typography 1; 201-110, Typography 2; 201-102, Design Fundamentals; and the use of computers at an introductory level.

201-122 Graphical Design 2 2 credits
Focuses on two-dimensional advanced design problems using a broad range of design vehicles. Emphasis is on concepts, campaigns and producing graphics for the student's portfolio. Prerequisites: 201-121, Graphic Design 1; 201-128, Print Production 1; and use of computers at an introductory level.

201-124 Advanced Problems/Illustration 2 credits
This course emphasizes the nature of the business of illustration. An understanding of the types of skills needed to work as an illustrator are explored in actual or realistic job situations and assignments. Importance is also placed on developing a strong, marketable style and producing portfolio quality samples. Major media explored reflects the interest and expertise of the instructor in a given semester. May include oil, watercolor, acrylic, etc. Prerequisite: 201-106, Illustration 1.

201-127 Advanced Problems/Graphic Design 2 credits
Through lectures, group discussion, demonstrations, hand-outs, field trips and guest visitations, students are encouraged to develop necessary skills for independent, untutored problem solving. Students are challenged to produce professional solutions. Prerequisites: 201-128, Print Production 1; and 201-121, Graphic Design 1.

201-128 Print Production 1 3 credits
Practical training in layout and production of art. In a variety of increasingly complicated assignments, the student learns to solve realistic print advertising problems from the layout to the camera-ready mechanical stage. Both traditional and electronic methods explored. Prerequisites: 201-110, Typography 2; and 201-136, Comprehensive Rendering.

201-129 Print Production 2 3 credits
The student explores marketing, research, advertising concepts and alternative printing techniques through a variety of team and individual assignments. Activities related to assigned projects include tours, demonstrations, handouts, speakers and independent research. Both traditional and electronic methods explored. Prerequisites: 201-128, Print Production 1; and 201-121, Graphic Design 1.

201-136 Comprehensive Rendering 3 credits
Emphasizes the creation of a variety of layout and presentation material exploring a wide range of levels of "finish." Felt-tip markers are primarily used, although pencil, paint, computer and many other contemporary media and techniques are covered. Prerequisites: 201-102, Design Fundamentals; and 201-103, Drawing Fundamentals.

201-139 Design and Color 1 2 credits
Provides involvement with the creative process, the traditional elements and principles of design, and various techniques for solving two-dimensional design problems.

201-140 Design and Color 2 2 credits
Provides involvement with practical and theoretical problems while building on the knowledge gained in Design and Color 1. Prerequisite: 201-139, Design and Color 1.

201-162 Portfolio Preparation 2 credits
Students work to prepare a sample portfolio of their work for prospective employers. Students are supervised and assisted in choice of samples, number of samples and layout of portfolio. Lectures are given on job interviewing and job markets. Departmental approval of a finished portfolio is required for graduation. Prerequisite: Student must be in the final semester of the Commercial Art Program.

201-180 Commercial Art Internship 1 credit
Off-campus experience in a wide range of art studios, public institutions, or large corporate art departments and commercial art agencies. Prerequisites: Consent of instructor; student must have already complet-
203-105 Photographic Composition 2 credits
A survey of composition as an important tool of the photographer that helps to establish purpose and meaning to visual statement. Includes an introduction to the field of professional photography through the work of some noted photographers.

203-107 Studio Photography 1 3 credits
Basic theory and practical application in the use of the view camera, lenses and light meters, exposure techniques and related processing systems. Camera required: 4 x 5 view camera and sturdy tripod.
Prerequisite: consent of instructor for non-majors.

203-108 Studio Photography 2 3 credits
Continuation of Studio Photography 1 with emphasis on the portrayal of architectural forms, light and control of perspective.
Prerequisite: 203-107, Studio Photography 1.

203-109 Studio Photography 3 3 credits
Emphasizes photographic solutions for many occupational areas such as industrial and freelance. Students are encouraged to set up individual projects and their solutions.

203-110 Graphic Arts Photography 1 3 credits
Continues developing prepress skills which were begun in Lithographic Technology 2. Students receive instruction in the following areas: exposure determination and use of photographic materials, process camera operations/controls, basic densitometry, intermediate multi-color image assembly, film contacting procedures, pin register step-and-repeat processes, pin register systems and signature imposition.
Prerequisite: 204-105, Lithographic Techniques 2.

203-111 Graphic Arts Photography 2 3 credits
Continues developing pre-press skills begun in Lithographic Techniques 1, 2 and Graphic Arts Photography 1. Instructor covers process camera operations/controls, advanced multi-colored image assembly, four-color process image assembly, spreads and chokes and advanced contacting procedures.
Prerequisite: 203-110, Graphic Arts Photography 1.

203-120 Lighting Techniques 2 credits
Introduction to the laws of light, learning the qualities of natural and artificial light sources. Lighting for form, texture and separation using basic lighting techniques. The use of standard studio lighting for balance and correct exposure. Prerequisite: consent of instructor for non-majors.

203-121 Commercial Photography 1 3 credits
Large-format photography with an emphasis on creating solutions for advertising illustrating using color and black-and-white photography.
Prerequisites: 203-108, Studio Photography 2; and 203-141, Color Photography 1.

203-123 Commercial Photography 2 3 credits
Continuation of Commercial Photography 1. 203-121. Includes survey of business practice. Prerequisite: 203-121, Commercial Photography 1.

203-142 Color Photography 2 3 credits
Develops advanced skills using color negative and transparency materials. Covers proper use of color materials in the studio and on location. In relation to lighting, filtration, and color temperature. Prerequisite: 203-141, Color Photography 1.

203-151 Electronic Imaging 1 3 credits
Explores basic computer skills, issues and skills unique to electronic image handling, utilization of image enhancement software, operation of desktop film and print scanners as input devices, various forms of image output in photographic and graphic art environments, electronic image capture devices, and legal and ethical issues regarding electronic image handling and manipulation.
Prerequisites: 203-108, Studio Photography 2; and 203-141, Color Photography 1.

203-152 Electronic Imaging 2 3 credits
A continuation of Electronic Imaging 1, this course places an emphasis on pre-press issues as they impact the printed reproduction of photographic images. Advanced imaging techniques are also explored.
Prerequisite: 203-151, Electronic Imaging 1.

203-170 Photography 1 2 credits
Basic 35mm camera operation, film development and printing to provide students with a solid photographic foundation. Students must provide their own 35mm cameras and basic materials.

203-171 Photography 2 2 credits
An intermediate level course in black-and-white photography. Students learn to light still life in the studio, pose and light subjects for portraiture, Emphasis on lighting, posing and character analysis.
Prerequisite: 203-170, Photography 1.

203-172 Photojournalism 2 credits
Photography for publication with the visual image being the impact point in relating events, ideas or circumstances. Students are exposed to techniques in which events can be communicated through visual means in print. The finished product may consist of published photos or photo essays.
Prerequisite: 203-170, Photography 1; or consent of instructor.

203-176 Photographic Communication 2 credits
Exploratory in nature, with emphasis on projects which communicate through the photographic medium. In consultation with the instructor, students may produce projects such as photo essays, documentary photographs, posters, audiovisual programs, self-promotion pieces or pho-
203-185 Portfolio Preparation 2 credits
The culmination of photographic skills acquired during study for the Associate Degree in Photography now is put into the form of a portfolio. This is a very important tool showing prospective employers skills and capabilities. Also, resumes and application information are prepared. The Portfolio Show highlights the semester's efforts. Departmental approval of the finished portfolio is required. Prerequisite: 203-108, Studio Photography 2; and 203-141, Color Photo 1.

203-186 Video Production 2 3 credits
A second-semester advanced course in television production, building on the EFP and ENG skills learned in 206-130. Video Production 1. Utilizes the television studio to introduce skills in audio, directing and studio camera operation.

203-199 Photography Internship 1 credit
Provides an opportunity to both observe and gain work experience with professionals in various areas of photography. Prerequisites: Students must have completed two semesters in the Photography Program and have a 3.0 grade point average.

203-301 Graphic Arts Photography 3 credits
Focuses on pre-press concepts. Students receive basic instruction in the following areas: exposure determination and use of photographic materials, process camera procedures, film contacting procedures, one- and two-color image assembly techniques, step-and-repeat processes, pin register systems, proofing, and platemaking. Prerequisite: Concurrent enrollment in 204-393, Lithographic Preparation 1.

204 Printing and Publishing Technology

204-101 Copy Preparation Techniques 1 3 credits
Covers introductory typesetting, pasteup and layout procedures. Topics include anatomy of type; markup and measurement; introductory typesetting commands; editing, file management and pasteup procedures; sizing camera-made diffusion transfer prints; and technical pen usage.

204-102 Lithographic Techniques 1 3 credits
Includes pre-press and press instruction. Students gain experience in exposure determination and use of photographic materials; process camera operations; one- and two-color image assembly techniques; step-and-repeat process; pin register systems; proofing; platemaking; basic small press safety, set-up and clean-up; and single-color printing.

204-103 Typography 2 credits
Basic course in pre-press graphic procedures exposing students to copy preparation, typesetting procedures and pasteup (mechanical) preparation. Type history, use and photomechanical access are studied and used in the laboratory. Features lecture, demonstration and project procedures. Covers most composition systems and procedures and enters image transfer. Some printing economics are discussed.

204-105 Lithographic Techniques 2 4 credits
Continues developing skills which were begun in Lithographic Techniques 1. Includes pre-press, press and bindery work including use and exposure determination of photographic materials; process camera operation; single- and multi-color image assembly techniques; film contacting room procedures; step-and-repeat processes; signature imposition; pin register systems; overlay color proofing systems; platemaking; and basic small press operation, including set-up and clean-up procedures, single- and multi-color printing; and basic bindery operations. Prerequisite: 204-102, Lithographic Techniques 1.

204-111 Press and Finishing Techniques 1 3 credits
Continues developing skills which were begun in Lithographic Techniques 1 and 2. Covers the following areas: intermediate single- and multi-color press work; basic operator-performed adjustments; intermediate bindery/finishing operations; and beginning quality control application in the pressroom. Prerequisites: 204-102, Lithographic Techniques 1; and 204-105, Lithographic Techniques 2.

204-112 Press and Finishing Techniques 2 3 credits
Continues developing skills which were begun in Press and Finishing Techniques 1. Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-119 Typography 2 3 credits
Introduction to type history, development, terminology and effective type usage. A new laboratory with the latest equipment offers an opportunity to experience today's requirements for job entry positions. Prerequisites: 204-103, Typography 1; and 204-181, Introduction to Computer Graphics.

204-123 Copy Preparation Techniques 2 3 credits
Covers basic typesetting, pasteup and layout procedures. Some topics include basic typesetting commands; basic editing, file management and pasteup procedures; and proofreader's marks. Prerequisite: 204-101, Copy Preparation Techniques 1.

204-124 Copy Preparation Techniques 3 3 credits
Intermediate typesetting, pasteup and layout procedures. Topics include intermediate typesetting commands; Intermediate editing; file management and pasteup procedures; and copyfitting. Prerequisite: 204-123, Copy Preparation Techniques 2.

204-130 Quality Control for the Graphic Arts 4 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-131 Copy Preparation Techniques 4 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-132 Quality Control for the Graphic Arts 4 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-135 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-136 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-137 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-138 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-139 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-140 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-141 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-142 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-143 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-144 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-145 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.

204-146 Production Processes 3 credits
Covers the following areas: advanced single- and multi-color press work, including four-color process; advanced quality control, including press room densityometry; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisites: 204-111, Press and Finishing Techniques 1.
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<td>204-307 Copy Preparation 1</td>
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<td>204-308 Copy Preparation 2</td>
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<td>204-320 Employment Orientation</td>
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<td>204-329 Lithographic Preparation 2</td>
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<td>204-332 Quality Control for Graphic Arts</td>
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<td>204-371 Introduction to Lithographic Press</td>
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<td>204-372 Lithographic Press and Finishing Operations</td>
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<td>204-393 Lithographic Preparation 1</td>
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<td>206 Visual Communications</td>
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<td>206-104 Visual Communications Internship</td>
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<td>206-105 Communication Problems 1</td>
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<td>206-106 Communication Problems 2</td>
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<td>206-110 Display, Design and Production</td>
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<td>206-117 Audiovisual Techniques 1</td>
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<td>206-120 Production, Planning and Control</td>
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<td>206-125 Instructional Media Systems</td>
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<td>206-130 Video Production</td>
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<td>206-131 Sound Production Techniques</td>
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<td>206-135 Multimedia Presentation</td>
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<td>206-137 Computer Animation</td>
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<td>206-138 Three-Dimensional Animation</td>
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<td>206-140 Portfolio Preparation</td>
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<tr>
<td>206-180 Advanced Media Problems</td>
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</table>
303-105 Introduction to Dietetics and the Health Care Field 3 credits
Students study the profession of dietetics and the role of the dietetic technician. The course introduces the student to health care facilities and members of the health care team. The American Dietetic Association policies and procedures are covered. This course reviews the four components of clinical practice, assessment, planning, implementation and evaluation.

303-110 Food Science—D.T. 3 credits
Students participate in sound food preparation methods, emphasizing preservation of nutritional values of food. Students develop an understanding of the physical and chemical properties of food, quality food standards and microorganisms as related to food-borne illnesses.

303-111 Basic Nutrition 1 3 credits
Covers the nutrients, their sources, functions, digestion and how the body utilizes them. Students learn to identify roles that nutrients play in affecting nutritional status.

303-112 Basic Nutrition 2 3 credits
Involves the study of nutrition and its relationship to the physiological, psychological and socio-economic status of people (i.e., pregnancy, infancy, geriatrics). Students learn to assess the nutritional needs and make dietary recommendations to individuals in each life span stage. Prerequisites: 303-105, Introduction to Dietetics and the Health Care Field, and 303-111, Basic Nutrition 1.

303-113 Nutrition Education 4 credits
Focuses on in-service education programs, the development of nutrition education materials and community nutrition. Emphasis is placed on individualizing education and the effectiveness of individual and group insurction. Students are exposed to agencies and programs providing nutrition and health education in the community. The major goal is for students to recognize the importance of nutrition education and its implementation.

303-115 Food Service Management 2 3 credits
Emphasizes the application of basic concepts, techniques and management trends. Areas of application include food procurement, cost control, recipe standardization, cycle menus, sanitation, employer relations and equipment specifications and layout. Prerequisite: 303-128, Food Service Management 1.

303-119 Applied Clinical Care 3 credits
Provides the opportunity to practice and refine skills in clinical nutritional care. Current trends in clinical nutrition are discussed to enhance application of normal nutritional care to relevant clinical problems. The ADA diet manual is reviewed to help prepare students for diet therapy and supervised field experience.

303-120 Supervised Field Experience 1 3 credits
Students are affiliated in area health care facilities for eight hours/week for 16 weeks (128 hours). There is also a one-hour seminar to discuss experiences. Learning experiences include food service equipment and production, menu planning, sanitation and safety procedures, assembly, delivery and service systems, food purchasing procedures, inventory control, diet office procedures and introductory nutritional care skills. Prerequisites: 303-105, Introduction to Dietetics and the Health Care Field; 303-110, Food Science-D.T.; 303-111, Basic Nutrition 1; and 303-123, Principles of Bio-Organic Chemistry. Must take concurrently with 303-128, Food Service Management 1.

303-123 Principles of Bio-Organic Chemistry 3 credits
A lecture-demonstration course consisting of a survey of general, organic and biological chemistry to meet the needs of dietetic technicians. Students are exposed to the composition, physical properties and reactions of inorganic and organic substances. Emphasis is directed towards human nutrition, physiology and the basic concepts of metabolism.

303-128 Food Service Management 1 3 credits
Students receive a broad orientation to food service management and the basic principles of quality food service. Areas of study include procurement, menu planning, recipe standardization, sanitation and safe food handling, employee relations, budgetary planning and computerized food service. Learning experiences include and are correlated with related field experience in various health care food service settings. Must take concurrently with 303-120, Supervised Field Experience 1.

303-129 Employment Orientation and Research 2 credits
The purpose of this course is two-fold: to prepare students for employment and to provide the students enrolled in practicum with a weekly session for the discussion of their field experience. The course includes professional development, research, ADA expectations, resume writing, job hunting and interviewing. The concept of continuing education is promoted. The students research, review and discuss current literature. Prerequisites: 303-113, Nutrition Education; 303-130, Diet Therapy 1; 303-132, Supervised Field Experience 2. Must take concurrently with 303-133, Nutrition Practicum.

303-130 Diet Therapy 1 4 credits
Students develop knowledge concerning the principles and methods of diet as a therapeutic measure in various conditions, including obesity, diabetes mellitus, cardiovascular disease and diseases of the digestive system. Students plan modified diets, individualized to meet nutritional needs of patients.

303-131 Diet Therapy 2 3 credits
A continuation of Diet Therapy 1. Topics covered include the nutritional management of digestive and genitourinary diseases, cancer, renal disease and other miscellaneous disease conditions as well as the role of the dietetic technician in nutritional support. Prerequisites: 303-130, Diet Therapy 1; and 303-132, Supervised Field Experience 2.

303-132 Supervised Field Experience 2 3 credits
Students are affiliated in area health care facilities for 128 hours. They are provided with the opportunity to apply the skills and knowledge necessary to meet the nutritional care needs of individuals and the food service management responsibilities of the facility.

303-133 Nutrition Practicum 4 credits
This field experience is designed to simulate an actual employment situation. Students are affiliated for 32 hours per week for eight weeks. Individualized field placement is coordinated by the dietetic faculty in a health care facility or community nutrition program. The student applies previously acquired knowledge and skills on the job in the role of a student dietetic technician. Nutrition education is practiced both in group and individualized settings. Must take concurrently with 303-129, Employment Orientation and Research.

303-140 Nutrition for the Family 2 credits
Course topics include the functions and sources of nutrients and the effects of diet on the health of the human body.

303-150 Physiology for Dietetics 3 credits
Covers the human body, its structures and functions. The body is seen as an integrated unit and cellular functions are emphasized. It includes an overview of the musculoskeletal, nervous, digestive and circulatory systems. The relationship of each system to nutrition and nutritional care is highlighted. A workshop/lab focuses on medical terminology. Prerequisites: 303-111, Basic Nutrition 1; and 303-123, Principles of Bio-Organic Chemistry.

304 Interior Design
304-100 Introduction to Interior Design 1 credit
Focuses on the interior design profession, including the definition and history of interior design, the personal qualities and attitudes of the interior designer, and professional organizations. The broad range of career opportunities and tasks performed by the interior designer is also explored.
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<tr>
<td><strong>304-102 Fundamentals of Design</strong></td>
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<tr>
<td>Focuses on the principles and elements of design that form the conceptual basis from which to solve and evaluate design problems.</td>
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<tr>
<td><strong>304-104 Basic Drafting</strong></td>
<td>3</td>
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<tr>
<td>Students learn to use basic drafting equipment and the symbols and language of building construction. Students sketch and draft interiors in plan and elevational views.</td>
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<tr>
<td><strong>304-105 Interior Components 1</strong></td>
<td>2</td>
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<tr>
<td>Basic elements and materials of interior design are studied: house plans and styles, decorating styles, furniture types and construction, upholstery, wall finishes, ceiling materials, and accessories.</td>
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<tr>
<td><strong>304-107 Interior Design Textiles</strong></td>
<td>3</td>
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<tr>
<td>Students study fibers, yarns, fabric construction and terminology, finishes, and performance criteria. The specification of textiles for interior design applications is emphasized.</td>
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<tr>
<td><strong>304-109 History of Architecture and Interiors 1</strong></td>
<td>2</td>
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<tr>
<td>Studies art, architecture and furniture from the Egyptian through the Baroque periods.</td>
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<tr>
<td><strong>304-122 Perspective Lab</strong></td>
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<tr>
<td>Focuses on the development of skill in sketching and drafting interiors in one- and two-point perspective and isometrics. Prerequisite: 304-104, Basic Drafting.</td>
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<tr>
<td><strong>304-124 Presentation Techniques</strong></td>
<td>3</td>
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<tr>
<td>Develops skill and speed in drawing, rendering and branded preparation for interior design presentations. Students gain awareness of the various media available and actively participate in the application of pencil and marker techniques. Prerequisite: Concurrent enrollment in 304-122, Perspective Lab.</td>
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<tr>
<td><strong>304-125 Space Planning</strong></td>
<td>3</td>
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<tr>
<td>Explores human factors, codes, regulations and standards, and barrier-free design as they relate to furniture arrangement and planning interior space. Projects take the student from the programming stage through the preliminary design of both residential and commercial spaces. Students use various problem-solving conventions and methods to aid in the exploration of design solutions. Prerequisites: 304-102, Fundamentals of Design, and concurrent enrollment in 304-122, Perspective Lab.</td>
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<tr>
<td><strong>304-127 Interior Components 2</strong></td>
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<tr>
<td>Continues the study of the basic materials used in interior design, focusing on window treatments and floor coverings. The features, applications and calculations of each product are covered. Prerequisites: 304-105, Interior Components 1; and 304-107, Interior Design Textiles.</td>
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<tr>
<td><strong>304-129 History of Architecture and Interiors 2</strong></td>
<td>3</td>
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<tr>
<td>Studies art, architecture and furniture from the Reen period through the 20th Century. Prerequisite: 304-109, History of Architecture and Interiors 1.</td>
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<tr>
<td><strong>304-132 Kitchen and Bath Design</strong></td>
<td>2</td>
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<td>Focuses on designing kitchens and baths, including the specification of cabinets, countertops, appliances, fixtures, materials and finishes. Prerequisites: 304-124, Presentation Techniques; 304-127, Interior Components 2; and concurrent enrollment in 304-135, Lighting.</td>
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<tr>
<td><strong>304-133 Commercial Design</strong></td>
<td>4</td>
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<tr>
<td>Focuses on the design, specification and documentation of commercial office spaces using conventional furniture and open-office systems. Students apply their knowledge of materials, finishes, furniture, lighting and building construction through all phases of the design process. Prerequisites: 304-124, Presentation Techniques; 304-127, Interior Components 2; and concurrent enrollment in 304-135, Lighting.</td>
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<tr>
<td><strong>304-135 Lighting</strong></td>
<td>2</td>
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<td>Explores light sources, luminaire options, the quality and quantity factors of lighting specification, and the lighting plan and schedule. Students plan and execute the lighting of the residential design studio or the lighting lab. Prerequisite: 304-125, Space Planning.</td>
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<tr>
<td><strong>304-142 Professional Practice</strong></td>
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<tr>
<td>Covers essential interior design business practices and procedures including business formations, fees, contracts, project management, business forms and record keeping. Prerequisites: 304-100, Introduction to Interior Design; 304-132, Kitchen and Bath Design; and 304-133, Commercial Design.</td>
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<td><strong>304-143 Advanced Interior Design</strong></td>
<td>2</td>
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<tr>
<td>Students demonstrate their accumulated skills through the resolution of a comprehensive residential design project and an independent design project. Students prepare a portfolio for presentation at the Interior Design Portfolio Show. Prerequisites: 304-129, History of Architecture and Interiors 2; 304-132, Kitchen and Bath Design; and 304-133, Commercial Design.</td>
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<tr>
<td><strong>304-145 Interior Design Internship</strong></td>
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<tr>
<td>Students work in an interior-design-related business to gain practical knowledge of the interior design skills learned in the classroom. Students meet once a week to discuss their internship work experiences. Prerequisite: Consent of instructor.</td>
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<tr>
<td><strong>307-100 Introduction to Early Childhood Care and Education</strong></td>
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<tr>
<td>Students gain an overview of the field of early childhood care and education and become familiar with programs and agencies that provide services to children and families. They study state licensing rules as well as diverse models of early childhood education with a focus on the characteristics of quality care.</td>
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<tr>
<td><strong>307-101 Child Growth and Development 1</strong></td>
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<tr>
<td>Physical, social, cognitive and emotional development during infancy and toddlerhood are studied, as well as prenatal development. Representative theories of child development are discussed (psychoanalytic, cognitive, behavioral) and the relevance of theory to skillful practice is stressed.</td>
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<tr>
<td><strong>307-102 Child Growth and Development 2</strong></td>
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<td>Focuses on development in the domains from age 2 to 8 years. Prerequisite: 307-101, Child Growth and Development 1.</td>
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<tr>
<td><strong>307-103 Understanding and Guiding Children’s Behavior 1</strong></td>
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<tr>
<td>A developmental approach to child guidance and discipline with a focus on understanding the causes of behavior. Students study guidance methods and rationales and develop skill in observing and recording behavior. Observation assignments supplement academic studies and increase students’ awareness of normative patterns of child behavior.</td>
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<tr>
<td><strong>307-104 Understanding and Guiding Children’s Behavior 2</strong></td>
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<tr>
<td>Students study additional approaches to guiding behavior and are exposed to a variety of guidance strategies. Techniques of assessing individual needs and strengths are introduced with the focus on providing the optimal learning environment for young children.</td>
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</table>
307-106 Child Care and Development Practicum 1 2 credits
The initial weeks of this practicum involve observing a variety of early childhood programs to become acquainted with different kinds of child-care settings and philosophies. Students are then placed in licensed early childhood centers. This first of four on-the-job training experiences develops skill in interacting with children and staff. MATC faculty help students set training goals via periodic observations and conferences.

307-107 Practicum Seminar 1 2 credits
This weekly discussion focuses on what students are observing and learning in the field.

307-108 Child Care and Development Practicum 2 2 credits
In this second on-the-job training experience, students apply knowledge and skills acquired in Practicum 1 and related class work under the supervision of qualified instructors and caregivers. Planning and implementing activities are included, and conferences with MATC faculty are scheduled to help students analyze problems as well as formulate and achieve training goals.

307-109 Practicum Seminar 2 2 credits
This weekly discussion focuses on field experience and group dynamics.

307-110 Child Care and Development Practicum 3 3 credits
Twelve hours per week. See description for 307-108. One week of head teaching is required.

307-111 Supervised Fieldwork/Seminar 3 2 credits

307-112 Child Care and Development Practicum 4 3 credits
This final on-the-job training experience includes two weeks of head teaching, stresses staff-parent communication and may be designed to coordinate with students' choices of career specializations. Observations and conferences continue, helping students formulate and achieve training goals.

307-113 Practicum Seminar 4 2 credits
This weekly discussion focuses on field experience and group dynamics.

307-114 Activity Planning 1 3 credits
Introduction to the process of planning, implementing and evaluating activities appropriate for children in child-care settings. An overview of preschool curriculum is presented. Differences between structured and spontaneous activities are discussed with an emphasis placed on creativity and meeting the developmental needs of the child.

307-115 Activity Planning 2 3 credits
Students develop further skill in planning and implementing activities in child-care settings. Prerequisite: 307-114, Activity Planning 1.

307-117 Working with Staff and Parents 2 credits
Students study the basic principles of staff/child and staff/parent relationships. Particular attention is devoted to establishing and maintaining effective communication and support.

307-118 Culture, Class and Gender in the Early Childhood Setting 2 credits
Students study issues relating to culture and social class as well as gender. The aim is to help students increase their understanding of diversity and to increase self-awareness so that they may plan and implement bias-free early childhood programs.

307-119 Working with Children with Special Needs 2 credits
Students study the process and implications of integrating children with special needs into early childhood programs. A variety of developmental delays and disabilities is studied and coping strategies are developed. Students become acquainted with services and resources available to parents and teachers of children with special needs.

307-120 Play and Play Environments 2 credits
The development and significance of children's play are discussed as well as principles involved in setting up a developmentally-oriented play and learning environment.

307-121 Issues in Infant and Toddler Care and Development 2 credits
Focuses on the principles of infant and toddler care, development and education, particularly as they relate to center-based and family child-care settings. Supportive methods of working with families of infants and toddlers are emphasized.

307-122 Administration: Group Centers and Family Day Care Homes 2 credits
Focuses on administration of family child-care homes and group centers. Program start-up, budgeting, staff management, space/design and overall responsibilities are covered.

307-123 Working with Children Who Challenge: Social and Emotional Issues 2 credits
Analyzes three factors which cause challenging behaviors in children: characteristics of the child, the family, and the child-care environment, including teaching skills and attitudes. Ideas for specialized activities for parents and children are presented. Assessment and management skills are emphasized. The course builds on previous course work.

308 Consumer

308-100 Consumer Resources 3 credits
Helps students develop effective skills and methods that are useful in acquiring competence as consumers of goods and services in a modern economic society. Information on consumer rights and responsibilities is given in areas such as law, money management, credit, housing, furnishings, equipment, clothing, food, transportation, health, recreation and banking services.

403 Drafting—Architectural

403-302 Architectural Drawing 5 credits
Continued development of the basic skills acquired in Construction Drawing 1, plus development of skills in architectural planning as related to site development, building design and construction techniques. Project work is directed toward most phases of architecture from preliminary design to construction drawings. Major emphasis on the drawing process as it relates to the commercial building process. Prerequisites: 403-301, Construction Drawing 1; and 804-379, Vocational Mathematics 1.

403-303 Construction Drawing 1 5 credits
Thorough and comprehensive coverage of the basic skills and concepts of drafting as a tool of architecture. Class work is directed toward a comprehensive presentation of details and overall design. Emphasis on meeting the requirements for the Architectural Drafting course. An introduction to three-dimensional drawing. Work is directed toward most phases of architecture. Course work is recorded on the final project. Prerequisites: 403-302, Architectural Drawing 1.

403-304 CAD Applications 2 credits
Introduces intermediate CAD concepts and integration of CAD concepts into working drawing production. A significant portion of the course is spent on preparing working drawings as part of a project assignment in the Architectural Drafting course. An introduction to three-dimensional concepts is also covered. Prerequisite: Introduction to Computer Graphics, 403-315.

403-308 Codes and Regulations 2 credits
Includes zoning requirements, residential and commercial building codes, sanitary regulations, permit applications, building permits and inspection procedures. Contact documents and office practice are also discussed. Prerequisite: 804-379, Vocational Mathematics 2.
403-315 Introduction to Computer Graphics  2 credits
Introduces computer equipment, DOS, terminology and industry usage. Major emphasis is on learning the necessary commands and input required for making two-dimensional drawings for production purposes. Emphasis is on learning the basics of a CAD system and not on becoming a proficient operator of the system. The importance of CAD as a stand-alone design tool and its integration with manual drafting are discussed. Detail drawings are used as a means of conveying typical construction techniques, plus exercises for developing CAD skills within the course.

403-316 Building Construction 1  3 credits
Permit application, codes, excavation, footings, foundations, examples of framing, different structure types, roofs and general rough-in of residential building are covered. Students are given the opportunity to work with building materials when possible.

403-317 Building Construction 2  2 credits
Topics include electrical installation, waste systems, water systems, insulation, heat loss, heating system design, cooling systems, ventilation, septic systems, municipal sewage and new methods of obtaining power. Drawing plans and installation methods for the above areas are covered. Prerequisite: 403-316, Building Construction 1.

403-330 Mechanical Systems 1  1 credit
Covers basic mechanical principles of residential heating, ventilation and air conditioning, and electrical and plumbing, with emphasis on thermal efficiency and energy conservation.

403-331 Mechanical Systems 2  2 credits
Covers heating systems design, cooling systems, ventilation, electrical service and wiring, electrical generation, lighting design, interior waste system, water system, gas piping, exterior plumbing systems, waste treatment, wells, water supply and public garbage disposal. Prerequisite: 403-330, Mechanical Systems 1.

404 Automotive Technician

404-316 Accessories  2 credits
Students study equipment supplied by both the major manufacturers of automobiles and after-market suppliers. Classroom and lab activities help students understand basic electricity, electrical circuits, and use of test equipment to troubleshoot problems in circuits such as lighting, windshield wipers, power windows, instruments and sound systems.

404-318 Heating and Air Conditioning  2 credits
Covers basic principles of heating and air conditioning. Detailed studies of heating systems and air-conditioning systems are carried out in the classroom and the lab. Includes vacuum, electrical and automatic temperature control systems. Diagnosis and typical service jobs are done in the lab using up-to-date tools and diagnostic equipment.

404-335 Engine Performance  6 credits
Techniques of diagnosis and analysis of the electrical and fuel systems are studied. A computerized engine analyzer is used to diagnose driveability problems. Repairing and testing procedures are emphasized. Test equipment operation is practiced. Principles of carburetors, electronic fuel injection, multi-port injection and system controls are studied.

404-336 Engine Rebuilding  6 credits
Covers the theory of automotive gasoline and diesel engine operation, construction and design along with methods of engine problem diagnosis, disassembly, repair and assembly. Students become familiar with the tools, machines and equipment used to repair automotive engines. Emphasis is on the development of diagnostic ability and work skills. Prerequisite: 404-340, Minor Repair; or consent of instructor.

404-339 Brakes and Steering  5 credits
Covers fundamentals of automotive brake systems including drum brakes, disc brakes, hydraulic systems, power brakes and anti-skid systems. Includes fundamentals of steering systems and service, and adjustment and overhaul of manual and power steering gears. Laboratory work stresses brake overhaul and component reconditioning and troubleshooting of brakes.

404-340 Minor Repair  6 credits
Theory, design and operation of the automobile engine along with maintenance, light-duty repair and safety inspection is studied. Engine lubrication, cooling and exhaust systems are studied and serviced. Students learn basic electrical theory used in diagnosis and repair of batteries, and starting and charging systems. Theory and proper use of hand tools, electrical test equipment and fasteners are emphasized.

404-341 Suspension and Alignment  5 credits
Covers basic principles of passenger car construction, suspension, tires, wheels and wheel alignment angles. Laboratory work stresses inspection, correction or replacement of all suspension parts and the role they play in proper vehicle handling and operation. Wheel and tire repair, balancing, alignment procedures and the use of modern wheel alignment machines, headlight aiming and troubleshooting are stressed.

404-355 Automatic Transmissions  5 credits
Covers electrical, mechanical and hydraulic systems of the modern automatic transmission and transaxle. Demonstrations and practice provide the opportunity to become proficient in diagnosis, service and complete rebuilding of these systems.

404-356 Standard Transmissions and Driveline  5 credits
Covers clutches, standard transmissions, manual transaxles, drivelines and differentials. Demonstrations and practice provide the opportunity to become proficient in diagnosis, service and complete rebuilding of these systems.

404-357 Auto Electrical Systems  6 credits
Comprehensive study of the electronic systems of automobiles. Emphasizes the operations of sensor-based computer systems to include both digital and analog circuits. Includes electronic instrumentation, engine, transmission, brakes and chassis controls. The use of manufacturers' diagnostic test equipment and procedures is followed. Lab practice and demonstrations provide students an opportunity to become proficient at troubleshooting, diagnosing and repairing these systems. Prerequisite: 404-335, Engine Performance, or instructor approval.

404-366 Auto Electronics  2 credits
Basic automotive electronics including electrical principles and concepts through automotive semi-conductors and microprocessors are studied.

404-373 Automotive Industry Orientation  2 credits
Discusses the role, function and operation of small and large automotive businesses, emphasizing the service department. Special attention is given to the responsibility of the service person to the automotive establishment and to the community. Students receive specific occupational information which enables them to effectively seek employment in the automotive service industry and are assisted in preparing personal data sheets, job interviewing techniques, letters of application, references and resumes. Also covers information on wages, benefits, mechanic certification and job retention.

405 Auto Body and Paint Technician

405-330 Collision Repair/Refinishing 1  11 credits
Stresses all aspects of body work and related metal straightening. Emphasis is on performing all body work activities on automobiles. Such operations as welding on replacement panels, minor frame or body alignment, straightening of damaged sheet metal, complete refinishing, spot repair...
and panel repair are completed on vehicles. Supplementary operations such as trim removal, minor mechanical, glass replacement and electrical wiring are performed as the need arises. Further skill is developed in the use of hand and power tools as well as major power equipment. Paint mixing skills are also taught so that students can mix paints to acceptable color matches. Prerequisite: 405-330, Collision Repair/Refinishing 1.

405-332 Collision Repair/Advanced Refinishing 11 credits
All the skills learned in Collision Repair/Refinishing 1 and 2 are applied in the repair of collision-damaged vehicles. Includes the proper welding, sanding, and blending of panels to prepare them for refinishing. Procedures of HSS (High Strength Steel) and HSLA (High Strength Low Alloy) steel, various panel replacement and unibody structural sectioning. Complete refinishing and blending of paints are performed on the repaired vehicles. Safe working procedures are emphasized. Prerequisites: 405-330 and 405-331, Collision Repair/Refinishing 1 and 2; 405-360, Auto Body Accessories; and 405-361 and 405-362, Collision Repair/Refinishing Theory 1 and 2.

405-333 Advanced Unibody-Collision Repair 11 credits
Continuation of Collision Repair/Advanced Refinishing. Includes dedicated bench and laser measuring systems, wheel alignment and steering geometry as well as the study of glass installation and adjustments, interior trim, roof covers and accessory equipment. The safe working procedures of an auto body shop are stressed. Prerequisites: 405-330 and 405-331, Collision Repair/Refinishing 1 and 2; 405-332, Collision Repair/Advanced Refinishing; 405-360, Auto Body Accessories; 405-361 and 405-362, Collision Repair/Refinishing Theory 1 and 2; and 405-365, Unibody Collision Repair Theory.

405-334 Collision Damage Report Writing 2 credits
This lecture, demonstration and discussion course covers vehicle damage estimating. Students learn the proper sequence for writing an estimate, the use of estimating guides and the various uses of an estimate of repairs. Each student has an opportunity to do some actual estimating of damaged vehicles.

405-360 Auto Body Accessories 2 credits
Covers basic principles of brake system operations, wheel alignment, suspension and steering, air conditioning and cooling components, and fuel systems. Also covers the automotive electrical system including basic electricity, soldering, troubleshooting with a meter, exterior lighting, instruments, windshield wipers, motors and their circuits.

405-361 Collision Repair/Refinishing Theory 1 2 credits
Covers related information on all phases of auto body welding, and metal straightening with hand tools and hydraulic equipment. Collision damage analysis of sheet metal and unibodies is studied. Different types of sheet metal, such as HSS and HSLA, as well as the properties of sheet metal are discussed. Where and how to use lead and plastic filler is presented. Paint equipment such as the operation and maintenance of the spray gun is studied. Extensive discussion takes place on refinishing products, surface preparation, sanding and polishing, thinners and reducers and top coat application. Instruction in shop, tool and paint safety is presented.

405-363 Collision Repair/Refinishing Theory 2 2 credits
To further promote knowledge of repair skills related to auto body, the following discussion areas are included: the evaluation of automobile bodies and damage repair techniques, unibody construction and repair techniques, structural terminology, suspension designs, collision damage diagnosis, vehicle preparation, metal correction and parts replacement. Additional instruction may include glass installation, electrical accessories, door and window servicing and trim replacement. Prerequisite: 405-361, Collision Repair/Refinishing Theory 1.

405-365 Unibody Collision Repair Theory 2 credits
Introduces the dedicated bench system for repair of unibody vehicles, and proper anchoring and pulling procedures. Instruction on removing and replacing engines and running gear components. The proper care and protection of on-board computers in autos is stressed. Sheet metal alignment, frame and unibody straightening, along with procedures for restoring severely damaged vehicles are studied. Prerequisites: 405-330 and 405-331, Collision Repair/Refinishing 1 and 2; 405-360, Auto Body Accessories; and 405-361 and 405-362, Collision Repair/Refinishing Theory 1 and 2.

405-374 Collision Repair Occupational Orientation 2 credits
A study of the operation of all departments of a collision repair center. Special attention is given to the business operations of paper flow, job costing, budget preparation, insurance and AS 132 law. The students receive specific occupational information which enables them to effectively seek employment in the collision repair industry. Personal data sheet, job interviewing techniques, letters of application, seeking references and writing resumes are covered. In addition, personal concerns such as finances, time management, first impressions and evaluating strengths and weaknesses are discussed. Prerequisites: 405-330 and 405-331, Collision Repair/Refinishing 1 and 2; 405-360, Auto Body Accessories; and 405-361 and 405-362, Collision Repair/Refinishing Theory 1 and 2.

410 Wood Technics

410-330 Introduction to Cabinet Making 10 credits
This course provides instruction in the following areas: hand and portable power tool operations, machine woodworking operations and related areas including but not limited to wood finishes; wood as a material; adhesives, abrasives and fasteners; and buying lumber and plywood grading systems.

410-331 Cabinet and Furniture Making 10 credits
Basic design concepts, material selection and planning techniques in the cabinet- and furniture-making industry. Introduces the procedures and operations involved in cabinet and furniture making including, but not limited to, styles, methods of construction, material selection, finishing and installation. Prerequisites: 410-330, Introduction to Cabinet Making; 410-333, Introduction to Construction; or consent of instructor.

410-332 Construction and Remodeling 10 credits
Continues roof framing and introduces shingling, soffits, exterior siding materials, windows and doors, construction of soffits, hanging interior doors and installation of interior trim. Kitchen cabinet and basic stair construction are also included. Information on removal, repair, remodel and restoration of residential interiors and exteriors is provided. Prerequisite: 410-333, Introduction to Construction; 410-330, Introduction to Cabinet Making or consent of instructor.

410-333 Introduction to Construction 10 credits
This course provides instruction in the following areas: hand and portable power tools operations; machine woodworking operation; buying and grading lumber-plywood; interpretations of plans, specifications and building codes; site preparation and layout of footings, foundation and framework; and fundamentals of floor, wall, ceiling and roof framing.

410-336 Machine Maintenance 2 credits
Fundamentals of wood-shop maintenance are emphasized. This includes the identification of maintenance problems and the care of woodworking tools and machines. A study of the principles on which machines operate and preventive maintenance is included. Lab work involves the maintenance of woodworking tools and machines.

410-340 Plastic Laminates 2 credits
Introduces the field of plastic laminates. Includes grades and textures of laminates, types of adhesives, and methods of application and of applying pressure to secure laminates. Stresses special skills specific to laminates including routing, edge-banding, machining and forming. New product lines are examined including the 32mm system of cabinet fabrication.

410-345 Construction Materials and Estimating 2 credits
Types of building materials, their usages, costs and applications for light residential construction are explored. Plans are interpreted for building materials, takeoffs and estimating for bills of materials. Prerequisite:
11-2-330, Introduction to Cabinet Making; 410-333, Introduction to Construction; or consent of instructor.

11-385 Drawing and Estimating 2 credits
Introduction to drawing and estimating as they relate to woodworking occupations. Areas of drawing instruction include sketching techniques, orthographic projection, and isometric, oblique and perspective drawings. Methods of estimating materials and construction costs, reading prints and interpreting drawings are included.

11-386 Cabinet Drawing 2 credits
Introduces the areas of kitchen cabinet design, planing, drawing and estimating costs. Units include kitchen layout and design; kitchen planning using frameless, framed and 32mm systems; estimating kitchen costs; and computer-aided drafting of kitchen cabinets.

412 Diesel and Heavy Equipment Technician

412-312 Mobile Hydraulics 2 credits
Introduces the fundamentals of fluid power, principles of operation and components and terminology used to describe hydraulic systems on mobile equipment. Operation, maintenance, service and system diagnosis are related to construction equipment and heavy duty trucks. Shop exercises include cylinder rebuilding, component repair, system pressure testing and flow checks, hose end installation and system maintenance.

412-324 Accessories-Diesel 2 credits
Operation and function of electrical, pneumatic and hydraulic accessories, either standard or optional equipment on off-road or on-road vehicles are studied. Special attention is targeted at diagnosis, repair, testing and scheduled maintenance of systems such as fifth wheels, truck cruise control devices, vehicle recorders, trailer landing-gear mechanisms and cab jack systems.

412-325 Air Conditioning 2 credits
Consists of understanding the science and theory of heat movement. Diagnosis and service procedures are explained and demonstrated in classroom and lab exercises. Repairs are accomplished on lab simulators and automotive systems.

412-326 Refrigeration Systems-Diesel 2 credits
Theory of refrigeration cooling, heating and defrost cycles. Attention is focused on diagnosis, adjustment and replacement of system components. The proper procedures for charging, recovery and recycling of refrigerants used in the transport industry are included so the technician is capable of properly maintaining the refrigeration unit. Prerequisite: 412-325, Air Conditioning.

412-337 Diesel Shop Operations 1 credit
Students learn what is expected of the diesel technician, the role and function of the service manager, the parts department and the company's organization structure. Includes new machine delivery procedures, service reports, repair orders, warranty policies and a study of the latest procedures and techniques in industry. Also includes identifying employment opportunities and preparation for seeking employment.

412-338 Diesel Equipment Maintenance 1 credit
Preventive maintenance for trucks and construction equipment is covered. A study of oils, fuels, lubricants, filtration, tires, rims, tracks, belts and chains is included.

412-345 Diesel Electrical Fundamentals 2 credits
Students gain basic knowledge and needed experience in electrical theory, function of magnets, electrical symbols and diagnosis; and perform tasks using shop equipment and special tools in the following areas: wiring and lighting systems, proper wire repair and electrical systems.

412-346 Diesel Electronics 2 credits
Theory and laboratory experience give students the basic knowledge and skills needed in Diesel Electronics. Students perform tasks using test equipment and special tools used in diagnosis procedures.

412-347 Heavy Duty Charging/Starting Systems 2 credits
Students gain basic knowledge in theory and operation of cranking motors and circuits, solenoids and charging systems. Perform various tasks using shop equipment and special tools which relate to cranking motors and charging systems. Prerequisites: 412-345, Diesel Electrical Fundamentals; and 412-346, Diesel Electronics.

412-355 Medium Duty Transmissions 3 credits
Study and training experiences are presented to acquaint students with standard diagnosis, disassembly, inspection, reassembly and adjustment of medium-duty transmissions, such as Muncie, Borg Warner Clark and John Deere single counter-shaft designs. Also includes medium-duty differentials such as General Motors, Ford and Dana Spicer units. Typical equipment used in this instructional unit are highway trucks and construction equipment. Lab time is used in conjunction with classroom time to allow the student a hands-on application of principles.

412-356 Heavy Duty Transmissions 3 credits
Study and training experiences are presented to acquaint students with standard diagnosis, disassembly, inspection, reassembly and adjustment of heavy-duty transmissions such as Eaton Fuller, Spicer and Rockwell twin counter shaft designs. Also in this unit are heavy-duty differentials and power dividers. Typical equipment used are highway trucks and construction equipment. Lab time is used in conjunction with classroom time to allow students a hands-on application of principles.

412-357 Heavy Duty Drivelines 3 credits
Study and training experiences are presented to acquaint students with standard diagnosis, disassembly, inspection, reassembly and adjustment of power shift transmissions, both counter shaft and planetary types. Typical equipment used are highway trucks and construction equipment. Lab time is used in conjunction with classroom time to allow students a hands-on application of principles.

412-358 Power Shift Transmissions 3 credits
Study and training experiences are presented to acquaint students with standard diagnosis, disassembly, inspection, reassembly and adjustment of power shift transmissions, both counter shaft and planetary types. Typical equipment used are highway trucks and construction equipment. Lab time is used in conjunction with classroom time to allow students a hands-on application of principles.

412-365 Heavy Duty Hydraulic Brakes 2 credits
Theory and laboratory experience give students basic knowledge and skills needed to perform maintenance and repair of heavy-duty hydraulic brakes, such as drum and disc brakes.

412-366 Air Brakes 2 credits
Theory and laboratory experience give students the basic knowledge and skills needed to perform maintenance and repair of air-brake systems.

412-367 Heavy Duty Track Wheel Alignment 2 credits
Theory and laboratory experience give students the basic knowledge and skills needed to perform adjustments and repairs on heavy-duty truck wheel alignment.

412-375 Diesel Fuel Systems 1 3 credits
Theory and operation of fuel systems on engines up to 250 HP are covered. Lab exercises are arranged to provide the skills and knowledge to properly diagnose, disassemble and inspect components used in diesel fuel systems.

412-376 Diesel Fuel Systems 2 2 credits
Rebuilding, diagnosis, calibration and tune-up of fuel systems on engines above 250 HP are covered. Further study of unit injectors, nozzles, in-line pumps, distributor fuel pumps, turbochargers and how each affects engine performance is demonstrated with the use of engine dynamometers and other types of analysis equipment.

412-377 Diesel Engine Performance 2 credits
Enables students to assess engine performance using various diagnostic equipment. An intensive lab skill program ensures that students are aware of proper tune-up procedures for various engines. Dynamometers
are explained and utilized during lab sessions to simulate loaded conditions and help students understand the engines proper functions.

**412-378 Diesel Engine Component Repair** 2 credits

The operational theory of electronically controlled fuel systems is covered. Classroom and laboratory exercises are arranged to provide skills and knowledge of these systems. Lab exercises include tune-up, fault diagnosis and adjustment of the electronic control system.

**412-385 Diesel Engine Overhaul** 3 credits

Students develop a basic knowledge of diesel engine design and construction and understand the major differences between a diesel and gasoline engine. Also covers the theory and operating principles of diesel engines, torque curves, horsepower ratings, the relevant terminology and diesel engine maintenance.

**412-386 Diesel Engine Repair Procedures** 3 credits

Provides the skills, knowledge and procedures needed to make repairs on diesel engines. Precision measuring, cleaning, machining, engine parts inspection, failure analysis and parts installation procedures are covered.

**412-387 Diesel Engine Component Repair** 2 credits

Gives students the skills and knowledge needed to repair diesel engine components. Components included are water pumps, blowers, lube pumps, turbo chargers, fan hubs, oil coolers, filter housings and other miscellaneous components that are used on diesel engines. Prerequisite: 412-386, Diesel Engine Repair Procedures.

**412-388 Diesel Engine Overhaul** 3 credits

Gives students skill and knowledge needed to overhaul a diesel engine. Includes in- and out-of-chasis overhaul, along with engine removal and reinstallation. Prerequisites: 412-386, Diesel Engine Repair Procedures; 412-387, Diesel Engine Component Repair.

**414 Electronic Servicing**

**414-311 Electronic Shop Processes I** 3 credits

Shop safety and operation, soldering, printed circuit boards and an introduction to the use of the computer are covered.

**414-312 DC Circuits** 3 credits

Practical theories and concepts essential to the understanding of DC electricity and electronics are covered. Laboratory work introduces the use of basic test equipment.

**414-313 AC Circuits** 3 credits

Students study alternating currents applied to resistors, capacitors, inductors and transformers. Use of the oscilloscope in AC measurement and troubleshooting is included. Prerequisite: 414-312, DC Circuits.

**414-314 Semiconductor Devices** 3 credits

Basic semiconductor devices including junction diodes, zener diodes, bipolar transistors, field effect transistors and other active devices are studied. Prerequisites: 414-312, DC Circuits; and 414-313, AC Circuits.

**414-315 AC Systems Applications** 3 credits

Introduces basic electronic circuits including amplifiers, power supplies, oscillators and wave-shaping circuits. Prerequisites: 414-312, DC Circuits; 414-313, AC Circuits; and 414-314, Semiconductor Devices.

**414-316 DC/AC Circuits for Maintenance** 3 credits

Practical DC/AC concepts are covered to introduce the maintenance personnel to various components, electrical quantities and the measurement of values in both DC and AC circuits. DC and AC power sources are implemented in working configurations. Voltage, current and resistance measurements are taken with analog and digital multimeters for an understanding of proper diodes. Three-phase power panels and schematic symbols are introduced. Wire connection techniques including soldering are covered. Students develop insight to component functions through an introduction to oscilloscope measurements.

**414-317 Electronic Circuits for Maintenance** 3 credits

Semiconductor devices are implemented in practical circuit configurations including power supplies. Operational amplifiers are introduced and given extensive applications to control circuits. Prerequisite: Co-requisite: 414-315, Programmable Logic Controllers; or instructor consent.

**414-319 Programmable Logic Controllers** 3 credits

This course begins with an overview of closed loop control systems, from measurement to control. Operation and applications of Programmable Logic Controllers (PLCs) are covered. Programming of PLCs is major topic. Prerequisite: 462-303, Industrial Equipment Mechanisms/Industrial Electricity and Controls; or instructor consent.

**414-321 Interfacing Sensors with Computer Controls** 3 credits

Various sensors are applied to analog input modules of programmable controllers and to A/D converters for computer systems. Prerequisite: 414-319, Programmable Logic Controllers; or instructor consent.

**414-325 Intro to Digital Electronics** 3 credits


**414-329 Office Equipment Maintenance** 3 credits

Mechanisms as they relate to consumer and business electronic products such as copy machines with an emphasis on services and installation. Prerequisites: 414-311, Electronic Shop Processes I; and 414-315, AC Systems Applications.

**414-330 Electronic Communications** 3 credits

This course will include AM and FM transmitters and receivers, TV systems, VCRs and pulse data communications systems. Lab work will include some experiments in basic communication circuits, construction and alignment of a radio receiver and television measurements and troubleshooting. Pre-requisite: 414-315, AC Systems Applications.

**414-331 Electronic Shop Processes 2** 2 credits

Prepares students to perform the shop skills required of an electronics technician. Students are exposed to researching, purchasing, pricing, stocking, inventory procedures and maintenance/assembly operations. Prerequisite: 414-311, Electronic Shop Processes I.

**414-341 Electronic Systems** 3 credits

This course covers the theory and operation of a variety of electronic systems likely to be encountered by the electronic technician. Methods of servicing and electronic trouble shooting techniques are also covered. Laboratory activities include some examination of system circuits and extensive electronic trouble shooting and repair of electronic devices. Topics of the course include trouble shooting techniques, documentation, safety and examination of the following systems: telephone, cellular phone, alarm, fiber optic, digital data, phase locked loops and image (fax).

**419 Industrial Hydraulics**

**419-300 Hydraulics and Mechanics** 2 credits

Covers fundamentals of fluid and mechanical power components as to principle function, terminology and use. The basic power train systems are studied and include hydraulic components, gears, belt and chain drives, shafting, bearings, lubrication systems and speed and limit controls found on common industrial equipment. Hydraulic and mechanical maintenance as well as troubleshooting are also included.

**420 Machine Tooling Techniques**

**420-304 Advanced Inspection** 1 credit

High amplification inspection equipment and procedures. Emphasis is on surface finish, flatness, optical, mechanical, electronic and pneumatic gauging systems. Actual machine shop inspection and practices are employed specific to precision inspection.

**420-330 Metal Processes 1** 2 credits

Instruction in metalworking processes. Includes safety, layout and measuring, machining, oxy-acetylene welding, brazing and cutting, arc welding and properties of metals.
420-331 Metal Processes 2 2 credits
Instruction in sheet-metal work, soldering and brazing, forging and heat treatment, grinding, tool sharpening, metal casting, MIG and TIG welding, metal fabrication and the repair of metal objects. Prerequisite: 420-330, Metal Processes 1.

420-332 Metal Working Processes 3 credits
Instruction in metalworking processes. Includes safety, layout and measuring, machining, oxy-acetylene welding, brazing and cutting, arc welding and properties of metals.

420-333 Metal Processes for Maintenance 2 credits
Machine shop operations, sheet-metal work, soldering and brazing, forging and heat treatment, grinding, tool sharpening, metal casting and other metal applications as related to industrial machinery repair. Prerequisite: 420-330, Metal Processes 1; or instructor consent.

420-351 Layout and Inspection 2 credits
Introduces precision inspection and layout of machined parts. Emphasis is on methods, accuracy, calibration and measurement techniques used in the machine tool industry.

420-380 Machine Tool 1 8 credits
Instructional units include: Engine Lathe 1 (operational principles, nomenclature, maintenance and development of skills in turning, facing, center drilling, form turning, shoulders, tool geometry, tool grinding, tool positioning and tool selections); Engine Lathe 2 (limits, fits, tolerances and development of skills in turning, angle turning, knurling, drilling, reaming, boring and the use and requirements of various workholding methods); Power Sawing (basic power sawing operations and requirements as related to types of operations and different materials; includes blade selection, speeds and feeds, straight and contour sawing on internal and external surfaces, safety and troubleshooting); Drill Press 1 (principles of drills, drilling and drilling machines are covered; emphasizes safety, work-holding, speeds and feeds, hole location and quality, drill selection and drill maintenance; special operations are also included); and Milling Machine 1 (introduction to milling; emphasizes types of machines, terminology, safety, speeds and feeds, and cutter mounting and selection; includes mounting workpieces, squaring and step milling). Prerequisite: Concurrent enrollment in 804-381, Machine Tool 1; and 420-382, Machine Tool 2.

420-384 Introduction to Computer Numerical Control Applications 2 credits
Basic hands-on instruction using the CNC vertical milling machine and CNC Turning Center. Emphasis is on two-dimensional contouring, pocketing, drilling and basic turning and threading. Prerequisite: Concurrent enrollment in 420-397, Introduction to Computer Numerical Control.

420-388 Tool and Fixture Design 2 credits
Introduction to tool design and gauging practices. Emphasis is on jigs, fixture design, clamping, locating devices, tooling and production methods. Present and qualified tooling for NC/CNC are presented as they relate to conventional practice.

420-389 Advanced Computer Numerical Control Applications 2 credits
Instruction in advanced CNC Vertical Milling to include three-dimensional parts and multiple machining operations. The CNC wire cut machine is introduced and both simple and complex parts are machined. Prerequisite: 420-384, Introduction to Computer Numerical Control Applications; 420-397, Introduction to Computer Numerical Control; and concurrent enrollment in 420-399, Advanced Computer Numerical Control.

420-393 Job Orientation 1 credit
Specific occupational information for those seeking employment. Personal data sheets, job interviews, resumes and recommendations are covered. Former graduates are invited to discuss needs of the students before employment. Representatives of labor, management and industry are invited to discuss various aspects of employment.

420-394 Tool Making Theory 1 2 credits
Lecture course provides the theory to support shop activities. Presents the technology of various types of dies such as mold dies and stamping dies. Major emphasis is on the nomenclature, theory, construction features and design of dies.

420-395 Tool Making Theory 2 1 credit
Continuation of Tool Making 1 covers advanced mold, die and fixture design. Students may specialize in one area and design a mold or die which may be built in the Machine Tool 4 class.

420-397 Introduction to Computer Numerical Control 2 credits
Experience in manual programming of numerical control machines. Covers the history, justification, types of control systems and tape preparation. Students program a part, punch a tape and make the part on a computer numerical control milling and turning machine. Includes introduction to two-dimensional CAD-CAM computer programming system. Written reports are required. Prerequisite: 420-380, Machine Tool 1.
420-398 Special Problems Machine Tool 1 credit
Build and prove the die, jig, fixture, mold or special tool introduced and develop in 420-388, Tool and Fixture Design. Advanced computer numerical control projects may be completed with instructor approval. A written report and individual evaluation are required for credit.

420-399 Advanced Computer Numerical Control 2 credits
Experience in using a CAD-CAM computer programming system. Students construct parts from the simple to complex using the CAD-CAM system and then download the information to the CNC milling and EDM wire cut machines. Prerequisite: 420-397, Introduction to Computer Numerical Control.

421 Mechanical Drafting
421-392 Drawing Interpretation - Industrial Maintenance 2 credits
Basic principles of interpreting engineering drawings and schematics are studied. Through interpretation and sketching, students develop a visualization of the part, section or assembly. Drawings pertinent to the trade are used along with examples and discussions of manufacturing procedures.

421-393 Drawing Interpretation 3 credits
Basic principles of engineering welding drawings are interpreted through explanation, sketching and orthographic projections. Develops visualization of parts and fabrication assemblies. Includes AWS welding joints, symbols and their applications on fabricated models and company prints.

421-394 Drawing Interpretation 1 credit
Fundamental principles of interpreting and visualizing drawings are presented. The majority of classroom time is spent working with and interpreting drawings and prints. Basic sketching is also covered.

421-395 Drawing Interpretation 2 credits
Basic principles of engineering drawings are discussed. Through interpretation and sketching, students develop a visualization of the part, section or assembly. Drawings pertinent to the trade are used along with examples and discussion of manufacturing procedures.

422 Metallurgy
422-390 Fundamentals of Metallurgy 2 credits
Introduction to metallurgy emphasizing applications, selection, identification methods and alloy influences. Properties are studied utilizing testing, micro-structure interpretation and heat-treatment processes, tool steels, weld heat effects, failure analysis and machinability variations in cast iron, alloy steels and non-ferrous materials are covered in detail.

442 Welding
442-312 Oxy-Fuel Processes: Welding, Brazing, Soldering and Cutting 3 credits
Covers safety and the theory and techniques of welding, cutting and soldering on steels, cast iron and non-ferrous metals using oxy-acetylene and alternative fuels. Flame cutting to dimension using manual and semi-automatic equipment and maintenance/repair techniques are also taught.

442-313 Related Welding 2 credits
Introduces arc and oxy-acetylene welding. The fundamental principles of joining ferrous and non-ferrous metals are studied and demonstrated. Basic welding processes, equipment operations and safety procedures are practiced in the laboratory work. Emphasis is given to welding procedures and practice in the major areas of work such as machine shop, automotive and diesel mechanics and sheet metal.

442-314 Arc Welding (SMAW) Basic Theory Flat 3 credits
Emphasizes safety, theory, electrical applications and electrodes selection in the shielded metal arc-welding processes. Techniques of flat position arc welding taught include beads and AWS groove welds.

442-316 Arc Welding (SMAW) Horizontal 3 credits
Emphasizes shielded metal arc-welding (Stick Arc) techniques in the horizontal position. Includes AWS fillet and groove welds using 1/8" to 3/16" diameter E-6010, iron powder and low-hydrogen electrodes in welded assemblies. Also covers plug welding, oxy-fuel hand and semi-automatic pipe beveling and horizontal pipe welding. Prerequisite: 442-314, Arc Welding (SMAW) Basic Theory Flat; or concurrent enrollment; or division approval.

442-318 Gas Tungsten Arc Welding Processes 3 credits
Emphasizes gas tungsten arc-welding (TIG) theory, setup and safety. Development of skills and techniques in all positions on carbon steels, stainless steel and aluminum are applied to standard AWS joints. Prerequisite: 442-314, Arc Welding (SMAW) Basic Theory Flat; or 442-302, Basic Arc; or concurrent enrollment.

442-320 Welding Occupational Development 1 credit
Applications of welding terminology, use of forms, contracting, professional ethics and employment relations. Specific topics germane to the welding field in decision making, responsibility and preparation for the welding career are covered.

442-321 Arc Welding (SMAW) Vertical 3 credits
Emphasizes shielded metal arc-welding techniques in the vertical up and down positions. Includes AWS fillet and groove welds using E-6010 and low-hydrogen electrodes in weld assemblies. May include additional skill development or independent study of special welding processes, techniques and applications. Prerequisite: 442-316, Arc Welding (SMAW) Horizontal.

442-322 Advanced Welding Techniques 3 credits
Depending upon student needs, may include shielded metal arc welding techniques in overhead and pipe positions. Includes AWS fillet and groove welds using E-6010 and low-hydrogen electrodes in weld assemblies. May include additional skill development or independent study of special welding processes, techniques and applications. Prerequisite: 442-314, Arc Welding (SMAW) Basic Theory Flat; or consent of instructor.

442-323 Gas Metal Arc and Flux Cored Arc Welding Processes 3 credits
Theory, setup and safety for Gas Metal Arc-CO2 (MIG), Flux Cored Arc Welding and Gas Metal Arc Welding using various argon-rich gases and mixtures (approximately 36 hours each). Skills and techniques are developed on standard AWS joints in all positions on stainless steel, aluminum and 1/16" to 1" carbon steels. Prerequisite: 442-314, Arc Welding (SMAW) Basic Theory Flat; or concurrent enrollment; or department approval.

442-324 Layout and Fabrication Techniques 3 credits
Students perform geometric, triangulation and parallel-line layout and fabrication techniques on common-shaped products like hoodshoppers, pipe elbows and tee fittings. Fabrication projects develop students' knowledge of hand and power tools, shearing, oxy-fuel and plasma arc metal forming. Layout is bent allowance calculations and metal forming. Layout is applied to fabrication of welded assemblies by developing parts from drawings and also performing welding maintenance/repairs. Prerequisites: 442-314, Arc Welding (SMAW) Basic Theory Flat; or concurrent enrollment or division approval.

461 Motorcycle, Marine and Outdoor Power Equipment
461-322 Engine Diagnosis and Repair 10 credits
Principles of small internal combustion engines, including 2-cycle and 4-cycle are studied in detail. Design, construction, engine testing, diagnosing, disassembly, repairing and reassembly, and engine break-in are thoroughly covered. Engine tune-up, carburetion and electrical systems are also included. Snowmobiles, chain saws, and sharpening and balancing of rotating elements are covered. Students become familiar with the tools, machines and equipment that are used for engine repair work in the power equipment shop.
461-323 Electrical Systems and Power Trains 10 credits
Emphasizes the repair of equipment powered by small gas engines. Includes: charging systems, electric starters, linkage, hydraulic drives, belt drives, chain drives, gear drives, clutches, brakes and all other elements of power trains, motorcycles, outboard motors and accessories used on power equipment and engines.

461-328 Small Engine Lab 2 credits
Students work on individual projects approved by the instructor, such as building a leaf blower or motorcycle engine and developing advanced technical knowledge or skill in any of the motorcycle, marine, or small engine service areas. Prerequisite: 461-322, Engine Diagnosis/Repair; or 461-323, Electrical Systems and Power Trains.

461-330 Service Shop Management 2 credits
Covers basic principles of setting up and operating a small engine shop. Students study the financial, operational and marketing aspects of a small engine dealership or service shop. Students work in groups to set up their own small engine service shop business in a written report.

462 Industrial Maintenance

462-303 Industrial Equipment Mechanisms/Industrial Electricity and Controls 5 credits
This course involves the study of the basic principles of physics specific to electro-mechanical systems. Emphasis is on measurement, lubrication, energy, power, machines and fluid and chemical properties. Installation, timing and synchronization of machine drive components are also studied. Disassembly and assembly of industrial components with hands-on applications are conducted. AC power distribution and control topics are enhanced with the study of motors, transformers and various electro-mechanical devices. The programmable logic controller is introduced in the on/off mode. Prerequisite: Second semester student or instructor consent.

462-304 Introduction to Industrial Computers 1 credit
The processes of computers in industrial applications and activities such as keyboarding, equipment usage, storage and information retrieval systems. Other processes applied to industrial equipment are studied.

462-306 Industrial Fluid Power 3 credits
Fundamentals of fluid power (hydraulic and pneumatic) and its components as well as principles, functions and terminology. Covers the application of basic hydraulic systems in various machines along with maintenance and troubleshooting.

462-308 Heating and Air Conditioning 1 3 credits
Basic environmental equipment maintenance is covered. Applications of HVAC components, refrigeration controls, condensers, hydronics, boilers, heat exchangers, dampers, compressors, plumbing, pumps, measurement, blowers and preventive maintenance repair are presented. Use of measurement equipment, pressure and air volume flow are also studied.

462-309 Heating and Air Conditioning 2 3 credits
Advanced coverage of environmental equipment maintenance. This course puts much of the theory learned in Heating and Air Conditioning into practice. Prerequisite: 462-308, Heating and Air Conditioning 1; or instructor consent.

462-311 Industrial Maintenance Mechanic 1 3 credits
Emphasis is on the basic tools used for maintenance of a variety of equipment as well as safe rigging practices. Machine cleaning, surface preparation and painting are covered.

462-313 Business Operations 2 credits
Overview course with emphasis on the variety of industries and their roles as well as the variety of functional areas in each of these industries and how they interact with each other. Emphasis is also placed on quality control techniques which give the maintenance person an understanding of his/her role in an organization. Maintenance record keeping, parts ordering and shop operation are also covered.

462-314 Manufacturing Systems, Application and Control 3 credits
Computer-based control of manufacturing processes (proportional, integral, derivative) is introduced. Specific applications of robotics, work cells, flexible automation and CNC systems is presented from a troubleshooting perspective. This course is completed as part of an internship. Prerequisite: 414-319, Programmable Logic Controllers; or instructor consent.

462-315 Building Management Systems 3 credits
Computer-based energy and building control systems are studied in detail. Includes sensing devices, pneumatic and otherwise, as well as basic energy efficiency calculations. Cost-saving ideas and plans in the area of energy savings are also presented and discussed. Prerequisite: 462-308, Heating and Air Conditioning 1; or instructor consent.

462-316 Fluid Distribution Systems 2 credits
Advanced course on safety applications in repairing fluidic systems. Includes fittings, thread cutting, pipe sweating, solder, accessories, codes, repair equipment and tools. Pneumatic, hydraulic, water and fire protection distribution systems and networking are covered.

462-317 Building Service Maintenance 3 credits
Covers safety, schematics, well framing, electrical services, insulation, drywall applications, painting, floor applications, roofing and siding applications. Includes the study of appropriate applications of materials to facilities.

462-318 Maintenance Shop Processes 2 credits
Covers commercial and residential building codes and permit applications. Students study laws governing workplace safety and environmental concerns such as those covered by OSHA, EPA and the DNR. General and model codes (NEC, NFPA, ANSI, etc.) are contained as well as shop safety.

462-322 Industrial Maintenance Mechanic 2 3 credits
Emphasis on the job will be on installing, troubleshooting and maintaining manufacturing systems with special emphasis on automated systems. This course is completed as part of an internship. Prerequisite: 462-311, Industrial Maintenance Mechanic 1; or instructor consent.

462-335 Metal Processes for Maintenance 2 credits
This course includes machine shop operations, sheet metal work, working and brazing, forging and heat treatment, grinding, tool sharpening, metal casting and other metal applications as related to industrial machinery repair. Prerequisite: 462-330, Metal Processes 1; or instructor consent.

502 Barber/Cosmetology

502-301 Barber/Cosmetology Techniques 1 12 credits
Introduces various services performed by the barber/cosmetologist. Emphasis is on hair analysis, shampooing, scalp and hair treatments, manicuring, basic haircutting and hair styling. Students work on patrons and are given on-the-job training to develop the necessary skills.

502-302 Barber/Cosmetology Techniques 2 12 credits
Emphasizes studies and applications in advanced haircutting, thermal waving, blow-drying, permanent waving, hair coloring, hair straightening, hair relaxing and thermal hair straightening. Students continue to work on patrons with instructions while performing these services. Prerequisite: 502-301, Barber/Cosmetology Techniques 1.

502-303 Barber/Cosmetology Techniques 3 8 credits
Emphasizes hairstyling, manicuring, hairpieces, facial make-up, advanced perming and coloring. Students are given instruction and additional work on patrons to further develop the necessary skills to pass the state examination for entrance into the job market. Prerequisite: 502-302, Barber/Cosmetology Techniques 2.
502-311 Barber/Cosmetology Theory 1  
- 3 credits
- Students study hair analysis, shampooing, scalp and hair treatments, perming, air forming, thermal curling, manicuring and basic haircutting.

502-312 Barber/Cosmetology Theory 2  
- 3 credits
- Presents theories of advanced haircutting and chemical services.

502-313 Barber/Cosmetology Theory 3  
- 5 credits
- Presents wet and thermal theory of hairstyling, perming, coloring and relaxing; facial make-up; and skin care and facials.

502-390 Barber/Cosmetology Science 1  
- 2 credits
- Tools, equipment, hygiene, grooming and personal development, product knowledge and product use are covered. Emphasis is on nomenclature, usage, care and proper selection.

502-391 Barber/Cosmetology Science 2  
- 2 credits
- Bacteriology, sanitation, anatomy and physiology, disorders of the hair, skin and scalp, history of barbershopping and cosmetology, laws, rules, board authority and professional ethics are covered.

502-392 Barber/Cosmetology Sales and Advertising 1  
- 1 credit
- Students learn to recognize different types of salons and the varied opportunities each has to offer, identify the duties of a salon employee, and overcome obstacles that may be encountered.

502-393 Barber/Cosmetology Sales and Advertising 2  
- 1 credit
- Introductory sales course stressing the proper application of sales techniques to skilled occupations. The sales and advertising techniques are applied to job disciplines are designed not only to create greater efficiency on the job, but also to improve working relationships with fellow employees and customers. Includes the application of sales approach, demonstration and close.

503 Fire Protection Technician  

503-101 Chemistry of Hazardous Materials  
- 4 credits
- Survey course presents an analysis of hazardous materials classifications as well as specific hazards of materials found in today's environment. Students are given practice in research skills to enable them to prepare for the safe handling of a hazardous materials incident.

503-104 Hazardous Materials Tactile  
- 3 credits
- Provides a study of tactics for the handling of a hazardous materials incident. Simulations involve preparation, safety communications, site control, material identification, risk analysis, resource coordination, control, confinement, containment, decontamination and incident termination.

503-106 Building Construction and Design  
- 3 credits
- Covers the basic principles of construction and specific classifications of construction as they relate to fire prevention, fire resistance, fire and smoke containment, and performance under fire conditions. Specific building styles, including high-rise and multi-family dwelling units, are also studied along with model building codes and standards.

503-110 Fire Investigation  
- 3 credits
- Covers fundamentals of fire investigation and practices. Students examine the role of the firefighter in the investigative process as well as the modern fire investigator techniques used to determine cause and origin of accidental, incendiary and arson fires.

503-112 Fire Prevention  
- 4 credits
- Examines and explores the need for a thorough fire prevention program in all areas of society. Fire prevention organizations both public and private, pre-fire inspection, plan review, code enforcement, and records and reports, are covered. Public education programs are emphasized.

503-114 Fire Protection Systems  
- 4 credits
- Students survey and examine various detection and suppression systems. High-tech fire, heat and smoke detection devices, as well as portable fire extinguishers, automatic sprinklers, and foam, carbon dioxide, dry chemical and halogenated systems are studied.

503-120 Equipment and Apparatus  
- 3 credits
- Involves a complete study of conventional and custom firefighting apparatus and equipment. Includes the theory of operation and problems of maintenance as well as considerations for new apparatus and equipment purchases.

503-125 Fire Service Management  
- 3 credits
- A survey of the management system requirements of today's fire department. Included are units on the evolution of the fire service, planning, organizing and evaluating community fire protection, personnel, labor relations, budgeting, training, legal aspects, affirmative action and information systems. The implementation of special services, including emergency medical service and hazardous materials response, are discussed along with the future of the fire service including alternative delivery systems.

503-131 Principles of Fire Control  
- 3 credits
- Covers the procedures involved in the task and tactical levels of fire suppression. Basic company functions are studied in accordance with their role in an incident management system.

503-134 Introduction to Fire Organization  
- 3 credits
- Presents an overview of the fire service both in the public and private sectors. Emphasis on public fire protection includes its history, fire safety, fire behavior and fire loss. Also surveys the topics presented in other Fire Protection Technician Program courses.

503-145 Water Supply Hydraulics  
- 4 credits
- Provides a basic study of hydraulics in theory and practice. Students compute water-flow problems for industrial and municipal fire service applications. An actual field laboratory demonstrates practical application at the conclusion of this course.

503-153 Strategic Operations  
- 4 credits
- Students learn the procedures involved in developing an incident management system. Emphasis is on the strategic level; however, practice includes simulations ranging from single company responses to multiagency and multi-jurisdictional responses.

503-380 Fire Recruit Academy  
- 5-8 credits
- Offers the State of Wisconsin Firefighter I, II and III certification curriculum for 200 hours and 5 credits. The State of Wisconsin EMT Basic license curriculum constitutes an additional 120 hours and 3 credits.

504 Police Science Technology  

504-102 Organization and Administration  
- 3 credits
- Introduces managerial theory, organizational behavior and culture. Universal concepts which apply to all work situations are presented.

504-111 Criminal Justice Administration  
- 3 credits
- The focus of the course is centered on exposing the newly-entering police science students to the concept of "social justice." This includes an introduction of the student to the American system of criminal justice including its major component parts: the police, courts and corrections. Meets LEB performance objective 1.1-1.3.

504-113 Criminal Law Procedures  
- 3 credits
- Provides the student with an in-depth view of the criminal law: first, by familiarizing him/her with the basic criminal justice process and procedures and second, by conducting an analysis of the substantive criminal law, its scope and definition, classification and the elements constituting some of the more common crimes. Prerequisite: 504-111, Introduction to Criminal Justice Administration. Meets LEB performance objective 6.5.

### COURSES
504-115 Criminal Evidence 3 credits
Introduces the student to the legal process, procedure and forum in which guilt or innocence is determined. To explore the history and development of the law of criminal evidence and the necessity for having legal evidence. Prerequisite: 504-113, Criminal Law Procedures. Meets LEB performance objective 6.6 and 10.7.

504-121 Patrol Procedures 3 credits
Examines the patrol operation as it exists in the modern police department and explores the historical development of patrol, the various styles, techniques of decision making, hazards, patrol techniques, police subculture and the future of policing. It also identifies techniques in dealing with disasters, hazardous materials, mental health acts, victim assistance and enforcement of alcohol beverage laws. Meets LEB performance objective 1.4, 6.2, 6.8, 9.1, 9.2, 9.3-9.7.

504-123 Criminal Investigation 4 credits
Acquaints the student with basic techniques of investigation procedures which include crime scene procedures, and collection, preservation, evaluation, comparison of evidence. The student will learn to develop sources of information and surveillance techniques. Laboratory exercises will enable the student to obtain hands-on training in the use of evidence collection techniques and procedures. The student will review selected crime areas to learn investigative techniques employed in dealing with those situations and also preventative procedures. Meets LEB performance objective 9.3, 10.1, 10.2, 10.4, 10.5.

504-131 Traffic Investigation and Enforcement 3 credits
Students will learn knowledge, skills and attitudes necessary for effective traffic law enforcement and accident investigation. Student learning goals are to demonstrate knowledge of goals, methods and procedures pertaining to traffic law enforcement; correctly prepare and issue traffic law citations, ranging from verbal warning to arrest; demonstrate correct procedures for investigating the offense of driving or operating a motor vehicle while under the influence of alcohol or controlled substance; demonstrate knowledge of traffic control techniques under daytime and nighttime conditions; and demonstrate knowledge of procedures for accident investigation. Meets LEB performance objective 8.1-8.5.

504-135 Juvenile Justice 3 credits
Study of juvenile justice system which emphasizes factors and causes that explain delinquent behavior. The course also examines the juvenile as a delinquent and as a victim of child abuse and neglect.

504-136 Juvenile Law 3 credits
The philosophy of the juvenile court is examined. Wisconsin’s Children’s Code is studied, along with the study of statutory juvenile court process, beginning with the police and ending with the disposition of the delinquent juvenile or child in need of protective services (C.H.I.P.S.). Prerequisite: 504-135, Juvenile Justice. Meets LEB performance objective 6.7.

504-141 Technical Report Writing 3 credits
Emphasizes the content and practice of note taking and report writing. Students will recognize and critique proper word usage and sentence structure constructing narrative police reports. It is recommended that students complete 801-151 and 801-152, Communication Skills 1 and 2, before enrolling in this course. Meets LEB performance objective 10.6.

504-143 Criminality for Law Enforcement 3 credits
Exposes police science students to answers to these questions: what is crime and why is it a problem? In focusing on these two questions, the course will look at what is known about crime and how we know about crime. The course also touches on crimes, criminals and theories, while focusing on the police in the criminal justice system.

504-145 Investigative Photography 3 credits
Introduces photography - the use of the camera, film characteristics and purpose; darkroom procedures; problems of film contrast; photo enlargements; and basic procedures in portrait, scenery, crime scene and evidence photography. Enables students to understand legal and courtroom requirements, as well as the problems of prejudicial and probative value of photos for court evidence.

504-146 Forensic Photography 3 credits
Advanced follow-up to Investigative Photography. Use of the camera for crime scene photography, macrography and micrography. Covers forensic applications of ultraviolet and infrared photography for comparison, analysis and preparation of enlargements for courtroom presentation.

504-160 Constitutional Protection and Interview Procedures 3 credits
The objective of this course is to introduce the student to the protection afforded citizens under the Constitution of the United States, particularly as they relate to the actions of law enforcement officers. A second objective is to familiarize the student to the techniques of interviewing and interrogation involved in policing. Primary focus is on the limitations embodied in the Fourth, Fifth and Sixth Amendments to the United States Constitution. Prerequisite: 504-115, Criminal Evidence. Meets LEB performance objective 6.1-6.4, 10.3.

504-165 Police-Community Relations 3 credits
Identifies principles, techniques and behaviors that promote community service and effective interaction with a multicultural, multistate society. Also identifies principles and techniques of decision making and problem-oriented policing. Explores the principles and techniques of crime prevention. Meets LEB performance objective 1.4, 4.1-4.3, 9.4.

504-180 Practical Police Problems 3 credits
Integrates learned classroom theory and skills with real-life experience under the direct supervision of police practitioners. Students are placed within a police agency to interact, observe and participate - to a limited degree - with practitioners during the performance of their regular duties. Each student receives intense one-on-one instruction in developing useful police reports based on field experience. Prerequisites: Completion of two semesters (30 credits) in the Police Science Program and 2.5 GPA.

508 Dental Hygiene

508-101 Clinical Dental Hygiene Laboratory 2 credits
Emphasizes application of the theory and principles of dental hygiene practice and further study of dental instrumentation, including treatment of prophylaxis patients in a clinical setting.

508-103 Clinical Dental Hygiene Theory 2 credits
Further study of patient assessment procedures including treatment planning, phase microscope, oral indices, vital signs, occlusion, special needs patients and patient counseling. Prerequisite: 508-101. Dental Hygiene Theory and Laboratory 1.

508-105 Dental Hygiene Theory and Laboratory 1 4 credits
First in a series of four courses designed to provide the student with the knowledge and understanding of the principles in the practice of clinical dental hygiene. Emphasis will be placed on the development and application of the knowledge used in the prevention of oral disease, examination procedures for data collection, clinical and histological anatomy of the gingiva, determination of tooth texture, application of aesthetic techniques, prophylactic instruments and their uses, application of preventive agents, the removal of accretions and complete prophylactic procedures on patients.

508-113 Tooth Morphology 1 credit
A study of dental nomenclature, anatomic form, eruption function, functional relationships and supporting structures of human primary and secondary teeth.

508-117 Clinical Dental Hygiene Theory 3 2 credits
Emphasis on treatment planning, x-ray interpretation, advanced instrumentation, pain control, four-handed dental hygiene, patient motivation.
and parallel radiographic techniques. Prerequisite: 508-103, Clinical Dental Hygiene Theory 2.

508-119 Clinical Dental Hygiene Laboratory 3 4 credits
Special emphasis on advanced instrumentation techniques. Prerequisite: 508-101, Clinical Dental Hygiene Laboratory 2.

508-123 Clinical Dental Hygiene Theory 4 1 credit
Emphasis on team dentistry, legal issues, practice settings, management skills, job selection, interviewing and resumes. Prerequisite: 508-117, Clinical Dental Hygiene Theory 3.

508-124 Clinical Dental Hygiene Laboratory 4 4 credits
This continuation of Clinical Dental Hygiene Laboratory 3 offers further practice of techniques and procedures already learned. Prerequisite: 508-118, Clinical Dental Hygiene Laboratory 3.

508-128 Dental Materials 2 credits
Introduces the nature, qualities and general characteristics of modern dental materials and dental operative procedures. Sources, properties, uses and techniques of manipulation for materials commonly used in dentistry are covered. Laboratory practice is provided for preparation of materials used for restorations, impressions and models.

508-131 Dental Emergencies 1 credit
A combination of both the didactic and practical content of the American Heart Association's basic life support course. It provides training in more advanced emergency care techniques for emergencies more likely to be encountered by dental professionals in an office setting. Successful completion of the course entitles the student to be certified in basic life support. The course also surveys and provides ways of managing emergencies that are dental in nature, i.e., lost filling, abscess, traumatic injury to the mouth, etc.

508-135 Periodontics 2 credits
A study of the periodontium - etiology, classification and characteristics of periodontal disease, and a study of the cause, prevention and treatment of periodontal disease - with clinical application and role of the dental hygienist.

508-138 Dental Hygiene Radiography 2 credits
A study of the nature, effects, generation and use of roentgen rays. Discussion and practice with equipment, materials, safety measures and techniques followed in making dental roentgenograms are covered. The course features lectures and demonstrations of the application of roentgen rays for dental diagnostic purposes. Electrofotography of the equipment, position of films, angulation of the machine and processing and mounting of dental radiographs are also discussed.

508-139 Histology 2 credits
Encompasses an overview of embroyological processes, especially those involved in the formation of face, oral and dental structures. A study of cells and tissues is presented, along with a study of the composition and microscopic anatomy of the teeth and their supporting structure.

508-142 Pharmacology 2 credits
A study of the principles of pharmacology and the pharmacology of representative drugs which are in current use and active dental practice. Special consideration is given to antibiotics, sedatives, pain-relieving drugs and anesthetics.

508-145 Pathology 3 credits
An attempt to understand oral disease so that it can be properly diagnosed and adequately treated. Presents a correlation of human biology with the clinical signs and symptoms of oral disease. Where possible, the prognosis of each disease is considered as a reflection of underlying tissue alteration and of contemporary therapeutic measures. Emphasis is placed on the physiological and chemical aspects of oral disease.

508-148 Oral Anatomy and Physiology 2 credits
A study of the anatomy and physiology of the head and neck. Detailed study of osteology, myology, neurology and the circulatory system is offered. Students also cover the effects of normal and abnormal respiration, swallowing and mastication on teeth.

508-190 Personal and Community Health 2 credits
Concerned with developing an understanding of public health methods and an awareness of the dental hygienist's role in the promotion of dental health within the context of the total health of the community.

508 Dental Assisting

508-304 Dental Materials 2 credits
The chemical and physical composition, functions and limitations of the materials used in dentistry are discussed. Laboratory exercises are provided to acquaint the student with various laboratory procedures used in dentistry.

508-305 Dental Theory 1 2 credits
Course topics include microbiology, sterilization, oral hygiene, dental decay, dental deposits, nutrition and preventive dentistry.

508-307 Dental Theory 2 1 credit
Involves study of the etiology and pathology of diseases of the oral cavity, An overview of dental pharmacology as it relates to drugs and the assistant's role is also covered.

508-308 Dental Materials 1 2 credits
Provides a discussion of various types of restorative materials used in dentistry. The uses of plaster of Paris, stone models and impression materials in dentistry are covered. Laboratory exercises are required to acquaint the student with various materials.

508-310 Dental Anatomy 2 credits
Consists of a survey of structure and function of the body in general, i.e., the skeletal, cardiovascular, respiratory, central nervous and reproductive systems; and a study of the human dentition, dental terminology and growth and development of the oral cavity. Topics such as dental and oral anomalies, bones of the head, nerve and blood supply to the head and neck, muscles of mastication and facial expression, sinuses, tonsils and salivary glands are also covered. Students draw various teeth from different aspects to better acquaint themselves with the anatomy of each tooth. Time is also spent studying human skulls and models.

508-320 Dental Practice Administration 1 credit
Deals with the business aspect of dental offices. Topics studied include confidentiality, ethics and jurisprudence. Students also receive instruction in appointment scheduling, recall systems, telephone techniques, office forms, laboratory cases, mail, financial arrangements and bookkeeping systems. In addition, topics such as interviewing for a job, job application and personnel policies are covered. In general, this course helps prepare the dental assisting student for employment as a receptionist or business assistant in a dental office.

508-321 Chairside Theory 1 2 credits
Involves study of the theory related to the skills needed in chairside dental assisting. Some of the topics which are included are equipment usage and maintenance, the function of instruments, oral evacuation, rubber dam, instrument transfer, local anesthetics, cavity classification and preparation, operative dentistry and dental prophylaxis.

508-322 Chairside Techniques Laboratory 1 2 credits
Encompasses instruction and practice in chairside dental assisting skills. These skills include use and maintenance of equipment, oral evacuation, receiving and dismissing patients, instrument identification, instrument transfer, anesthetic syringe, rubber dam, use of the microclave and aseptic technique.

508-323 Dental Assisting Radiography 2 credits
Students become familiar with the nature of roentgen rays, the physics of x-ray machines and radiation protection. Laboratory emphasis is on processing and mounting radiographs and developing intra-oral radiographic techniques.

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508-334 Chalside Theory 2 1 credit  
Continues study of the theory and skills needed in chairsde dental assisting. Emphasis is placed on four-handed dentistry and expanded duties. Included are charting, matrix bands, fluoride application, orthodontics, periodontics, oral surgery, periodontics, endodontics, prosthodontics, public health, geriatric dentistry and dentistry for the disabled patient.

508-335 Chalside Techniques Laboratory 2 1 credit  
Instruction and practice in chairsde dental assisting skills, both traditional and in expanded functions. Included are charting, matrix bands, fluoride application, orthodontics, oral surgery, periodontics, endodontics and review of selected first-semester items.

508-336 Clinical Affiliations 1 credit  
Affiliations are scheduled in general practice offices, specialty offices, the city county clinic and the dental hygiene clinic. The student assists and observes in these offices, under the supervision of a licensed dentist and the employed dental assistant. Students are visited by an instructor approximately every five days.

508-337 Medical Assistant 4 credits  
A continuation of 508-336, Clinical Affiliations. At the end of the course, the student will have affiliated a minimum of 300 hours.

509 Medical Assistant  

509-110 Medical Records 3 credits  
Designed to help students to become acquainted with medical records and statistical reports as they are prepared, used and stored in a clinic, nursing home or hospital; to become familiar with the various types of medical insurance; to increase their knowledge of medical terminology; to learn medical abbreviations; and to be aware of the need for strict release of information policies. Prerequisites: 509-180, Medical Terminology 1; and 509-181, Medical Terminology 2.

509-111 Medical Terminology and Records 3 credits  
Includes the study of medical insurance, commonly-used medical records and policies and procedures related to the preparation, use and storage of medical records. Prerequisite: 509-180, Medical Terminology 1.

509-180 Medical Terminology 1 2 credits  
Helps the student become familiar with medical terminology; understand how medical terms are formed; become familiar with the meaning of many word roots, prefixes and suffixes; be able to spell, define and pronounce many medical terms by understanding word components; and become skilled in the use of a medical dictionary.

509-181 Medical Terminology 2 2 credits  
Expands the information in 509-180, Medical Terminology 1.

509-303 Body Structure 2 credits  
A concise introduction to human body structure and function. Normal and abnormal states of the body and basic disease processes affecting the body are emphasized. Common problems encountered in a variety of health care settings are presented.

509-313 Practice Management 1 credit  
Concepts and procedures involving medical insurance comprise most of this course. Management of the medical practice, ethical concepts, professional growth and personal adjustments to medical assisting are explored.

509-315 Practice Management 2 1 credit  
The first half of this course concentrates on the interrelationship of medical ethics and medical law and the effects of each on the practice of medicine and the role of the medical assistant. The second half of the course introduces coding principles to the medical assistant.

509-316 Chalside Assisting 1 3 credits  
Introduces the clinical aspects of a physician's office and how the medical assistant functions in that setting, with an emphasis on assisting the physician in the care of patients. Care of equipment, sterilization of surgical instruments, and examining room techniques are stressed.

509-323 Interpersonal Relations 1 credit  
Examines the behavioral and cultural aspects that influence the dynamics of medical assistant-patient relationships which occur in medical offices and clinics. The basic concepts of stress, how it affects human behavior and stress management are incorporated. Practical human relations problems are presented with an emphasis on classroom interaction.

509-355 Clinical Lab 1 3 credits  
Designed to introduce students to basic laboratory procedures that may be performed by a medical assistant in a physician's office or clinic. Students are introduced to specimen collection, microbiology, throat and urine cultures; urinalysis; immunologic tests and laboratory quality assurance. Laboratory safety, OSHA regulations and CLIA regulations are emphasized, as well as the development of professionalism in a medical laboratory environment.

509-356 Clinical Lab 2 3 credits  
A 12-week course designed to extend the student's learning to include phlebotomy, capillary specimen collection, basic hematology and chemistry, testing and instrumentation. Continued emphasis is placed on laboratory safety, quality assurance, record keeping and organizational skills in the medical laboratory. Prerequisite: 509-355, Clinical Lab 1.

509-360 Medical Terminology 1 2 credits  
A basic introduction to the use of medical terminology. Emphasis is placed on recognition, division, definition, spelling and pronunciation of word parts. Medical terms are discussed in each unit as they pertain to anatomy, physiology and pathology.

509-361 Medical Terminology 2 1 credit  
A 13-week course focusing on special medical terminology, including abbreviations used in medical records and prescriptions; pharmacological terms, especially categories of drug action; diagnostic imaging and cancer terms; and review of basic medical terminology through an analysis of a medical paper. Students present current events, conduct discussions and research a short presentation. Prerequisite: Satisfactory completion of 509-360, Medical Terminology 1 or equivalent.

509-362 Clinical Assisting 2 3 credits  
A 13-week course focusing on assisting the physician with special diagnostic procedures, including electrocardiography and assisting with minor surgery, plus administration of medication. Prerequisite: Satisfactory completion of 509-361, Clinical Assisting 1.

509-365 Medical Office Procedures 3 credits  
A 13-week course to develop skills for use in a medical office. It is designed to give students fundamental knowledge in the following areas: patient reception, appointment scheduling, record keeping, filing, entering daily transactions, billing and collecting, banking procedures, preparing payroll, preparing some government forms, handling routine business correspondence and keeping an inventory of supplies. The course also introduces some of the features in an automated or electronic office situation. Prerequisite: Microkeyboarding course or 30 wpm typing speed.

509-370 Internship 2 credits  
Consists of 12 hours of classroom instruction during the final semester in preparation for employment, a 150-hour assignment to a local office or clinic and a two-hour evaluation of the experience. During the 160-hour internship, the student works four 40-hour weeks and provides his/her own transportation. Prerequisite: Satisfactory completion of all curriculum and recommendation of faculty.

509-371 Medical Office Emergencies 1 credit  
Half of this course is American Heart Association CPR and the remainder is a basic course in first aid, with emphasis on situations and emergencies in the medical office setting.
510 Nursing - Associate Degree

510-150 Nursing Fundamentals 7 credits
Introduces three roles of the associate degree nurse as defined by the National League for Nursing: provider of care, manager of care and member within the discipline of nursing. Also introduces concepts of human needs, life span and common health problems. Discusses concepts related to physiologic, safety/security and love/belonging needs. Considers life span concepts in terms of how these affect human needs. Introduces the nursing process, emphasizing client assessment and implementation of basic skills. Opportunity for practice and simulated demonstration of skills is provided in the nursing skills laboratory. Concurrent clinical experience with adult clients is provided in hospitals and extended-care facilities. Prerequisite: Acceptance into the Associate Degree Nursing Program.

510-151 Introductory Medical-Surgical Nursing, Part A 7 credits
Assists the student in developing an understanding of the nurse's role and how nursing care is affected by human needs, life span events and common health problems. Explores effects of the individual's illness, hospitalization or disability on the family. Describes client needs during the perioperative period. Identifies needs of clients with musculoskeletal, neurological and infectious health problems. Emphasizes the nurse's role in caring for these clients. Clinical experiences are provided in structured health care settings. Emphasizes the provider role of the nurse with a focus on communication skills and on the assessment, planning and implementation steps of the nursing process. Prerequisites: 510-150, Nursing Fundamentals; 806-207, Anatomy and Physiology I; 806-273, Microbiology; 809-231, Introduction to Psychology or 809-199, Psychology of Human Relations.

510-152 Introductory Medical-Surgical Nursing, Part B 2 credits
Develops an understanding of the nurse's role and how human needs are affected by common health problems and the aging process. Explores the physiologic and psychosocial changes of normal aging, culture and loss. Identifies common needs of clients with gastrointestinal health problems and cancer. Prerequisites: 510-150, Nursing Fundamentals; 806-207, Anatomy and Physiology I; 806-273, Microbiology; 809-231, Introduction to Psychology or 809-199, Psychology of Human Relations.

510-153 Intermediate Medical-Surgical Nursing 6 credits
Develops an understanding of the nurse’s role and how human needs are affected by common health problems. Identifies needs of clients with fluid and electrolyte, reproductive, urological, endocrine and sensory health problems. Further develops assessment, planning and implementation skills of the nurse. The evaluation step of the nursing process is expanded and applied in the clinical setting. Continues development of communication skills. Emphasizes the nurse's role in client teaching, admission, discharge and referral. Provides clinical experiences in acute care settings. Prerequisites: 510-151 and 510-152, Introductory Medical-Surgical Nursing Parts A and B; 806-208, Anatomy and Physiology 2; 809-233, Developmental Psychology; 809-203, Introduction to Sociology or 809-197, Contemporary American Society; 801-201, English Composition 1 or 801-151, Communication Skills 1.

510-154 Parent-Child Nursing 4 credits
Increases the student's understanding of the nurse’s role and how human needs are affected by life span events and common health problems. Focuses on childbirthing families. Explores the nurse’s role in modification of care for infants, children and adolescents during illness and/or hospitalization. Continues to develop assessment, planning and implementation skills. The evaluation step of the nursing process is expanded and applied in the clinical setting. Continues development of communication skills. Emphasizes the nurse's role in client teaching, admission, discharge and referral. Provides clinical experiences with a focus on childbirthing families and on nursing care of children. Associate degree nursing students who are licensed practical nurses are provided an opportunity to challenge selected aspects of the course. Prerequisites: 510-151 and 510-152, Introductory Medical-Surgical Nursing Parts A and B; 806-208, Anatomy and Physiology 2; 809-233, Developmental Psychology; 809-203, Introduction to Sociology or 809-197, Contemporary American Society; 801-201, English Composition 1 or 801-151, Communication Skills 1.

510-155 Nursing Ethics and Trends 1 credit
Emphasizes the role of the associate degree nurse as a member within the discipline of nursing and the transition to the level of a registered nurse. Discusses levels of practice, the role of the associate degree nurse and legal responsibilities of nursing practice. Includes the structure and authority of the State Board of Nursing, the process for licensure and employment responsibilities and opportunities. Introduces current ethical and health care issues and trends in nursing. Prerequisites: 510-153, Intermediate Medical-Surgical Nursing; 510-154, Parent-Child Nursing; 810-201, Fundamentals of Speech or 810-152, Communication Skills 2.

510-156 Nursing Management/Psychiatric Nursing 6 credits
Focuses on psychiatric nursing and the role of the nurse as manager of client care. Presents the nurse’s role as provider of care for clients with common mental health problems. Emphasizes development of therapeutic communication and evaluation of self. Develops the nurse’s role as manager of care. Includes role and scope of practice of the associate degree nurse with other nursing care providers and with groups of clients. Emphasizes communication as a member of the interdisciplinary health care team. Provides clinical experiences with psychiatric clients. Also includes a clinical experience in an extended-care facility, with a focus on the role of manager of nursing care. Associate degree nursing students who are licensed practical nurses will have the opportunity to challenge selected aspects of this course. Prerequisites: 510-153, Intermediate Medical-Surgical Nursing; 510-154, Parent-Child Nursing; 810-201, Fundamentals of Speech or 810-152, Communication Skills 2.

510-157 Advanced Medical-Surgical Nursing 5 credits
Focuses on the nurse’s role in providing care for ill clients in the acute care setting. Presents needs and care of clients with respiratory, cardiac, hematological and other complex health problems. Explores life span concepts of chronic illness and adaptation of nursing care for young adult and middle-aged clients. Assists in preparing for transition to the role of the nurse providing care in the acute-care setting. Emphasizes setting priorities, planning for continuity of care, organizing time effectively and increasing skill in communicating with clients, families and other members of the health care team. Provides clinical experiences in acute care settings. Prerequisites: 510-153, Intermediate Medical-Surgical Nursing; 510-154, Parent-Child Nursing; 810-201, Fundamentals of Speech or 810-152, Communication Skills 2.

510 Practical Nursing

510-334 Elementary Nursing 5 credits
Designed to teach basic nursing skills and the underlying principles needed by the student to assume the responsibilities of a practical nurse. Knowledge and skill gained in this course enables the student to function in relatively simple situations and to assist the registered nurse as an integral part of the nursing team in the care of acutely ill patients. Lectures and demonstrations are supplemented by laboratory and clinical experiences in hospitals and nursing homes. Selected learning experiences in these clinical areas are under direct supervision of instructors from the college. Consideration is given to the role of the practical nurse within the framework of various methods of nursing care delivery systems and the use of the problem-solving approach to nursing care. Basic skills are stressed to develop health and effective relationships with other members of the health team. Course taken concurrently with 510-336, Nursing the Adult 1; and 510-339, Interpersonal Relationships in Nursing; and with other first-level courses: 510-335, Body Structure, 510-356, Growth and Development; and 510-357, Nutrition For Health Care.

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510-335 Body Structure 2 credits
Provides an insight into basic human anatomy and physiology including fundamental content needed for the understanding and evaluation of health practices related to each system and the body as a whole. Course taken concurrently with First-level courses: 510-334, Elementary Nursing; 510-335, Body Structure; 510-336, Growth and Development. This course may be taken prior to entering the program on a space-available basis.

510-336 Nursing the Adult I 4 credits
Covers basic concepts of health, illness and nursing care applicable to the adult. The student is introduced to the nursing process and to new medical terminology. The initial course focus is on homeostasis and preventive aspects of health care. Additional content includes imbalances resulting from illness and client needs created by those conditions, as well as an introductory unit in pharmacology. A supervised clinical experience in a general hospital or nursing home facility that incorporates theory with direct client care is a major component of the course. Course must be taken concurrently with 510-334, Elementary Nursing; and 510-339, Interpersonal Relationships in Nursing.

510-337 Nursing the Adult II 7 credits
Gives students an opportunity to study conditions affecting body systems. Emphasis is on nursing care and intervention therapy within the practical nursing role. The student studies the general characteristics, uses, side effects and nursing implications of drug therapy according to classification and system usage. A supervised medication administration experience is provided. Clinical experience is provided in a general hospital setting or a nursing home with emphasis on the developmental needs of the older adult. Prerequisites: First-level courses: 510-334, Elementary Nursing; 510-335, Body Structure; 510-336, Nursing the Adult I; 510-339, Interpersonal Relationships in Nursing; and 510-356, Growth and Development. Course taken concurrently with 510-359, Nursing the Mentally Ill; and 510-362, Parent-Child Nursing.

510-338 Nursing the Adult 3 and Law 5 credits
The last in a series of medical-surgical courses completing the body systems. The clinical focus includes multiple client assignment, team medication administration experience and introduction to the role of team leader. This course includes the legal aspects of nursing in relation to the roles of the practical nurse within the health care team. Prerequisite: Second-level courses: 510-337, Nursing the Adult II; 510-359, Nursing the Mentally Ill; and 510-362, Parent-Child Nursing.

510-339 Interpersonal Relationships in Nursing 1 credit
Introduces the student to his/her personal and vocational responsibilities as a student in the Practical Nursing Program. It examines the complex means of communication, the behavioral and cultural aspects that influence its cause and the dynamics of the nurse-client relationship. Development of communication skills in the nursing setting and techniques utilized in developing interpersonal relationships are explored. The problem-solving approach to nursing care is explored. The development and utilization of the nursing process and charting are introduced. The ethical and legal responsibilities, both of a student and practicing nurse, are identified. The foundation for identifying the client needs is established through an understanding of human development using the theories of Maslow, Erikson, and Beck. The basic concepts of stress and how it affects human behavior, and stress management are incorporated. Taken concurrently with 510-334, Elementary Nursing; and 510-336, Nursing the Adult I.

510-346 Nursing Assistant 3 credits
Prepares students for employment as nursing assistants. Students learn communication skills, basic nursing and personal care skills, client rights, and care of clients with dementias. A supervised clinical experience with direct client care is a major component of the course. Upon completion, the student is eligible for the Wisconsin Nurse Aide Registry, and therefore, for employment in nursing homes, hospitals, home health agencies and homes for the developmentally disabled. Prerequisites: None.

510-356 Growth and Development 1 credit
Growth and development is studied from conception through the older adult based on Erikson’s conceptualization of developmental process. The course is divided into two sections. The first section will deal with the normal physical, mental, emotional and social growth and development from conception through early adulthood. The subject is approached within the framework of the family throughout the life cycle. The second section is designed to deal with the physiological and psychological functions of middle and older lives with implications for nursing and applications of principles and concepts to care for the individuals in a variety of settings. Course taken concurrently with First-level courses: 510-334, Elementary Nursing; 510-335, Body Structure; 510-336, Nursing the Adult I; 510-339, Interpersonal Relationships in Nursing. Course may be taken prior to entering the program on a space-available basis.

510-357 Nutrition for Health Care 1 credit
The study of nutrition and nutritional requirements during the life cycle comprise the course, including vitamins, minerals, fats and protein. Emphasis is placed on developing an understanding of cultural and religious food preferences, consumer information and safe food handling, as well as alteration of nutrients to meet the needs of altered physiological function. Course taken concurrently with First-level courses: 510-334, Elementary Nursing; 510-335, Body Structure; 510-336, Nursing the Adult I; 510-339, Interpersonal Relationships in Nursing. Course may be taken prior to entering the program on a space-available basis.

510-359 Nursing the Mentally Ill 3 credits
Provides students with a basic understanding of the dynamics of human behavior so they may better understand themselves and clients. This understanding is built on recognition of healthy and unhealthy coping mechanisms with emphasis on the symptomatology of behaviors. A supervised clinical experience in care of the mentally ill in a psychiatric facility is included as part of the course. Prerequisites: First-level courses: 510-334, Elementary Nursing; 510-335, Body Structure; 510-336, Nursing the Adult I; 510-339, Interpersonal Relationships in Nursing; 510-356, Growth and Development. Course taken concurrently with 510-362, Parent-Child Nursing; and 510-337, Nursing the Adult II.

510-362 Parent-Child Nursing 4 credits
Designed to assist the student practical nurse in developing a broad perspective of the meaning of family-centered, parent-child nursing. Basic information about normal development changes and health maintenance provide the framework for meeting the needs of the normal family and the ill child. Clinical experience to enhance the student practical nurse's understanding of their role on the health team are provided in structured settings including a hospital, family practice and pediatric clinic and nursery school. Prerequisite: First-level courses: 510-334, Elementary Nursing; 510-335, Body Structure; 510-336, Nursing the Adult I; 510-339, Interpersonal Relationships in Nursing; 510-356, Growth and Development. Course taken concurrently with 510-362, Parent-Child Nursing; and 510-337, Nursing the Adult II.

511 Culinary Arts
511-101 Principles of Sanitation 1 credit
Covers food-service sanitation principles and the role of food service personnel in the prevention of contamination and food-borne illness. Condensed version of 511-105, Sanitation, for non-culinary arts majors only.

511-104 Introduction to Gourmet Food Preparation 3 credits
Provides the student with an introduction to classical- and ethnic-cooking techniques common to full service restaurants. Students will have an opportunity to apply and develop their skills in a simulated restaurant environment in the MATC Gourmet Dining Room.
511-105 Sanitation 2 credits
Covers food-service sanitation principles and the role of food service personnel in the prevention of contamination and food-borne illness. Certification through the Educational Foundation of the National Restaurant Association is a requirement for completion and can be used to apply for state certification.

511-106 Food Science Theory 2 credits
Student chefs learn basic techniques through lecture, demonstration and hands-on experiences. Includes the use of hand tools and equipment, terminology and preparation methods. Units include soups, sauces, vegetables, meats and seafood.

511-108 Baking Theory 2 credits
Covers fundamental principles of baking through lectures and lab experimentation. Functions and usage of ingredients is discussed. Formulas are analyzed according to baker's percentages and ingredient cost-outs are calculated.

511-111 Entrees 1 2 credits
Provides experience in the production of quality foods in quantity. Emphasizes the techniques and methods used during the preparation of entrees. Students select entrees from daily menus which include meats, poultry and seafood. Methods include roasting, braising, broiling and grilling.

511-113 Soups 1 1 credit
Offers experience in the production of quality soups in quantity. Students use recipes to prepare cream and broth soups. Emphasizes the techniques and methods used in soup preparation. Thick and thin soups are covered along with the proper herbs and spices used in soup cookery.

511-115 Baking 1 1 credit
Introduces fundamentals of production baking. Products made in the lab include basic yeast breads and rolls, sweet dough, specialty cookies, quick breads and muffins, pies and tarts, croissants and cheesecakes. Students practice basic cake-decorating techniques.

511-118 Food Service Management 3 credits
Provides an overview of management and organizational structure in the restaurant phase of the hospitality industry. Students evaluate styles of leadership and develop effective skills in human relations and personnel management applicable to various food service settings.

511-119 Vegetables/Starches 1 1 credit
Provides experience in the selection and preparation of vegetable and starch products. Students clean, prepare and evaluate vegetables using various methods of cooking. Preparation of rice and pasta products are also included.

511-121 Entrees 2 2 credits
Emphasizes helping students become proficient in the art of various entree cookery. Prerequisite: 511-111, Entrees 1.

511-125 Baking 2 2 credits
Covers advanced aspects of production baking. Products made include specialty yeast breads and rolls, puff pastry, creams and Bavarians, creamed and foam cakes, and petit fours. Students work on plated presentation of desserts and chocolate work. Healthful bakery products are also made. Intermediate cake-decorating techniques are demonstrated and practiced. Prerequisite: 511-115, Baking 1.

511-129 Vegetables/Starches 2 2 credits
Covers advanced techniques in the preparation of various vegetables and starch products. Prerequisite: 511-119, Vegetables/Starches 1.

511-130 Gourmet Foods 4 credits
Fine tuning of basic skills and refined cooking techniques. Introduces and studies classical menus with emphasis on decorative foods which require extra care and art in their preparation and presentation. Encourages individual creative styles. Lectures and demonstrations are given on the use of herbs and fine wines in international and continental-style cooking. Emphasizes table service. Some table-side cooking techniques are practiced in the gourmet restaurant operation. Prerequisite: 511-104, Introduction to Gourmet Food Preparation.

511-132 Waitstaff Training 1 credit
Focuses on types of dining room service appropriate to various restaurant operations. Students gain understanding of relationship between "front" and "back" of the house.

511-133 Decorative Foods 2 credits
Students use the appropriate tools and techniques to create decorative show pieces such as ice sculptures, sugar work, chocolate pieces, chaud, fruit work and aspic glazes. Techniques learned are applied to create artistic displays for show and culinary exhibits.

511-134 Advanced Baking 2 credits
This elective course increases the students understanding of basic production baking principles in a hands-on lab setting. Curriculum is customized by the instructor to incorporate students' interests and abilities based on prior experience and what can be accomplished in the course time frame.

511-135 Dining Room Operations 1 credit
Students learn and practice the responsibilities common in dining room management. Various styles of table service, table-side presentations and beverage service are implemented.

511-140 Menu Planning/Writing 1 credit
Addresses advanced culinary terminology and principles of menu writing and planning for various types of facilities and service. Students apply skill in creating menus for the MATC Gourmet Dining Room.

511-152 Nutrition 2 credits
Provides information about nutrition as it applies to the food service industry. Covers the six classes of nutrients and the latest guidelines set forth by governmental agencies and health organizations. Nutrition and its relationship to weight management and diseases are discussed as well as nutritional concerns throughout the life cycle. Menus are designed for specific nutritional requirements such as low-fat, vegetarian, low-sodium and diabetic diets.

511-158 Food Costs and Purchasing Analysis 3 credits
Covers the calculation of food costs and the use of food cost records. (Problems are presented that relate to cost factors.) Includes pricing of menu items and a study of labor cost and the effect they have on the overall operational costs. The mechanics of food and beverage purchasing are also included. Covers what and where to buy, the selection of suppliers, the various purchasing systems and the practical aspects and legal considerations of food buying.

511-175 Computers in Food Service 2 credits
Gives students an understanding of how computers are used in the food service industry to reduce food costs, improve productivity and enhance profitability. Students receive hands-on training using a software program that simulates a food service operation. Topics include inventory control, recipe and menu development, cost-outs, forecasting and catering functions.

511-179 Restaurant Law 3 credits
Provides a general awareness of the rights and duties which the law imposes upon and grants to the innkeeper in addition to outlining the consequences caused by failure in those responsibilities. Covers court decisions in the hospitality area are examined. Includes status and responsibilities; accommodations and discrimination; theories of liability, torts and negligence; liability for condition of premises; liability of leased premises; product liability; liability for guests' property; labor law; and liens and evictions.

511-185 Food Service Layout and Equipment 2 credits
Gives potential food service people an understanding of the basics in layout and design of food service facilities and equipment specifications.

Courses
regarding size, usage, placement, environmental impact, pricing and san-

itary considerations. Collaborative learning techniques are used.

511-194 Culinary Internship 1 credit
511-196 Culinary Internship 2 credits

Offers opportunities to gain practical work experience through a supervis-
sed internship at an approved job site. These elective courses are in-
tended to complement and enhance program core courses. Selection of
a site is based on the student's individual professional objectives. Note:
Enrollment is limited to students who have successfully completed two
semesters of the Culinary Arts Program.

512 Surgical Technician

512-300 Introduction to the Operating Room 1 credit
An introduction to the different aspects of the role and function of the
surgical technician. A brief history of surgery is presented. Stress is
given to developing an understanding of the meaning and correct usage
of medical-surgical terminology, weights and measures, introduction to
metric system and pharmacology and moral and legal responsibilities.

512-303 Surgical Technician Anatomy 1 2 credits
Designed to provide students with a concise introduction to human body
structure and function. The normal state of the body is presented to
enable the student to more effectively assist in the surgical procedure.
The student should acquire knowledge of the location of body parts, their
structure and main functions.

512-310 Surgical Technician Communications 1 credit
Designed to introduce the student to the fundamentals of communication,
with an emphasis on modes of communication most frequently used
in the clinical environment. Skills related to utilization of equipment
are also emphasized. Development of the roles of scrub technician and
circulator are stressed. Hospital organization and lines of authority are
discussed.

512-311 Surgical Technician Human Relations 1 credit
Examines human development and behaviors and their effect on relation-
ships at home and work. The student will also be provided with a basic
understanding of stress, its affect on behavior and stress management
techniques. Situational exercises involving human relations problems
will be presented with an emphasis on classroom participation through
role playing and other learning activities.

512-315 Surgical Technician Theory 1 5 credits
Emphasizes surgical asepsis, the process of prevention and control of
infection; care and safety of the surgical patient; principles of operating
room techniques; and related hospital and nursing activities.

512-316 Surgical Technician Lab 1 3 credits
Students will observe and practice skills required to function as a surgi-
cal technician. Emphasis will be placed on identification, care and han-
dling of instruments, aseptic principles/practices and preparation and
maintenance of a sterile field. Practice is provided in the college lab set-
ting and supplemented with limited experience in the hospital setting.

512-317 Functional Microbiology 1 credit
Designed to introduce students to the study of morphology and classifi-
cation of microorganisms and their effect on human body tissue. It
includes a study of the infectious process and the transmission of infec-
tious diseases. Immunology, nosocomial infection and common diseases
are studied. Methods of control by means of packaging, sterilization and
processing are stressed.

512-320 Surgical Technician Theory 2 2 credits
Designed to give students a working knowledge of surgical procedures
involved (including the anatomy of the areas and pathophysiology), posi-
tioning, surgical preparation, draping, instruments and accessory or spe-
cial equipment needed for each specific surgical procedure.

512-321 Surgical Technician Anatomy 2 1 credit
Directly related to the surgical procedures-seminar. It is designed so that
students review, expand and associate specific body structures and
pathophysiology with related surgical procedures.

512-322 Surgical Technician Laboratory 2 12 credits
Clinical experience is provided in hospital operating rooms. Clinical
rotations include teaching, private, federal and rural hospital settings.
Students practice and perfect operating room skills under strict supervi-
sion employing adaptation consistent with individual hospital proced-
ures. Students learn to function in ambulatory surgery, recovery room
and central supply. Clinical conferences are conducted daily to clarify
learning experiences in each clinical area.

513 Medical Laboratory Technician

513-100 Introduction to Medical Laboratory Careers 3 credits
Provides an introduction to the profession of medical technology and the
tasks of the medical laboratory technician. It includes the study of med-
ical terminology, laboratory safety, the collection of blood specimens,
performance of basic hematology procedures and professionalism.

513-101 Clinical Microscopy 3 credits
Covers the physical, chemical and microscopic examination of urine,
some special procedures performed on urine and an introduction to stool
analysis, semen analysis, pregnancy testing and body fluids.

513-104 Hematology 5 credits
Covers the study of blood, hemopoiesis, and principles and procedures
for routine hematology tests in the clinical laboratory. Also includes
principles and procedures for selected special hematology tests in the
clinical laboratory, coagulation and blood diseases. Prerequisite: 513-
100, Introduction to Medical Laboratory Careers or consent of instructor.

513-107 Instrumentation 2 credits
Study of the fundamentals of clinical laboratory instrumentation, which
includes the principles of operation, routine cleaning and maintenance of
instruments and special procedures as applied to specific instruments.

513-108 Clinical Immunology 5 credits
Provides theoretical background and practical application of immunolog-
ic principles in serology and blood banking. Emphasis is on the serodi-
agnostic methods used for identification of certain disease states and
blood compatibility testing protocols, including donor and patient blood
testing. Prerequisite: 513-104, Hematology or consent of instructor.

513-109 Clinical Chemistry 5 credits
Includes the study of titrmetric, spectrophotometric, electrophoretic,
potentiometric, automated blood and body fluid chemistry methods and
other routine chemistry tests for carbohydrates, proteins, electrolytes,
blood gases, etc. The testing procedures used in this course include vari-
ous automated instruments, pipetting, quality assurance techniques and
preparation of standard curves. Prerequisite: 806-201, General
Chemistry; or 806-210, College Chemistry 2 with Biochemistry.

513-111 Clinical Microbiology 5 credits
In-depth study and application of laboratory methods used in the isola-
tion and identification of pathogenic microorganisms especially bacteria,
parasites and fungi and sensitivity testing of antimicrobics. This course
also provides an overview of the clinical basis of infection and the speci-
men collection procedures for viral and rickettsial diseases. Prerequisites:
806-273, General Microbiology.

513-112 Seminar 1 credit
This program is divided into two parts. The Pre-Practicum Seminar, held
prior to the practicum assignment, is designed to prepare medical labora-
tory technician students for the practicum. Prerequisite: Completion of
all program courses except Practicum and Pre-Practicum Seminar. The
Post-Practicum Seminar is composed of examinations given at hospital
laboratories following each rotation, a mock registry exam at MATC at
the conclusion of the practicum and a program evaluation. Prerequisite:
All program courses including Pre-Practicum Seminar; and 513-113, Practicum.

513-113 Practicum 10 credits
Students are assigned an 18-week externship (fourth semester) at an affiliating hospital laboratory and enrichment sites. Some of the affiliating laboratories are outside Madison. Therefore, students can anticipate being placed for the practicum in Bunzoo, Fort Atkinson, Green Bay, Marshfield, Beloit, Neenah, Monroe or Beaver Dam as well as in Madison. Prerequisite: All program courses except Post-Practicum Seminar.

514 Occupational Therapy Assistant

514-101 Introduction to Occupational Therapy 3 credits
Students are introduced to occupational therapy and the OT assistant's role in service delivery. The course includes medical terminology and abbreviations.

514-105 Field Observation 2 credits
Orients students to policies and procedures related to Level II Fieldwork. A one-week (40 hours) placement provides an opportunity for observation and participation in an OT practice environment. Emphasis is placed on developing basic competencies in the areas of professional skills, planning and documentation. Prerequisites: First and second semester occupational therapy courses; concurrent enrollment in 514-130, Physical Rehabilitation Practice; and 514-135, Mental Health Practice.

514-111 Therapeutic Skills 1 2 credits
Increases students' self-awareness and develops the skills and attitudes needed for effective client and co-worker relationships. Content emphasizes understanding the processes of behavior change, interpersonal techniques, interviewing and use of self within dyadic contexts. Experiential learning activities promote self-assessment and skill development.

514-112 Therapeutic Skills 2 2 credits
Provides students with an opportunity to explore the ways therapeutic use of self is integrated to the group process. Students practice the skills needed to plan, implement and evaluate group activities. Varies class experiences enhance and build students' understanding of how group activities and leadership skills are used to meet therapeutic goals. Prerequisite: 514-111, Therapeutic Skills 1.

514-113 Developmental Principles 4 credits
Enables students to apply a knowledge of normal human development and related principles to analyze human performance, activities and environments. Emphasizes specific client conditions and OT interventions related to practice with infants, children and adolescents.

514-117 Biological Foundations of Human Performance 2 credits
The anatomical and physiological foundations of the sensorimotor and cognitive components of human performance are studied, including normal development; effects of disease, delay, injury or aging on the human potential; and therapeutic interventions to enhance human performance. Prerequisite: 806-207, Anatomy and Physiology I.

514-120 Occupational Therapy Process 4 credits
Provides the foundations for the OT assistant role at each stage of the OT process, with emphasis on skill development in screening and evaluation tasks. Occupational therapy and activities services in nursing home and geriatric settings are introduced and knowledge and skills are applied in an institutional or community activities fieldwork placement.

514-125 Community Practice 3 credits
Focuses on the role of occupational therapy in promoting maximal client adaptation in home, community and work contexts. Basic skills in program planning, use of community resources and development of educational experiences for clients, families and peers are emphasized. Various interventions and resources used when working with individuals with developmental disabilities in community and institutional settings are included. Prerequisite: 514-115, Developmental Principles.

514-130 Physical Rehabilitation Practice 4 credits
Explores the various methods of physical rehabilitation service delivery in acute care, rehabilitation, outpatient specialty clinics, home health and long-term care. OT evaluation and treatment are based in the Occupational Performance frame of reference. Prevention, maintenance and rehabilitation are stressed through lecture, client interaction and demonstration. Prerequisites: 806-207, Anatomy and Physiology I; 514-117, Biological Foundations of Human Performance; 514-120, Occupational Therapy Process; and concurrent enrollment in 514-105, Field Observation and 514-135, Mental Health Practice.

514-135 Mental Health Practice 4 credits
This course emphasizes psychosocial needs and mental health conditions affecting function. Coursework stresses skill development in client interaction and therapeutic intervention through simulations and exposure to various procedures such as interviewing, assessing clients' behavior and performance skills, planning treatment and developing activity interventions. Prerequisites: 809-231, Introduction to Psychology or 809-199, Psychology of Human Relations; 809-237, Abnormal Psychology; 514-111, Therapeutic Skills I; 514-112, Therapeutic Skills 2; 514-120, Occupational Therapy Process; and concurrent enrollment in 514-105, Field Observation and 514-130, Physical Rehabilitation Practice.

514-140 Health Care System 2 credits
Explores various service delivery systems and how each impacts the practice of occupational therapy. Medical, educational and social models of service delivery are examined with students studying each system from the perspectives of consumer, client advocate and OT provider. Emphasis is placed on learning to use resources to understand and access delivery systems. Concurrent enrollment in 514-105, Field Observation, is recommended.

514-145 Recreation Practice 3 credits
Introduces the theory of recreation for special populations across the life span — clients who are dealing with developmental disability, physical disability, mental illness or chemical dependency. It includes the importance of play and leisure to health, selection of activities appropriate to the client's developmental level, interests, abilities and lifestyle; and orientation to community recreation resources. Skills in leading and facilitating group or individual recreational activities are practiced. Prerequisites: 514-111, Therapeutic Skills I; 514-112, Therapeutic Skills 2; and 514-115, Developmental Principles; completion of first-and second-semester occupational therapy courses is recommended.

514-148 Minor Media 1 1 credit
Provides students with experience and skill development in a variety of craft media. Students are introduced to teaching methods and department maintenance duties.

514-149 Minor Media 2 1 credit
Provides students with experience and skill development in a variety of craft media. Teaching methods, activity analysis and activity adaptation are emphasized. Completion of 514-148, Minor Media I is recommended.

514-150 Media and Skills 4 credits
Refines skills in analyzing and selecting activities suitable to the needs and interests of clients. Students practice leading or teaching activities and adapting them to meet client needs, with emphasis on pediatric and mental health populations. Activities such as woodworking, leather work, ceramics, music, electric switch construction and computer and assistive technology are included. Prerequisites: Completion of first- and second-semester occupational therapy courses.

COURSES
514-160 Fieldwork 1 5 credits
514-165 Fieldwork 2 5 credits
Full-time fieldwork placements in approved training centers throughout Wisconsin and adjoining states. Fieldwork education emphasizes integration of academic and technical skills, client groups across the life span, psychosocial and physical performance deficits and interventions and service delivery models, reflective of current practice in the profession. The course stresses competencies necessary for entry-level OT assistant practice. Prerequisites: Completion of the academic curriculum (first-, second- and third-semester courses); demonstration of prerequisites professional skills.

514-170 Seminar on Practice and Management 2 credits
Provides review and feedback on academic and fieldwork experiences toward bridging the gap between training and on-job realities and exceptions to the rule. Unique fieldwork experiences are shared with classmates and fundamentals of job-hunting are covered. An introduction to department management and employee or volunteer supervision is emphasized, since graduates may head activities departments in nursing homes and community settings. Prerequisites: Completion of or concurrent enrollment in, fourth-semester fieldwork courses.

514-180 Special Problems 1-3 credits
Elective course. Allows the student an opportunity to further explore a specialized interest regarding occupational therapy practice. An individualized learning contract is developed with an OT faculty advisor.

515 Respiratory Care Practitioner
515-101 Respiratory Care Fundamentals 5 credits
Discusses the basic principles and techniques of routine respiratory care procedures. The laboratory portion provides the opportunity to use the equipment and apply theories of operation. A 32-hour introductory clinical rotation provides an observational experience in in-hospital practice of respiratory care. Prerequisites: 806-201, General Chemistry; 806-155, Health Technical Science; 515-105, Introduction to Respiratory Care; 806-206, General Anatomy and Physiology.

515-105 Introduction to Respiratory Care 2 credits
Designed to provide an introduction to the anatomy and physiology of the respiratory and cardiovascular systems. Programmed instruction in medical terminology is covered independently by the student.

515-115 Pulmonary Physiology 3 credits
Designed to give students the depth in understanding of physiology of respiration necessary for meaningful clinical experiences. The lecture portion includes all basic areas of respiratory physiology, while the laboratory portion of the course is primarily concerned with pulmonary function testing techniques. Prerequisites: 806-201, General Chemistry; 806-155, Health Technical Science; 515-105, Introduction to Respiratory Care; 806-206, General Anatomy and Physiology.

515-120 Respiratory Care Procedures 1 5 credits
The first half of a two-semester course designed to prepare students in mechanical ventilation, infection control, airway management and cardiorespiratory monitoring. Prerequisites: 515-101, Respiratory Care Fundamentals; 515-115, Pulmonary Physiology; and 806-273, Microbiology.

515-122 Respiratory Care Procedures 2 5 credits
A continuation of 515-120, Respiratory Care Procedures 1. Designed to prepare the student in three primary areas of respiratory care: pediatrics, pulmonary function testing and pulmonary rehabilitation/home respiratory care. Emphasis is placed on learning how to manipulate and manage a variety of intensive care and diagnostic equipment. This course involves a variety of computer applications. Prerequisites: 515-120, Respiratory Care Procedures 1; 515-125, Respiratory Care Clinical Practice 1; 515-130, Pathophysiology; 515-131, Pharmacology. Taken concurrently with 515-126, Respiratory Care Clinical Practice 2.

515-125 Respiratory Care Clinical Practice 1 5 credits
Supervised clinical experience in selected hospitals two days per week. The student is provided an opportunity to develop skills in routine therapy and the care of patients. A weekly, three-hour clinical discussion class is also included to review previously learned skills and develop understanding of chest x-ray and EKG interpretations. Prerequisites: 515-101, Respiratory Care Fundamentals; 515-115, Pulmonary Physiology; and 806-273, Microbiology.

515-126 Respiratory Care Clinical Practice 2 5 credits
Supervised clinical experience in selected hospitals two days per week. The student is provided an opportunity to develop respiratory care skills in caring for patients in intensive care units. A weekly three-hour clinical discussion class provides the student with a formal review of respiratory care practices in preparation for the self-assessment, mock-board exams given during this semester. Students also present patient case studies to their fellow classmates and instructors. This course also provides an introduction to the assessment of fluid and electrolyte balance and how this balance impacts on patient management. Prerequisites: 515-120, Respiratory Care Procedures 1; 515-125, Respiratory Care Clinical Practice 1; 515-130, Pathophysiology; and 515-131, Pharmacology.

515-127 Respiratory Care Clinical Practice 3 2 credits
Supervised clinical experience in selected hospitals five days per week for six weeks. The student is provided an opportunity to further develop routine, as well as advanced, respiratory care skills in the care of adult and pediatric patients. Prerequisites: 515-122, Respiratory Care Procedures 2; 515-126, Respiratory Care Clinical Practice 2.

515-130 Pathophysiology 2 credits
This course is team-taught by a respiratory therapist faculty member and a group of local pulmonologists and is designed to provide the student with an understanding of the diagnosis, pathophysiology, clinical manifestations, treatment and prognosis of a variety of pulmonary disorders or diseases. Prerequisite: 515-115, Pulmonary Physiology.

515-131 Pharmacology 2 credits
Designed to give respiratory care students the knowledge needed to safely administer pulmonary medications. It is also designed to give student knowledge of important non-respiratory drugs which are commonly given to respiratory care patients. Prerequisite: 515-115, Pulmonary Physiology.

516 Optometric Technician
516-301 Ophthalmic Pre-Testing 3 credits
Covers the history of optometry, relationships between optometry, ophthalmology and opticianry and various paraprofessional careers in vision care. The course involves the study of and practical experience in patient pre-testing such as case history, visual acuity, color vision, pupil evaluation and depth perception as well as the specialized testing procedures such as keratometry, tonometry and blood pressure.

516-305 Basic Optical Concepts 3 credits
Covers the properties of light and the function of a lens in vision correction. Includes a review of basic math needed in vision care and the physiological aspects of vision. This course begins the study of the neutralization and verification of spectacle lens powers, to include spherical, cylindrical and prism lenses.

516-315 Ocular Anatomy 2 credits
Familiarizes the optometric technician with the form and function of the human eye. The foundation of the lecture material is the anatomy of the eye, but we will discuss the physiology and function of the eye as much as possible. We will also discuss the actions and uses of diagnostic pharmaceutical agents, as their function is based on interference with normal ocular physiology. This course also covers optometric terminology as well as prescription transition.
516-325 Optical Dispensing 1  3 credits
Covers frame definition, parts and types of frames, measurement of frames and lenses, alignment of frames, inserting and removing lenses, introduction to dispensing of eyewear and frame repairs.

516-326 Optical Dispensing 2  2 credits
This course assists the student in developing a mastery of the alignment and adjustment of eyewear. It also covers the various lens materials, multifocal styles and lens tints. Prerequisite: 516-325, Optical Dispensing 1.

516-330 Contact Lenses  3 credits
Gives the student in-depth exposure to the technical aspects of clinical contact lens practice. Lecture and laboratory experiences emphasize lens verification, patient education and evaluation. Prerequisites: 516-305, Basic Optical Concepts; and 516-315, Ocular Anatomy.

516-335 Ophthalmic Specialty Testing  3 credits
Provides the student experience and knowledge in areas of special vision care procedures: subjective refraction, visual field testing, slit lamp, goldmann tonometry, basic concepts of orthoptics and the treatment of eye diseases including instillation of eye medications and eye patching. Patient instruction and assistance are emphasized in laboratory sessions. Prerequisite: 516-301, Ophthalmic Pre-Testing.

516-339 Human Relations  1 credit
Introduces students to their personal and vocational responsibilities as an optometric technician. The development of communication skills one needs as an optometric technician are introduced. The ethical and legal responsibilities of an optometric technician are defined. Time management techniques will be presented. Basic concepts of stress and how it affects behavior, and stress management are discussed. The course also covers writing a job application letter and resume as well as interview techniques.

516-340 Patient Relations and Practice Management  1 credit
Provides a study of front office management techniques including telephone and appointment book management, filing, recall systems, business letter writing, bookkeeping and insurance claim processing. Prerequisites: none.

516-345 Precliniical  2 credits
Prepares students for clinical affiliation by having them complete vision screening on patients from the college. Class discussions are held analyzing the results of the screening as well as the students' performance. Prerequisites: 516-301, Ophthalmic Pre-Testing; and enrollment in 516-335, Ophthalmic Specialty Testing.

516-350 Clinical Experience  3 credits
Students participate 40 hours per week for six weeks of assigned clinical experience in an optometric or clinic setting. The student is expected to achieve specific educational objectives determined for this experience. Prerequisite: Satisfactory completion of all first-semester courses plus enrollment in second-semester courses.

518 Food Service

518-301 Food Theory 2  2 credits
Teaches basic methods of food preparation, standards, principles and mise en place used in recipes for quantity production. Small-quantity lab production of eggs, vegetables, meat, cereal products, dairy products, fish, soups, sauces, salads, gelatin, desserts, fruits, beverages, batters and doughs is covered.

518-303 Soups  2 credits
Students gain experience in the production of quality soups in quantity. Given recipes students prepare cream and broth soups. Emphasizes techniques and methods used in soup preparation. Thick and thin soups are covered along with the proper herbs and spices used in soup cookery.

518-307 Orientation to Food Service  1 credit
Provides an orientation for students preparing for careers in food service. Covers safety and sanitation, history of food service, tools and equipment, cycle menu, pre-preparation, basic cooking principles, ethnic cuisines, job applications and expectations, culinary terms, introduction to food preparation lab facilities, setting up cafeteria service and practice for performance expectations.

518-310 Basic Food Production  4 credits
Provides an introduction to quantity food preparation, techniques, principles and equipment. Preparation of soups, salads and sandwiches are included as well as culinary terminology, utilization of quantity measuring devices and portion and quality control.

518-311 Entrees  3 credits
Students gain experience in the production of quality foods in quantity. Emphasizes techniques and methods used in preparing entrees. Students select entrees from daily menus which include meats, poultry and seafood. Methods include roasting, braising, broiling and grilling.

518-312 Short Order Cookery  1 credit
Introduces students to equipment and methods used in short-order cooking, i.e., deep for frying, grilling and sandwich making.

518-313 Food Theory I  1 credit
Involves the study of the physical properties, terminology and principles necessary for the preparation of eggs, milk, meat, poultry, fish, fruit, vegetables, soups, sauces, cereal products, batters and doughs, salad dressings, cheese, gelatin and beverages.

518-314 Baking Lab 1  2 credits
Covers fundamentals of production baking. Products made in the lab include basic yeast breads and rolls, sweet dough, cookies and bars, quick breads and muffins and pies. Students also learn basic cake decorating techniques. Ingredient cost-outs and formula comparisons are calculated.

518-315 Baking Lab 2  2 credits
Provides a study of the physical properties, terminology and principles necessary for the preparation of eggs, milk, meat, poultry, fish, fruit, vegetables, soups, sauces, cereal products, batters and doughs, salad dressings, cheese, gelatin and beverages.

518-318 Food Service Sanitation  1 credit
Provides understanding of basic facts of food sanitation and how to prevent food-borne illness. Covers sanitation and health, serving sanitary food, food purchasing and storage, sanitary facilities and equipment, pest control and the regulations and standards governing food establishments.

518-321 Institutional Foods Lab  3 credits
Provides an awareness of special dietary needs in relation to food service. Entrees, soups and side dishes are prepared by the students and analyzed for nutritional value and appropriate dietary guidelines.

518-325 Baking Lab 2  2 credits
Students gain practical experience in making a variety of scratch and convenience bakery products. Students will also develop skill in cake decorating techniques.

518-327 Catering  2 credits
Provides an understanding of catering concepts through demonstration and hands-on experience.

518-334 Bakery Production  1 credit
Fundamental baking techniques and principles are developed and applied to familiarize students with bakery production for a food service operation. Some cake decorating is also included.
518-340 Bakery Merchandising 1 credit
Gives general understanding of the daily operations of the front end of a bakery. Topics covered include developing effective sales promotions, creating appealing ads for print and radio, decorating the storefront using holiday themes, operation of NCR cash registers, effective selling techniques and developing methods for training sales staff.

518-352 Nutrition/Menu Planning 1 credit
Focuses on the principles of menu planning for various types of food service operations. Nutritional qualities and functions of food as they apply to various menus and diets are discussed.

518-360 Food Service Mathematics 1 credit
Objectives include becoming proficient in basic operations using whole numbers, common fractions and decimal fractions; understanding percent and solving problems involving it; solving verbal problems as a consumer and as one preparing for an occupation; understanding operational procedures of weight and measures, portion control, converting standard recipes, production formulas, food costs and menu pricing.

518-361 Field Experience 1 1 credit
The two field experiences provide an opportunity to apply and develop skills learned in the classroom. Working in an actual food service operation, students develop a positive work attitude and work ethic as a potential employee of the food service industry.

518-362 Field Experience 2 1 credit
The two field experiences provide an opportunity to apply and develop skills learned in the classroom. Working in an actual food service operation, students develop a positive work attitude and work ethic as a potential employee of the food service industry.

518-370 Interpersonal Skills 1 credit
Job-seeking and job-keeping skills are presented through mock interviews, role playing, group discussion, writing résumés, and practicing positive job attitudes. Personal goals and interests are defined by the student to help develop a positive self-concept.

518-382 Decorative Foods/Garde Manger 2 credits
Laboratory course providing practical experience in producing decorative foods for commercial use and introducing the fundamental techniques of the art of garde manger, buffet presentation, area planning, salad dressings, marinades, aspics, chaud froid, hors d'oeuvres, appetizers, pastes and cold food presentation for practical and culinary displays. The objective is to nurture the creativity of the individual student chef and provide a tangible reward of recognition among peers.

520 Human Service Associate

520-105 Introduction to Human Services 3 credits
Examines the scope, values and principles of the human service profession. Introduces the typical roles and duties of human service workers. Students assess their own motivations, attitudes and interests.

520-106 Orientation to Human Services Populations 3 credits
Introduces social problems that contribute to the dysfunction of individuals, groups, families, and communities. Addresses problems, needs, conditions and events that bring people to human service organizations. In addition to the regular classroom hours, 45 hours of volunteer work in a community human service agency are required.

520-116 Group Work Skills 3 credits
Covers skills needed to organize, facilitate and participate in groups. Through reading and experiential exercises, students learn about group process, stages of group development, leadership styles, their own behavior in a group and the types of groups used in human service work.

520-117 Interviewing 3 credits
Students learn principles and techniques needed to conduct informational and supportive interviews. Students practice interviewing skills during class.

520-120 Community Service Agencies 3 credits
Focuses on characteristics and functions of human service organizations and the roles of human service workers in those organizations. Covers organizational skills of assessment, planning, budgeting, grant writing, evaluation and consulting.

520-130 Social Change Skills 3 credits
Introduces principles and strategies of planned change and the role of human service workers as community organizers. Covers how consumers affected by a social problem can clearly define an issue, set a goal and organize to bring about social change.

520-135 Issues In Alcohol and Other Drug Abuse 3 credits
Provides students with a basic understanding of the use and abuse of alcohol and other drugs. Emphasizes historical and social perspectives on drug use, trends of use and legal and social responses to illicit drug use. Additionally, this course provides an accurate description of the effects of psychoactive drugs, identifies methods of substance abuse treatment and introduces the student to local treatment services.

520-136 Counseling Alcoholics and Other Drug Abusers 3 credits
Trains students in basic listening and responding skills, familiarizes students with the 12 core functions performed by AODA counselors (screening, intake, orientation, assessment, treatment planning, counseling, case management, crisis intervention, client education, referral, reports, record keeping and consultation) and provides a structured learning environment in which students can develop skills in these core functions.

520-139 Human Service Agency Experience 1 4 credits
Students develop skills as human services workers by working directly or indirectly with clients in community agencies 16 hours per week. An agency supervisor and a faculty member closely supervise students. The human services staff makes field placement assignments. Must be taken concurrently with 520-188, Human Service Experience Conference 1.

520-140 Human Service Agency Experience 2 5 credits
Students continue their on-the-job training in community agencies for 20 hours per week. At the end of the course, students have the skills of an entry-level human services worker. Prerequisites: 520-139, Human Service Agency Experience 1; 520-188, Human Service Experience Conference 1.

520-141 Introduction to Community Mental Health 3 credits
Introduces the major diagnostic categories of mental illness, with a focus on the psychosocial management of these mental illnesses. Examines the unique treatment needs of people who have a coexisting psychiatric-disorder and substance-abuse problem.

520-150 Alcohol and Other Drug Abuse-Special Populations 3 credits
Provides an understanding of the unique AODA concerns, problems and needs of particular special populations, including youth, women, older adults, people with disabilities, gays and lesbians, ethnic and other minority groups.

520-157 Human Service Counseling Skills 3 credits
Introduces basic concepts of psychodynamic theory, ego counseling, Rogerian counseling, transactional analysis, rational-emotive therapy and reality therapy. Covers how counseling theories identify and define problems, explain personality development and treat problem situations.

520-188 Human Services Experience Conference 1 3 credits
A small-group seminar designed as a companion/supportive course to the agency experience. Relates theory and principles of practice to agency field-study experience. Students learn to develop supportive relationships with clients and apply the values of confidentiality and client self-determination. They learn how their values and personal experiences affect their work with clients. Must be taken concurrently with 520-139, Human Service Agency Experience 1.

520-189 Human Services Experience Conference 2 3 credits
Students develop skills specific to their fieldwork placement and complete a major project for their fieldwork agency. Taken concurrently with
### Radiography

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<thead>
<tr>
<th>COURSE</th>
<th>HOURS</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td><strong>526-101 Introduction to Radiologic Technology</strong></td>
<td>5 credits</td>
<td>An introduction to the career field of radiologic technology, radiation protection, professional ethics, methods of patient care, medical-legal issues, prime exposure factors and technical factors of film quality. The operation of energized x-ray units is demonstrated. Students perform experiments to emphasize how KVP, MA, time- and source-image distance affect radiographic film quality. Students are also introduced to the clinical aspects of radiologic technology. They observe and assist radiologic technologists with various procedures. Prerequisite: Acceptance and enrollment in program.</td>
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<tr>
<td><strong>526-102 Radiographic Anatomy</strong></td>
<td>3 credits</td>
<td>Includes the interrelationship of anatomical parts with emphasis on three-dimensional location. The location of anatomical parts by the use of external landmarks is stressed. Skeletons, phantoms and animal dissections are used to illustrate these landmarks and structure location. Radiographs may also be used. Gross physiology and organ size, shape and location are discussed and demonstrated on anatomical models and/or radiographs. Cross-sectional structure locations are identified on images (ultrasound/computer tomograms) if available. Prerequisite: Acceptance and enrollment in program.</td>
</tr>
<tr>
<td><strong>526-103 Radiographic Physics</strong></td>
<td>2 credits</td>
<td>Defines, discusses and demonstrates the use of fundamental and derived units and reviews basic mathematics, mechanics, subdivision of matter, mass-energy equivalency, magnetism, electricity, electromagnetism, generators and motors, transformers, rectifiers and voltage-current controlling devices. Electromagnetic spectrum energies are discussed.</td>
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<tr>
<td><strong>526-111 Radiographic Procedures 1</strong></td>
<td>5 credits</td>
<td>Fundamentals of radiographic positioning and the terminology used to describe radiographic positioning are studied. Standard projections are discussed, demonstrated, practiced on fellow students (no exposures), performed on phantoms and then on patients with appropriate supervision present. Immediate procedure corrections and film critiques are done on each projection. Body areas covered are the chest, abdomen and extremities. Prerequisites: Completion or concurrent enrollment with 526-101, Introduction to Radiologic Technology; 806-218, Anatomy; and 509-180, Medical Terminology.</td>
</tr>
<tr>
<td><strong>526-112 Radiographic Procedures 2</strong></td>
<td>5 credits</td>
<td>Fundamentals of radiographic positioning and the terminology used to describe radiographic positioning are studied. Standard projections are discussed, demonstrated, practiced on fellow students (no exposures), performed on phantoms and then on patients with appropriate supervision. Immediate procedure corrections and film critiques are done on each projection. Body areas covered include urinary and gastro-intestinal tract, skull, spine and mammography. Prerequisites: 526-101, Introduction to Radiologic Technology; 526-102, Radiographic Anatomy; 526-111, Radiographic Procedures 1; and 509-180, Medical Terminology.</td>
</tr>
<tr>
<td><strong>526-121 Applied Clinical Radiography 1</strong></td>
<td>2 credits</td>
<td>Students perform standard radiographic examination of patients - chest, abdomen, urinary and gastro-intestinal tract, extremities, skull, mammography, and shoulder and pelvic girdle with appropriate supervision. Students assist technologist with the exams studied in Radiographic Procedures 3 plus special positions of examinations for above-standard tests. Timely film critiques, competency documentation forms and professional assessment instruments are used for evaluation. Major and minor affiliates are used. Prerequisites: 526-112, Radiographic Procedures 2; 526-131, Radiographic Techniques 1; and 526-141, Radiologic Science.</td>
</tr>
<tr>
<td><strong>526-122 Applied Clinical Radiography 2</strong></td>
<td>2 credits</td>
<td>Students perform all standard projections of chest, abdomen, urinary and gastro-intestinal tract, extremities, skull, mammography and shoulder and pelvic girdles with limited supervision as clinical competency indicates. Students may perform special examinations and specialized projections under qualified supervision. Students may be rotated to various shifts to ensure optimal clinical experiences as clinical competency indicates. Timely film critiques, competency documentation forms and professional assessment instruments are used for evaluation. Prerequisites: 526-121, Applied Clinical Radiography 1; 526-112, Radiographic Procedures 2; 526-141, Radiologic Science; and 526-132, Radiographic Techniques 2.</td>
</tr>
<tr>
<td><strong>526-123 Applied Clinical Radiography 3</strong></td>
<td>1 credit</td>
<td>A continuation of examination performances in all radiographic imaging areas with limited supervision as clinical competency indicates. Assignments to various shifts may be made to provide an increased examination base as needed to gain clinical competency. Timely film critiques, competency documentation forms and professional assessment instruments are used for evaluation. Prerequisite: 526-122. Applied Clinical Radiography 2.</td>
</tr>
<tr>
<td><strong>526-124 Applied Clinical Radiography 4</strong></td>
<td>1 credit</td>
<td>A continuation of examination performances in all radiographic imaging areas with limited supervision as clinical competency indicates. Assignments to various shifts may be made to provide an increased examination base to gain clinical competency as needed. Timely film critiques, competency documentation forms and professional assessment instruments are used for evaluation. Prerequisite: 526-123, Applied Clinical Radiography 3.</td>
</tr>
<tr>
<td><strong>526-131 Radiographic Techniques 1</strong></td>
<td>5 credits</td>
<td>A discussion of the characteristics of radiographic film, construction and design of radiographic dark rooms, and manual and automatic processing techniques, including the processing chemistry needed for each. Also described are radiographic principles with emphasis on radiation protection and radiographic film quality. Methods of reducing patient exposure to ionizing radiation through the selection of proper exposure factors and the use of accessory devices are demonstrated. Prerequisites: 526-101, Introduction to Radiologic Technology; 526-102, Anatomy; and 526-103, Radiographic Physics or concurrent enrollment.</td>
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<tr>
<td><strong>526-132 Radiographic Techniques 2</strong></td>
<td>3 credits</td>
<td>A continuation of Radiographic Techniques 1, this course concentrates on methods of special radiographic techniques for stereoradiography, scannography, tomography, pelvimetry methods and image intensification. Theories and principles are discussed, demonstrated and practiced. Prerequisites: 526-131, Radiographic Techniques 1; and 526-141, Radiologic Science.</td>
</tr>
<tr>
<td><strong>526-141 Radiologic Science</strong></td>
<td>3 credits</td>
<td>A discussion of x-ray properties; including production, interaction with matter, basic single- and three-phase x-ray circuits, construction of x-ray tubes, and methods of radiation, detection and measurement. Students perform lab experiments to demonstrate affect of KVP, MAS, distance and collimation upon patient exposure. Radiation dosimetry, biology, patient and personnel protection and health physics are studied. X-ray spectra, HVL, depth dose, structural shielding and radiation codes are discussed. Prerequisites: 526-103, Radiographic Physics; and 526-101, Introduction to Radiologic Technology; and 516-111, Radiographic Procedures 1, or concurrent enrollment.</td>
</tr>
<tr>
<td><strong>526-150 Special Procedures</strong></td>
<td>4 credits</td>
<td>Students are introduced to the specialized and higher technical procedures in radiography. CT scanners and digital subtraction angiography equipment are discussed, demonstrated and utilized as the technologist permits. The medical indications and anatomy demonstrated for each examination are surveyed in an integrated approach to include a study of some medical and surgical diseases. Students assist with CT imaging and interventional angiography studies under close supervision. Emphasis is</td>
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placed on the theory of quality assurance in an x-ray environment. After a detailed study of test theory, students actually perform a question-and-answer survey of a radiology department. These tests are performed under indirect supervision after training in the use of test tools and then the results are intensively reviewed with reports submitted to the department supervisor for corrective action, if needed. Prerequisite: Completion of 526-121, Applied Clinical I; 526-111 and 526-112, Radiographic Procedures 1 and 2; 526-103, Radiographic Physics; 526-141, Radiologic Science; and 804-171, Basic Computer Mathematics, or concurrent enrollment.

526-153 Introduction to Specialized Radiology 1 credit
Students are given the opportunity to rotate to the radiology sub-specialties of MRI, radiotherapy, nuclear medicine and ultrasound. MRI and radiation therapy equipment are discussed, demonstrated (if applicable), toured (if appropriate) and utilized as the technologist permits. This course includes assisting in nuclear medicine and ultrasound imaging at a basic level. This course services to develop interest in those areas in departments and clinics where a level of cross-training is acceptable. This training is not sufficient for certification in these imaging modalities. Prerequisite: 526-150, Special Procedures.

526-161 Practicum 1
A continuation of radiographic exam performance in all radiographic imaging areas with decreasing direct supervision by a qualified technologist as the student improves skills and clinical competency increases. Students perform standard radiographic examinations of patients of the following body areas: chest, abdomen, extremities, and shoulder and pelvic girdles. Students also perform any special views and positions of exams of the listed body areas. Film critiques are held in conjunction with the clinical assignments on an individual basis and as a group if necessary. Assignments to nontraditional shifts are made to increase and diversify patient exam experiences. This course is normally offered in the first fall semester. Prerequisite: Completion of, or concurrent enrollment in, 526-101, Introduction to Radiologic Technology; 526-122, Radiographic Anatomy; 526-111, Radiographic Procedures 1; and 509-180, Medical Terminology.

526-162 Practicum 2
A continuation of radiographic exam performance in all radiographic imaging areas with decreasing direct supervision by a qualified technologist as the student improves skills and clinical competency increases. Students perform standard radiographic examinations of patients of the following body areas: chest, abdomen, extremities, and shoulder and pelvic girdles, mammography and skin. Students also perform any special views and positions of exams of the listed body areas. Film critiques are held in conjunction with the clinical assignments on an individual basis and as a group if necessary. Assignments to nontraditional shifts are made to increase and diversify patient exam experiences. This course is normally offered in the first spring semester. Prerequisite: 526-161, Practicum 1.

530 Medical Coding

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>530-301</td>
<td>Pathophysiology/Pharmacology</td>
<td>2 credits</td>
<td>Gives the beginning student an insight into basic pathophysiology/pharmacology, including fundamentals needed for understanding and evaluating health practices related to each body system and the body as a whole. It presents a correlation of human disease etiology, treatment (diagnostic and pharmacological) with knowledge of human anatomy, and physiology and medical terminology. Students identify symptoms vs. definitive states of disease and identify treatment modalities and drugs indicated for specific disease conditions. Students develop skill in the use of the PDR/AHFS and laboratory reference manuals.</td>
</tr>
<tr>
<td>530-302</td>
<td>Medical Records</td>
<td>1 credit</td>
<td>Gives the beginning student an insight into basic aspects of medical record functions and guidelines as they relate to acute, ambulatory and long-term care facilities. Students will locate, analyze, abstract and index administrative and clinical data in medical records and describe licensing/accreditation requirements for medical records. Internal and external review processes involving the medical record and payment methodologies related to ICD-9-CM and CPT/HCPCS coding systems are emphasized.</td>
</tr>
<tr>
<td>530-303</td>
<td>ICD-9-CM Coding</td>
<td>3 credits</td>
<td>A 9-week course. Gives the beginning student an insight into the instructional notations, conventions and rules associated with the ICD-9-CM Coding System. The student will assign and sequence diagnostic and procedure codes utilizing medical documentation and reporting guidelines established by various governmental agencies. Inpatient and outpatient guidelines are covered. Expansion of knowledge regarding payment methodologies and knowledge of computerized coding software is emphasized.</td>
</tr>
<tr>
<td>530-304</td>
<td>CPT Coding</td>
<td>3 credits</td>
<td>A 9-week course. Focuses on the fundamentals of the CPT/HCPCS coding system utilizing medical information and is a continuation of concepts presented in ICD-9-CM Coding. Students utilize instructions relating to use of CPT/HCPCS along with medical documentation and reporting guidelines established by various governmental agencies to assign procedure codes. Expansion of knowledge regarding payment methodologies and knowledge of computerized coding software is emphasized. An 18-hour non-paid affiliation in acute care, ambulatory care, insurance companies or government agencies associated with health care reimbursement, medical research and health planning is required, involving application of ICD-9-CM and CPT/HCPCS knowledge.</td>
</tr>
<tr>
<td>530-305</td>
<td>Medical Terminology</td>
<td>2 credits</td>
<td>A basic introduction to the use of medical terminology. Emphasis is placed on recognition, division, definition, spelling and pronunciation of word parts. Medical terms are discussed in each unit as they pertain to anatomy, physiology and pathophysiology.</td>
</tr>
<tr>
<td>530-306</td>
<td>Body Structure and Function</td>
<td>2 credits</td>
<td>A concise introduction to human body structure and function. Normal and abnormal states of the body and basic disease processes affecting the body are emphasized. Common problems encountered in a variety of health care settings are presented.</td>
</tr>
</tbody>
</table>

531 Emergency Medical Services

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>531-105</td>
<td>Hazardous Materials Incidents</td>
<td>2 credits</td>
<td>Covers the minimum requirements for Fire/EMS personnel in responding to and dealing with a hazardous material incident as required at the OSHA Hazardous Materials Operational Level.</td>
</tr>
<tr>
<td>531-110</td>
<td>Paramedic Fundamentals</td>
<td>3 credits</td>
<td>A foundation course preparing students for clinical practice in hospital units. Students develop competencies in patient assessment techniques, venipuncture, IV insertion, administration of medication, airway maintenance techniques and record keeping. Also covers medical terminology, acid-base balance and infectious disease precautions.</td>
</tr>
<tr>
<td>531-112</td>
<td>Adult Emergencies 1</td>
<td>3 credits</td>
<td>Course topics include pathophysiology, patient assessment, differential diagnosis and pre-hospital treatment for common adult emergencies, including pulmonary, cardiovascular, gastrointestinal, neurological, endocrine, renal, environmental and psychological emergencies.</td>
</tr>
<tr>
<td>531-114</td>
<td>Adult Emergencies 2</td>
<td>3 credits</td>
<td>Continuation of Adult Emergencies 1.</td>
</tr>
<tr>
<td>531-116</td>
<td>Paramedic Pharmacology</td>
<td>2 credits</td>
<td>Enables students to safely administer the commonly used pre-hospital emergency medications.</td>
</tr>
<tr>
<td>531-118</td>
<td>ECG Interpretation for Paramedics</td>
<td>2 credits</td>
<td>Includes the etiology and ECG characteristics of all major dysrhythmias. Interpretation will focus on utilization of a Lead II rhythm strip.</td>
</tr>
</tbody>
</table>

COURSES
531-120 Pre-Hospital Obstetrical and Pediatric Emergencies 3 credits
Covers pathophysiology, patient assessment, differential diagnosis and pre-hospital treatment of common obstetrical and pediatric emergencies. Clinical experience in obstetric and pediatric units is required.

531-122 Advanced Paramedic Procedures 1 credit
Provides demonstration and supervised performance of cardiovascular, pericardiocentesis, thoracic decompression and intra-osseous infusion in a laboratory setting.

531-124 Advanced Cardiac Life Support for Paramedics 1 credit
Includes all the mandatory content areas and mandatory testing stations as outlined by the American Heart Association for an ACLS course. Students must achieve certification in ACLS according to American Heart Association Standards.

531-126 Psycho-Social Issues in Emergency Care 1 credit
Covers issues and problems facing paramedics in pre-hospital emergency care, including job stress, ethical issues, legal aspects and death. Students ride with a police officer during one shift.

531-128 Paramedic Clinical Experience 1 4 credits
Supervised clinical experience in selected units of the University Hospital. Students observe patient care and participate within the scope of paramedic practice.

531-130 Paramedic Clinical Experience 2 4 credits
Continuation of Paramedic Clinical Experience 1.

531-132 Field Internship 6 credits
Upon successful completion of didactic and clinical training, paramedic students participate in a field internship. Students apply knowledge and skills to pre-hospital patient situations, supervised by clinical instructors, on ambulance calls.

531-134 Rescue Techniques 2 credits
Reviews all aspects of extrication, including auto, agricultural, industrial, water and other areas in which the paramedic may be involved in gaining access and assessing/treating patients. Field settings with hands-on experience included in course.

531-140 EMS Management Principles 2 credits
Covers the history of the paramedic and reviews current operation of paramedic services. Management practices and skills are stressed, and opportunities to observe and learn from EMS managers are provided.

531-150 First Responder/Police Science 2 credits
Covers the immediate and temporary care given in case of accident, illness or emergency childbirth. This course qualifies students for the standard or advanced Red Cross first aid certificate. Meets LESB performance objective 5.1-5.18.

531-301 Emergency Medical Technician Basic 3 credits
Follows the U.S. Department of Transportation EMT Basic course curriculum. Hospital emergency room experience is required. Wisconsin Ambulance Attendant Licensure Exam is provided.

531-340 Emergency Medical Technician Basic-Fire 3 credits
Follows the U.S. Department of Transportation EMT Basic course curriculum. Hospital emergency room experience is required. Wisconsin Ambulance Attendant Licensure Exam is provided.

531-350 EMT Intermediate 3 credits
The student will learn advanced patient assessment, communication skills and beginning advanced life support interventions. This course meets requirements for certification with the National Registry of Emergency Medical Technicians and the educational requirements for licensure in the state of Wisconsin. Prerequisite: 531-301, Emergency Medical Technician Basic.

533 Sign Language

533-120 American Sign Language 1 3 credits
Enables students to sign naturally, interact comfortably and show awareness of and respect for the deaf community. Includes numerous exercises to develop both receptive and expressive skills in this subtle, elegant and powerful language. The rich and complex culture of the American deaf community will be explored.

533-121 American Sign Language 2 3 credits
Advanced level of American Sign Language. Students will learn complex grammatical structures from role-play situations which pertain to everyday deaf-hearing encounters. This will allow students to contextualize and give meaning to the situations presented. The indirect benefit of the situations demonstrated for students is the development of cultural awareness and cross-cultural adjustment skills. Activities will be varied to allow students to use different learning strategies to practice what they have learned. Prerequisite: 533-120, American Sign Language 1.

536 Pharmacy Technician

536-310 Pharmaceutical Calculations 2 credits
Reviews basic mathematics, including addition, subtraction, multiplication and division of whole numbers. The course covers mathematical systems used by health professionals, emphasizing the metric, apothecary, apothecary, avoirdupois, household measures and approximate equivalents. Students gain an understanding of drug calculations, including percentage determinations.

536-311 Pharmacy Communications 2 credits
Communication theory and practice are studied with special attention to pharmacy situations. Emphasis is placed on active listening, rapport with patients, patient concerns, sales techniques, business and group communication, and problem solving.

536-312 Pharmacy Operations 1 2 credits
A definition of the pharmacy technician role and responsibilities are presented, as well as a study of general operations of pharmacies at different settings. Emphasis is placed on computer usage, purchase requisitioning and order preparation, charges and billing, filling procedures, patient profile preparation, reference material, cash register operations, physician's orders, controlled substances, security and telephone procedures.

536-313 Pharmacy Operations 2 2 credits
Emphasizes over-the-counter drugs, glucose-monitoring devices, syringes, IV pumps and durable medical equipment, drug distribution systems and inpatient/outpatient pharmacy services. Prerequisite: 536-312, Pharmacy Operations 1.

536-315 Pharmacy Regulation and Inventory Control 2 credits
Deals with the history, development and current regulations and laws of handling different types of drugs. It covers purchasing, storing, dispensing and record keeping, as well as drug abuse.

536-322 Introduction to Drug Classification and Pharmacology 2 credits
Presents pharmaceutical terminology, including generic and brand names of drugs by pharmacologic classification. A survey of actions, reactions and administration routes of major pharmacologic groups is presented.

536-324 Pharmacy Unit Dose 2 credits
A laboratory study of the unit dose (individually packaged medications) drug distribution system. Emphasis is placed on setting unit doses while concentrating on accuracy and speed. Students gain an understanding of the physician's order sheets, patient medication profiles, delivery and/or exchange of medications and filling of unit doses.

536-326 Pharmacy Sterile Products 3 credits
A laboratory study of the aseptic compounding techniques for parenteral administration. Emphasis is placed on the equipment and aseptic tech-
COURSES

602 Automotive Technology

602-102 Service Repair Procedures 4 credits
Covers automotive engine theory, design and operation. Includes diagnosis and repair procedures of the engine cooling, lubricating and exhaust systems. Covers batteries, starting and charging systems along with the proper use of meters and the latest test equipment. Emphasizes shop safety and proper use of hand tools. Prerequisite: Concurrent enrollment in 804-141, Industrial Mathematics 1.

602-150 Internal Combustion Engines 4 credits
Uses discussion, demonstration and laboratory experiments to study internal combustion automotive engines. The latest machining equipment is used to accurately diagnose, disassemble, repair and reassemble an automobile engine. Diagnosis of engine-related mechanical problems is covered. Prerequisite: 602-102, Service Repair Procedures.

602-152 Computerized Engine Controls 4 credits
Focuses on automobile electronics. All phases of computer-controlled systems are studied, including instrumentation, engine, transmissions and chassis systems. Computer language as well as digital and analog sensor input are covered in detail. Demonstrations and experiments using the latest manufacturers' test equipment enables students to diagnose and repair automobile problems involving on-board computers. Prerequisite: 602-166, Driveability and Fuel Systems.

602-153 Power Transmission Systems 3 credits
Course topics include operation and theory of clutches, transaxes, standard transmissions, drivelines and differentials. Covers diagnosis, repair, testing and periodic maintenance as recommended by major manufacturers. Utilizes classroom and shop time to develop skills in diagnosis and repair of clutches, drivelines and differentials. Prerequisite: 806-151, Technical Science 1.

602-154 Fluid Power Transmission 3 credits
Covers operation and theory of hydraulically and electronically controlled automatic transmissions. Emphasizes diagnosis, repair, testing and periodic maintenance as recommended by major manufacturers. Utilizes classroom and shop time to develop skills in diagnosis and repair of automatic transmissions. Prerequisite: 804-142, Industrial Mathematics 2.

602-156 Comfort Control Systems 2 credits
Covers basic principles of refrigeration and air conditioning, including the component parts that make up the A/C units on passenger cars and light trucks. Covers heating and automatic temperature control. Prerequisite: Concurrent enrollment in 804-141, Industrial Mathematics 1.

602-157 Technical Brake/Steering Systems 3 credits
Topics include principles of drum and disc brake designs, inspection and diagnosis. Covers all designs of steering systems. Lab experiences include inspecting, troubleshooting and the repair and replacement of defective or worn parts of the complete brake and steering system. The use of correct procedures and tools is stressed. Prerequisite: 804-141, Industrial Mathematics 1; or concurrent enrollment.

602-158 Service Management 3 credits
Principles of various types of business organizations are examined and applied to automotive wholesale and retail businesses, ultimately focusing on the automobile as part of the service department. Service department operation is covered in detail and depth from large organizations to small organizations. The conventional line method of management is stressed. Employment possibilities and job-interviewing techniques are discussed. Prerequisite: 602-153, Power Transmission Systems.

602-162 Accessories 2 credits
Examines equipment supplied by both major manufacturers of automobiles and after-market suppliers. Classroom and lab activities help students understand basic electricity, electric circuits and use of test equipment to troubleshoot problems in circuits such as lighting, windshield wipers, power windows, instruments and cruise control.

602-163 Vehicle Suspension and Alignment 3 credits
Principles of suspension design, wheel alignment angles, headlight alignment, inspection procedures, parts replacement, steering gears, shock absorbers and sway bars, frame designs, tire design and operation and wheel balancing. On-the-job experiences include inspecting and correcting suspension angles, parts replacement, adjusting steering gears, aligning headlights and balancing wheels. Covers four-wheel alignment. Prerequisite: 804-141, Industrial Mathematics 1; or concurrent enrollment.

605 Electronics Technology

605-109 Electronics for Power Welding Sources 3 credits
Basic principles of AC and DC circuits are used to study the operation of electric arc welding equipment. Emphasizes troubleshooting commercial arc welding equipment. Students participate in classroom and laboratory exercises in the study of basic concepts and laws of alternating and direct current circuits. Includes the study of Ohm's law, half, full wave and bridge rectifier currents. The effects of high and low frequencies are studied in relation to welding practices.

605-112 DC Fundamentals 3 credits
Basic DC concepts and theories: Ohm's law, Kirchoff's voltage and current laws, Thevenin, Norton and maximum transfer of power theorem. Proper techniques with digital multimeters for the measurement of current, voltage and resistance are emphasized. RC time constant circuits and DC voltage measurements introduce the use of the oscilloscope and the square wave generator. Troubleshooting techniques are introduced when series, parallel and series-parallel circuits are discussed. Co-requisite: Concurrent enrollment in 605-171, Applied Electronics Mathematics 1.

605-113 Analog Solid State Devices 1 3 credits
Introduction to electronic devices, circuits and applications. Uses DC characteristics, parameters and operation of electronics devices - P-N diode, zener diode, optoelectronic devices (LED, photodiode, optocoupler), junction field-effect transistor and bipolar transistor - to learn the DC-biasing of the devices. The DC operation of the differential amplifier is introduced to teach the DC-biasing of OP-AMPS. Lab procedures
introduce practical use of these solid state devices, emphasizing troubleshooting procedures. Prerequisite: 605-112, DC Fundamentals.

605-114 AC Fundamentals 3 credits
Practical theories and concepts essential to the understanding of alternating voltage and current; amplitude, period and frequency of a sinusoidal waveform; phase relationships; inductive and capacitive reactance and impedance; combinational resistive, inductive and capacitive circuits; superposition of AC and DC voltages; series and parallel resonance; filters; and frequency response of circuits. Develops proficiency in the use of lab equipment with AC circuits including frequent use of the oscilloscope. Prerequisites: 605-112, DC Fundamentals; 605-171, Applied Electronic Mathematics 1; and concurrent enrollment in 605-172, Applied Electronic Mathematics 2.

605-115 Analog Solid State Devices-AC Analysis 3 credits
A review of small-signal amplifiers and a study of the basics of various types of transistors, multi-stage amplifiers, power amplifiers, differential amplifiers, integrated circuits and feedback circuits, oscillators and regulated power supplies. Prerequisites: 605-114, AC Fundamentals; 605-115, Analog Solid State Devices-AC Analysis. 605-119, Digital Circuits Fundamentals 2 or concurrent enrollment is recommended.

605-116 Advanced Analog Solid State Circuits 4 credits
A study of half-wave rectification, full-wave rectification, clipping, clamping, zener, varactor, LED, photodiode and simple operational amplifier circuits. Also includes bipolar, field effect and uni-junction transistors and thyristors, common bipolar, field effect, multistage, class A-B-C amplifiers and oscillators. Covers different amplifier and operational amplifier basics such as feedback, input/output impedances, bias current and offset voltage compensation. Prerequisites: working knowledge of basic electronics, instructor's consent.

605-141 Applied Linear Circuits 3 credits
Diode, transistor, SCR, amplifier, oscillator and basic operational amplifier circuits are investigated and working circuit applications are made. Includes half- and full-wave rectifier, filter, clipping, clamping, zener, varactor, LED, photodiode and simple operational amplifier circuits. Also includes bipolar, field effect and uni-junction transistors and thyristors, common bipolar, field effect, multistage, class A-B-C amplifiers and oscillators. Covers different amplifier and operational amplifier basics such as feedback, input/output impedances, bias current and offset voltage compensation. Prerequisites: working knowledge of basic electronics, instructor's consent.

605-143 Industrial Control Systems 3 credits
Covers industrial controllers and applied systems. Specific content is on programmable controllers, motor speed, control systems, feedback systems, servo-mechanisms, industrial robotics, closed loop industrial systems and on-line microcomputer control. Prerequisites: 605-116, Advanced Analog Solid State Circuits; 605-130, Measurement and Industrial Devices Applications; 605-173, Electronic Computers and Assembly Language; and 605-176, Introduction to Digital Systems.

605-150 Electronic Data Transmission 3 credits
Study of selected circuits and systems basic to the electronic telecommunications industry. The systems investigated are the electronic transmission, receiving, encoding, decoding, storing and retrieving of information. Covers oscillators, filters, AM modulation, FM modulation, PLL, time and frequency division multiplexing, pulse width modulation, SSB and heterodyning. Prerequisites: 605-116, Advanced Analog Solid State Circuits; and 605-176, Introduction to Digital Systems.

605-151 Troubleshooting and Maintenance of Power Supplies and Computer Monitors 3 credits
Hands-on experience using schematic diagrams and test equipment to locate problems in malfunctioning equipment. Covers basic circuit theory with lab verification. This is designed to achieve the proper mix of theory, lab work and test instrument use. A variety of modern electronic equipment in varying states of improper operation will be examined and repaired. Extensive experience is gained in using and interpreting component specifications from spec sheets, data books and catalogs. Linear power supplies, switch mode power supplies and computer monitors are the major types of systems studied. Prerequisites: 605-116, Advanced Analog Solid State Circuits; and concurrent enrollment in 605-152, Microprocessors and Digital Systems or consent of instructor.

605-152 Microprocessors and Digital Systems 3 credits
A study of microprocessors and digital control systems. Includes microprocessors, interrupts, DMA, parallel and serial I/O, peripherals and software applications. Laboratory exercises and a hardware/software project provide practical experience with digital systems. Prerequisites: 605-116, Electronic Computers and Assembly Language; and 605-176, Introduction to Digital Systems.

605-153 Troubleshooting and Maintenance of Video 3 credits
Students learn basics of VCR maintenance troubleshooting, repair and care for recording and playback systems. The first major area emphasized includes cleaning, lubricating, repairing dirty switch contacts, reconnecting broken wires, cleaning and/or replacing video heads, replacing old and/or worn rubber belts and rollers and removing jammed tapes. The second major area of concentration is an in-depth analysis of the common circuits found in VCRs. This is accomplished by lecture, demonstration, signal tracing, signal injection and the analysis of normal and abnormal signals in VCRs. These techniques are used to help students learn how to locate and repair common VCR electronic faults. Prerequisites: 605-116, Advanced Analog Solid State Circuits; and concurrent enrollment in 605-152, Microprocessors and Digital Systems or consent of instructor.
605-171 Applied Electronics Mathematics 1 3 credits
First of a two-part applied electronics mathematics sequence focused on math concepts most needed by technicians on the job. Closely tied to the other first-semester electronics courses, emphasizes math as a powerful tool. The order of topics is dictated by the math skills necessary to successfully complete the concurrent courses. Laboratory sessions complete with circuits, instruments and computers help the student appreciate the connections between math and electronic circuits. Prerequisite: Satisfactory score on the math portion of the ASSET test.

605-172 Applied Electronics Mathematics 2 3 credits
Continues to develop the mathematics skills needed by technicians to be successful in their field. Closely tied to the other second-semester electronics courses. Laboratory sessions continue to integrate math with electronic applications. Prerequisite: Satisfactory completion of 605-171, Applied Electronics Mathematics 1 or equivalent competency level.

605-173 Electronic Computers and Assembly Language 3 credits
Introduces fundamentals of electronic computer systems. Covers the basic structure and function of computer hardware from a system-level perspective. Introduces advanced DOS usage. The ability to use assembly language to write machine language programs is developed. Prerequisites: Prior knowledge of DOS fundamentals and word processing fundamentals; and 605-118, Digital Circuit Fundamentals 1.

605-176 Introduction to Digital Systems 3 credits
Introduces the electronic aspects of digital systems. Includes review of basic digital components, logic families, printed circuit fabrication, memory components and digital-to-analog and analog-to-digital conversion. Laboratory exercises and a project provide practical experience. Prerequisites: 605-114, AC Fundamentals; 605-115, Analog Solid State Devices 2; and 605-119, Digital Circuit Fundamentals 2.

605-190 Special Problems – Electronics 2-4 credits
Students select a project or projects following previous or current courses of study which strengthen areas of electronic interest/and or needs. Projects must keep with time allotted. Projects must be in concert with and under the supervision of an instructor for credit. Prerequisite: instructor consent.

606 Mechanical Design Technology
606-100 Introduction to Mechanical Graphics 3 credits
Introduces the basic theory of engineering drawings, their content and the instruments and skills necessary to make acceptable drawings. Includes geometric constructions, lettering, and the theory and practice of orthographic projection.

606-102 Intermediate Mechanical Graphics 3 credits
Further opportunity to apply basic skills and theory of engineering graphics. Includes section views, auxiliary views and dimensioning practices. Prerequisite: 606-100, Introduction to Mechanical Graphics, or consent of the instructor.

606-104 Advanced Mechanical Graphics 3 credits
Includes threads and fasteners, springs, gears and cams and standard dimensioning practices. Introduces the basic use of geometric dimensioning and tolerancing. Extensive use is made of standard tables and charts, and handbooks for information regarding standard materials. Introduces tolerances, limits and fits as a design tool. Prerequisite: 606-102, Intermediate Mechanical Graphics; and 606-120, Introduction to CAD.

606-106 Applied Mechanical Graphics 3 credits
Final course in the study of drafting, the purpose is to apply the theory aspects of the first three courses. Emphasizes preparation of a complete detailed working drawing. Provides opportunity to develop additional skills in the use of CAD for two-dimensional and three-dimensional drawings. Prerequisite: 606-104, Advanced Mechanical Graphics.

606-110 Descriptive Geometry 3 credits
Studies fundamental theory of orthographic projection using the concept of points, lines and planes. Applies theoretical aspects to practical problems involving such things as bearing, slope, true length, strike, dip and intersections. Problems are limited to flat and curved surfaces; no warped surfaces or compound curvatures are studied. All problems are solved graphically. Prerequisite: 606-102, Intermediate Mechanical Graphics.

606-112 Tool Design 2 credits
Acquaints students with the language and methods used in designing jigs and fixtures. Through problems and actual designing of jigs and fixtures, students have the opportunity to complete actual tool design drawings. Skills in drafting can also be developed. Prerequisites: 606-104, Advanced Mechanical Graphics; and 606-155, Statics and Mechanics.

606-116 Machine Design 3 credits
Applies basic principles of mechanics and strength of materials to design of machine parts. Includes bolts, screws, shafts, clutches, belts, chains, gears and bearings. Prerequisite: 606-170, Strength of Materials.

606-120 Introduction to Computer-Aided Drafting (MDT) 2 credits
Introduces the basic capabilities of two-dimensional software used in the computer-aided drafting environment as it applies to mechanical design. Emphasis is on basic commands and input required to make CAD drawings. Studies the capabilities of the CAD system, not necessarily becoming a proficient operator of the system (this could come with direct usage of the equipment and hands-on lab time). Prerequisite: 606-100, Introduction to Mechanical Graphics; or consent of instructor.

606-132 Advanced CAD-MDT 2 credits
Continues investigation of the capabilities of CAD as it applies to mechanical design. Major emphasis is on the use of three-dimensional CAD and the advanced use of two-dimensional CAD as it applies to mechanical design. Prerequisite: 606-120, Introduction to Computer-Aided Drafting-MDT.

606-155 Statics and Mechanics 3 credits
Introduction to the field of mechanics limited to static forces. The solution of problems is limited to the mathematical approach, although graphic solutions are occasionally used as "checks." Includes resultant and equilibrium of forces, moments, nonconcurrent-co planar forces (couples) and concurrent-co planar forces. Prerequisites: 804-151, Technical Mathematics; and concurrent enrollment in 804-152, Technical Mathematics 2.

606-160 Manufacturing Processes 3 credits
A knowledge of present manufacturing processes is of extreme importance to technicians in industry. Instruction covers the technical fundamentals of important manufacturing processes, engineering materials and the modern machine tools necessary for processing these materials. Identifies manufacturing processes and the materials as to design, specifications, facility and economics through visitation of various manufacturing concerns, classroom exercises and assigned reading.
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<tr>
<td><strong>606-170 Strength of Materials</strong></td>
</tr>
<tr>
<td>Analysis of fundamental concepts of mechanics as they apply to beams, rivets, welded joints, shafts and various fasteners. Covers simple stress, mechanical properties of materials, center of gravity, moments of inertia, shear force and bending moment diagrams and torsion. Prerequisite: 606-133, Statics and Mechanics.</td>
</tr>
<tr>
<td><strong>606-182 Manufacturing Costs/Product Analysis</strong></td>
</tr>
<tr>
<td>This basic course presents information concerning the phases of production cost estimating and product analysis. Covers product development considerations, cost-estimating functions, organization, cost-estimating controls and estimating procedures. Emphasizes: Break-Even Analysis, Motion and Time Study, Statistical Process Control (SPC) and Material Requirements Planning (MRP). Prerequisites: 606-160, Manufacturing Processes; and 621-126, Manufacturing Materials Processing.</td>
</tr>
<tr>
<td><strong>606-186 Product Development</strong></td>
</tr>
<tr>
<td>Opportunity for advanced study on an individual basis. Students select a problem, collect data through research procedures, tabulate the data, draw conclusions and make recommendations. The material is presented in the form of a bound technical report and is used at the time of job interviews. Prerequisite: Fourth-semester standing.</td>
</tr>
<tr>
<td><strong>606-193 Job Orientation</strong></td>
</tr>
<tr>
<td>Acquaints students with some of the steps in the process of securing gainful employment in their technical specialty with emphasis on the student's responsibilities. Some sources include the MATC Placement Office, professional agencies, trade journals, newspapers and friends. Resource people are invited to discuss various aspects of the process. Students prepare a resume, a letter of introduction and a thank-you letter. Prerequisite: Fourth-semester standing.</td>
</tr>
<tr>
<td><strong>607 Civil Engineering Technology</strong></td>
</tr>
<tr>
<td><strong>607-133 Civil Engineering Estimating</strong></td>
</tr>
<tr>
<td>Stresses estimating for general civil engineering work. Covers the preparation of detailed estimates as prepared for contractors for bidding purposes, the general estimate as prepared by engineers and approximate estimates. Areas covered: highways, water and sewer lines, bridges, culverts, streets, and general construction grading. Prerequisite: Fourth-semester standing.</td>
</tr>
<tr>
<td><strong>607-140 Strength of Materials</strong></td>
</tr>
<tr>
<td>Covers basic principles of the strength of engineering materials. Includes simple stress, properties of materials, welded and riveted joints, combined stresses, columns and reinforced concrete. Prerequisite: 607-178, Mechanics.</td>
</tr>
<tr>
<td><strong>607-147 Basic Civil Drafting</strong></td>
</tr>
<tr>
<td>Introduces basic skills of drafting, such as line work, lettering and the use of basic drafting tools. Problems are related to those that would occur in the work of a civil engineering technician. Covers orthographic projection, bearing, true length, inclination, contours, cross section, etc.</td>
</tr>
<tr>
<td><strong>607-154 Surveying I (Architecture)</strong></td>
</tr>
<tr>
<td>Fundamentals of surveying as they apply to architecture. Includes the use of surveying equipment and instruments. Covers boundary, topographic and construction surveying. Prerequisite: 804-151, Technical Mathematics 1; or concurrent enrollment.</td>
</tr>
<tr>
<td><strong>607-155 Introduction to Surveying</strong></td>
</tr>
<tr>
<td>Introduction to the fundamental principles of surveying. The methods of measuring distances are discussed along with the corrections which should be applied. Includes instruction and practice in the use of the transit and level for making field measurements of angles and elevations. Azimuths, bearings and angles are studied and the principles of traverse computations are presented. Calculations for coordinates and areas are also included. Prerequisite: 804-151, Technical Mathematics 1; or concurrent enrollment.</td>
</tr>
<tr>
<td><strong>607-156 Route Surveying</strong></td>
</tr>
<tr>
<td>Covers principles of route surveying for public works systems. Includes reconnaissance and preliminary surveys as well as stakeout surveys with computation and fieldwork. Also includes calculations for layout of vertical and horizontal curves and the drafting of highway plans, profiles and cross sections. Prerequisite: 804-151, Technical Mathematics 1.</td>
</tr>
<tr>
<td><strong>607-158 Advanced Surveying</strong></td>
</tr>
<tr>
<td>Covers principles of advanced surveying. Includes triangulation, state plane coordinates, astronomical observations, topographic mapping and use of the total station and electronic distance measuring (EDM) system. Prerequisite: 607-156, Route Surveying.</td>
</tr>
<tr>
<td><strong>607-158 Legal Elements of Land Surveying</strong></td>
</tr>
<tr>
<td>Covers legal principles of how surveyors locate land boundaries from the written words of a deed. These principles are drawn up from the many precedents set by the courts.</td>
</tr>
<tr>
<td><strong>607-171 Structural Detailing</strong></td>
</tr>
<tr>
<td>Presents principles involved in producing detailed drawings of structures. Includes concrete, steel and prestressed concrete members. Prerequisite: 614-125, Introduction to CAD 2D.</td>
</tr>
<tr>
<td><strong>607-175 Boundary Location</strong></td>
</tr>
<tr>
<td>Covers principles and practices of boundary control. Laws and customs relating to boundary-writing property descriptions and field practice in locating property are covered.</td>
</tr>
<tr>
<td><strong>607-176 Water Supply and Sewerage</strong></td>
</tr>
<tr>
<td>Gives an understanding of the principles involved in the design of water supply and sewerage systems. Covers basic concepts of hydraulics and hydrology, water resources and distribution systems, and sewage treatment and collection systems. Prerequisite: Third-semester standing.</td>
</tr>
<tr>
<td><strong>607-177 Legal Elements of Engineering Technology</strong></td>
</tr>
<tr>
<td>Covers legal principles involved in a civil technician's work. Includes contract law, construction contracts, specifications and ethics.</td>
</tr>
<tr>
<td><strong>607-178 Mechanics</strong></td>
</tr>
<tr>
<td>Principles of engineering mechanics including parallel forces, concurrent forces, non-concurrent forces, non-co-planer forces, friction center of gravity and centroids. Prerequisite: 804-152, Technical Mathematics 2.</td>
</tr>
<tr>
<td><strong>607-181 Field Inspection and Materials Testing</strong></td>
</tr>
<tr>
<td>Fundamentals of the inspection of construction projects. Major divisions include inspection of earth work, pavements, pipelines, and steel and concrete structures in order to determine compliance with the project drawings and specifications. The materials testing phase of the course includes field testing of soils to determine their engineering properties and lab testing of soils, concrete, aggregates and metals. Prerequisites: 804-151, Technical Mathematics 1; 801-131, Communication Skills 1.</td>
</tr>
<tr>
<td><strong>607-190 Special Problems – Civil</strong></td>
</tr>
<tr>
<td>Provides opportunities for advanced study, both group and individual, in the processes and recording of project development from inception to completion. Students select a topic (problem) and through research procedures collect data, tabulate the data, draw conclusions and make recommendations. Prerequisite: Fourth-semester standing.</td>
</tr>
<tr>
<td><strong>607-193 Job Orientation</strong></td>
</tr>
<tr>
<td>Helps graduating students assemble materials and information that will ease the tension of interviews and enable graduates to make a positive impression on interviewers. To accomplish this, students review their academic records, assemble a portfolio, prepare a resume, write a cover letter and make other preparations for the interview. Also discusses some of the responsibilities and challenges that accompany a full-time job as an engineering technician. These include work attitude, absences, hourly vs. salaried positions and personal financial management. Prerequisite: Fourth-semester standing.</td>
</tr>
</tbody>
</table>
613 Metallurgy

613-100 Principles of Metallurgy 3 credits
Covers the location of ore deposits, conditions found in the earth, derivation of metals from their ores, refinement and purification, admixture and alloying, and the manufacture into various shapes and forms for industry. Includes classification of ferrous and nonferrous metals, testing of metals for mechanical properties and common metal problems such as fatigue and corrosion.

614 Architectural Technician

614-111 Architectural Theory and Drafting 1 3 credits
Emphasizes architectural drawing and the theory of drafting along with good lettering and line quality. Lettering, use of drafting tools, line work, orthographic projection, axonometric drawings, land measurement, vector analysis, geometric shapes, perspective drawings, shading and reflections are covered in the first semester. Prerequisite: Concurrent enrollment in 804-151, Technical Mathematics 1.

614-112 Architectural Theory and Drafting 2 3 credits
Working from codes and specifications, students develop a complete set of working drawings for a small commercial building or residence. Topics: excavation and backfill, foundations, floor plans, windows and doors, structural components, exterior characteristics, electrical wiring, stairways and fireplaces, joint framing and rafter framing, interior buildings, and plans, heat loss and heating, plumbing systems and pictorial projections. Prerequisite: 614-111, Architectural Theory and Drafting 1.

614-113 Introduction to CAD-Architectural 2 credits
An introduction to equipment, DOS and terminology used with computers in CAD applications is covered. Major emphasis is placed on learning the basic commands necessary to complete two-dimensional construction drawings. Approximately 60 percent of the course is spent on lecture/demonstrations and 40 percent is spent in a lab environment. The current version of AutoCAD is used. Prerequisite: 614-111, Architectural Theory and Drafting 1.

614-114 Applications of CAD-Architectural 2 credits
This course is designed to stress sound layout, dimensioning and sound architectural drawing fundamentals using CAD as a tool. The course is designed around a project approach to the solution of an architectural problem presented to the student by the instructor. Effective management, research of architectural information, filing and sound drawing fundamentals are stressed when solving the problem. Prerequisite: 614-113, Introduction to CAD-Architectural.

614-115 Introduction to Architectural Third Party Applications 2 credits
This course introduces the student to the basic concepts of the ASG (architectural) add-on package and how it is used to supplement AutoCAD in architectural applications. Discussing will also include other manufacturer's software designed to work within AutoCAD. Various architectural assignments are made to reinforce commands and present new challenges. Prerequisite: 614-114, Applications of CAD-Architectural.

614-118 Architectural Rendering 2 credits
Application of perspective principles to architectural presentations. Emphasizes pencil techniques, wash and temper colors. Prerequisite: 614-111, Architectural Theory and Drafting 1.

614-121 Construction Materials 3 credits
Emphasizes materials used in building construction and their manufacture and application in various construction systems from wood frame to masonry, steel and precast concrete. Basic properties of materials are discussed as well as how, when and where to use them. Prerequisite: Concurrent enrollment in 804-151, Technical Mathematics 1.

614-123 Electrical and Mechanical 4 credits
Covers wiring principles for electrical installation as applied to architectural design, as well as state, city and local utility codes. Studies design and installation of complete air-conditioning systems including heating, cooling, humidification and air cleaning. Private and public water and sewage systems are discussed and designed. Researches new trends in mechanical systems. Covers construction sequence pre-built home design and construction trade duties. Prerequisite: 614-112, Architectural Theory and Drafting 2.

614-124 Industrial Computer Applications 1 credit
Engineering technicians entering the work force are expected to be able to use microcomputers for basic engineering applications. To promote such facility and to provide students with a tool that will be useful throughout the program, this course provides training in the PC disk operating system (DOS), spreadsheet use and word processing.

614-125 Introduction to CAD-Two Dimensional 2 credits
Makes students aware of the basic capabilities of two-dimensional software used in the computer-aided drafting environment. Covers basic commands and input required to generate CAD drawings. Emphasis is on exploring and learning the capabilities of the CAD system and not necessarily becoming a proficient operator (this could come with direct usage of the equipment and hands-on lab time). A significant portion of the course will be used applying the CAD in a civil engineering application. Prerequisite: One semester of drafting, equivalent work experience or consent of instructor.

614-132 Building Estimating 2 credits
Studies problems and responsibilities of the estimator, including plans, specifications and published construction cost data. Emphasis is on understanding estimating techniques and methods of preparing estimates and take-offs. Prerequisite: 804-151, Technical Mathematics 1.

614-135 Building Codes 2 credits
Forms of contracts including specifications are discussed and a study is made of them for such construction materials as lumber, brick, steel and glass. Primary emphasis is given to the study of local zoning regulations, building codes, the State Uniform Dwelling Code and other code documents. Prerequisite: 614-111, Architectural Theory and Drafting 1.

614-145 Concrete and Steel Detailing 5 credits
Basic concepts of design as applied to concrete beams, slabs, columns and foundations. Emphasizes the understanding of functional design. Covers practices related to the placement of reinforcing rods and to concrete mixtures, as indicated in specifications or plans. Orthographic projection, isometric projection and perspective views as related to structural steel shop drawings are presented. Students make detailed drawings of structural steel assemblies and sub-assemblies. Prerequisites: 614-111, Architectural Theory and Drafting 1, and 804-151, Technical Mathematics 1; or concurrent enrollment in 607-140, Strength of Materials.

614-148 Evaluation of Structural Design 3 credits
Covers structural sections, terms and conventional abbreviations and symbols used by the structural fabricators and erectors. Students make detailed drawings of beams and columns. Introduces use of the A.I.S.C. Handbook for making calculations for various members and bolted connection details.

614-190 Special Problems 2 credits
Students work on a building design research project. Project parameters require complete on-site energy dependence without sacrificing modern convenience, a maximum of 25,000 BTU loss and a location north of Madison. Students are exposed to alternative sources of energy-efficient building design. Prerequisite: Fourth-semester standing.

614-193 Job Orientation 1 credit
Occupational information prepares students to seek employment. Includes personal data sheets, job interviews and letters of introduction and recommendation. Former graduates are invited to discuss needs of students before employment. Representatives of labor, management, business and the professions are invited to discuss points of interest toward becoming an employee. Prerequisite: Fourth-semester standing.

COURSES
621 Industrial Welding Technology

621-104 Computer-Aided Manufacturing Systems 4 credits
Computer-aided welding principles including material handling, positioning, jigs and fixtures. Covers programming welding and cutting equipment to produce sound weldments. Students work with industrial robots, CAD/CAM and CNC equipment.

621-105 Fundamentals of Arc 3 credits
Includes study of the electric arc and its application in welding, the power supplies, characteristics and uses of welding electrodes, and the science of fusion and penetration. A study of joint design and welding symbols is also made.

621-110 Shielded Metal Arc 4 credits
Covers welding techniques in all positions on a variety of metals. Develops welding techniques used for structural, pipe, pressure vessel and maintenance welding. Covers structural steel qualification skills.

621-115 Gas Welding Techniques 2 credits
Study of the oxy-acetylene welding process and its application. Provides an opportunity to develop the techniques used in welding, brazing, surfacing and soldering.

621-120 Gas-Shielding Arc Welding Process Techniques 4 credits
Orientation to and operations of the gas-shielding arc welding processes and equipment. Develops techniques of applying gas-shielding arc welding processes to ferrous and non-ferrous metals on sheet, plate and pipe materials.

621-125 Survey of Welding Processes 4 credits
A survey and study of all welding processes, fundamentals, application and economic value to the metal fabrication industries.

621-126 Manufacturing Materials Processing 2 credits
Introduction and orientation to the material applications field. Related technical information is supported by experiences on the operations in machining electrical, sheet metal and welding fabrication of materials. Prerequisite: 606-160, Manufacturing Processes.

621-130 Welding Codes, Analysis and Testing 5 credits
Develops procedures in accordance with recognized welding codes written by industrial standards committees such as AWS, ASME and Wisconsin Administrative Code for Buildings and Bridges. Develops nondestructive testing practices along with other methods of analyzing weldments for soundness, composition, strength and service integrity.

621-140 Weldability of Materials 4 credits
The capacity of a metal to be welded under the fabrication conditions imposed and the ability to perform satisfactorily in service are studied. The similarities and differences among the various welding processes as they pertain to the weldability of metals are also studied.

621-145 Metal Work and Foundry Techniques 2 credits
Provides the theory and practice needed to successfully prepare weld joints through the use of hand and machine tools.

621-148 Welding Metallurgy 3 credits
Covers the field of metallurgy, including the location of ore deposits, conditions found in the earth, derivation of metals from their ores, refinement and purification, admixture and alloying, and the manufacture into various shapes and forms for industry. Includes classification of ferrous and non-ferrous metals, the testing of metals for mechanical properties and common metal problems such as fatigue and corrosion.

621-175 Special Problems 2-4 credits
Advanced students interested in furthering their knowledge and skills in areas such as robotic welding, metallography or weldment analysis may be assigned special problems through consultation with the department's lead teacher and/or division dean.

621-193 Employment Orientation 1 credit
Specific occupational information prepares students to seek employment. Covers personal data sheets, job interviews, and letters of introduction and recommendation. Former graduates are invited to discuss needs of students before employment. Representatives of labor, management, business and the professions are invited to discuss points of interest toward becoming an employee.

636 Electron Microscopy

636-111 Scanning Electron Microscopy 3 credits
Provides extensive laboratory work in which students become proficient in the operation of scanning electron microscopes (SEMs). Students learn electron-specimen interactions, image processing, effects of microscope variables on the image and the use of various microscope accessories and outputs. Microscope optics are also considered.

636-112 Transmission Electron Microscopy 4 credits
Students become proficient in the alignment procedures and normal operation of transmission electron microscopes (TEMs). The effects of microscope variables on the image, x-ray analysis and electron optics are also included.

636-115 Photographic and Hazardous Materials Lab 1 credit
Students examine safety concerns and procedures encountered in an EM laboratory. The theory and practical application of photographic principals involved in film development and darkroom printing are explored. Optical light microscope operation is also discussed.

636-121 Biological Sample Prep for SEM and TEM 3 credits
Lecture-lab course covering biological sample preparation for both TEM and SEM. Includes chemical and cryo fixation, embedment, ultramicroscopy and staining methods. Solution preparation and laboratory techniques are also performed. Prerequisites: Grade of C or better in both 636-111, Scanning Electron Microscopy; and 636-112, Transmission Electron Microscopy, or consent of the instructor.

636-122 Physical Materials Specimen Prep 3 credits
Lecture-lab course covering non-biological sample preparation for both SEM and TEM. Includes replicas preparation methods, ion milling, polishing, etching, mounting and fracturing methods. Prerequisites: Grade of C or better in both 636-111, Scanning Electron Microscopy; and 636-112, Transmission Electron Microscopy, or consent of the instructor.

636-131 Advanced Biological Techniques and Ultrastructure Studies 3 credits
Students prepare biological samples for both SEM and TEM using methods not previously presented, such as colloidal gold labeling. Includes ultrastructure studies enabling students to identify features encountered in micrographs for interpretation and analysis. Prerequisites: Grade of C or better in both 636-121, Biological Sample Prep for SEM and TEM; and 636-122, Physical Materials Specimen Prep; or consent of instructor.

636-132 Advanced Physical Techniques and Material Science Studies 4 credits
Students prepare metallurgical, geological and other non-biological samples for observation by both TEM and SEM. Includes metallurgical studies to enable students to identify microstructure, fracture types, dislocations, etc. Interpretation of reciprocal lattice patterns from diffraction in crystals and compound identification utilizing diffraction rings are included. Prerequisites: Grade of C or better in both 636-121, Biological Sample Prep for SEM and TEM; and 636-122, Physical Materials Sample Prep; or consent of instructor.

636-135 Laboratory and Microscope Maintenance 2 credits
Training needed to accomplish tasks related to the normal maintenance of electron microscopes and related laboratory equipment. Prerequisite: Grade of C or better in both 636-121, Biological Sample Prep for SEM and TEM; and 636-122, Physical Materials Sample Prep.
636-141 X-Ray Microanalysis 4 credits
Students perform element analysis with energy dispersive x-ray systems in both TEM and SEMs. The use of matrix corrections, qualitative and quantitative computer analysis routine will constitute a major part of this course. Prerequisite: Grade of C or better in both 636-131, Advanced Biological Techniques and Ultrastructure Studies; and 636-132, Advanced Physical Techniques and Material Science Studies; or consent of the instructor.

636-143 Specialized Techniques and Related Equipment 3 credits
Laboratory course in which students perform tasks including voltage contrast, electron beam induced current (EBIC) and electron channeling. Presents other microscopy methods, such as tunneling and confocal. Prerequisite: Grade of C or better in both 636-131, Advanced Biological Techniques and Ultrastructure Studies; and 636-132, Advanced Physical Techniques and Material Science Studies.

636-147 Electron Microscopy Special Project 2 credits
Students choose an independent project resulting in a final report that will include micrographs from both TEMs and SEMs and x-ray analysis. Prerequisite: Grade of C or better in both 636-131, Advanced Biological Techniques and Ultrastructure Studies; and 636-132, Advanced Physical Techniques and Material Science Studies.

801 English

801-151 Communication Skills I 3 credits
Improves reading, writing and researching skills. Covers the basics of effective writing: clear sentence structure, accurate punctuation, and concrete diction. Students learn to organize their ideas into sharply focused, coherent paragraphs, includes use of the library to find career-related journal articles and to read and summarize these articles accurately.

801-152 Communication Skills II 3 credits
Applies skills to specific communication situations, both written and oral. Students learn how to prepare a detailed résumé and write effective letters and on-the-job reports. Students also learn to express themselves in a job interview, to participate in a group discussion and to organize and deliver speeches. Prerequisite: 801-151, Communication Skills I.

801-158 Technical Communications 3 credits
For students who need to communicate highly technical information to persons outside their own areas of expertise. Emphasizes speaking and writing clearly about technical processes, procedures and equipment in terms comprehensible to a layperson. Prerequisites: 801-151, Communication Skills I; and 801-152, Communication Skills II or consent of instructor.

801-197 Technical Reporting 3 credits
In-depth investigation into technical resources and practice in preparing and writing technical reports. Emphasizes the six stages of preparation and presentation: research, planning, organizing, writing, revising and presenting. In these reports, use of visual aids is stressed along with audience analysis. Also reviews the technical correspondence and group problem-solving. Students engage in technical activities directly related to their program. Prerequisites: 801-151, Communication Skills I; and second-semester standing.

801-198 Speech 3 credits
Presents the basic techniques of effective public speaking and listening for students in degree or diploma programs. Students improve their oral communication skills through analysis of persuasive and informative and persuasive speaking and using the group process to discuss issues and solve problems. Emphasizes audience analysis, audio-visual techniques, speaker evaluation and group work.

801-201 English Composition I 3 credits
Basic course in expository and argumentative writing, including the development of skills for writing a research paper. Assumes a basic knowledge of English grammar. May include readings to develop the skill of understanding ideas in written form.

801-202 English Composition II 3 credits
Continuation of English Composition I. Fiction, drama and poetry are used as a basis for writing analytically and providing further practice in expressing thought through effectively written English. Prerequisite: 801-201, English Composition I.

801-203 Advanced Composition 3 credits
Continues the study of expository writing for students who wish to attain advanced skills in managing the written language. Prerequisite: Two semesters of college English, including 801-201, Composition I; or consent of instructor.

801-204 Introduction to Modern Literature: 19th Century 3 credits
This course surveys modern literature (mostly 19th century British and American writers) in relation to society and major developments in the arts of fiction, poetry and drama. Prerequisite: 801-201, English Composition I.

801-215 Survey of British Literature I 3 credits
Examines the major authors, works and periods of British literature from its earliest foundations to the end of the Restoration/Neo-Classic period, in the context of historical, cultural and philosophical settings. Prerequisite: 801-201, English Composition I.

801-217 Survey of American Literature I 3 credits
Covers major writers of the 18th and 19th centuries in American prose and poetry. Prerequisite: 801-201, English Composition I.

801-218 Special Topics in American Literature 3 credits
Uses selected readings, class discussion and writing assignments to focus on a particular literary theme, form, period or personality in American literature. The content varies. Prerequisite: 801-201, English Composition I.

801-219 Survey of Western World Literature 3 credits
Studies the outstanding literary masterpieces of Western literature, from the Old Testament and Homer to the end of the Renaissance (16th century). The first semester is not a prerequisite of the second. Prerequisite: 801-201, English Composition I.

801-220 Survey of Western World Literature 2 3 credits
Studies the outstanding literary masterpieces of Western literature from the Neoclassic period to modern times. The first semester is not a prerequisite of the second. Prerequisite: 801-201, English Composition I.

801-228 Introduction to Modern Literature: 20th Century 3 credits
Survey of modern literature (mainly British and American of the 20th century) in relation to society and major developments in the arts of fiction, drama and poetry. Prerequisite: 801-201, English Composition I.

801-229 Contemporary Literature 3 credits
Survey of contemporary literature (mainly British and American) in relation to contemporary society and to major developments in the arts of fiction, drama and poetry. Readings mainly cover material published in the last 25 years. Prerequisite: 801-201, English Composition I.

801-233 Literature of the Theatre 3 credits
Provides the student an opportunity to consider human values and ethics as presented in representative plays. The course follows a historical overview which will enable the student to analyze and interpret the different types of theatre.

801-240 Creative Writing 3 credits
Covers the writing of short stories, poetry and the short play or film script. Discussion focuses on student manuscripts. Prerequisite: 801-201, English Composition I.
801-245 Newswriting and Reporting 4 credits
Intensive introductory course in journalism gives a better understanding of the unique role and responsibility of the journalist working in a "free press" democratic society. Covers the concerns, problems and techniques of the news reporter and provides practical experience in news gathering, editing, interviewing and copyrighting. Prerequisite: 801-201, English Composition I.

801-246 Feature Writing 4 credits
Operating as a writer's workshop, where students read, discuss and critique one another's work, this class gives aspiring freelance writers of nonfiction and those who might be headed for journalism school, a first chance to be published writers. Class members learn to meet deadlines, conduct interviews, choose lively story material from inside and outside the college, write query letters and complete rigorous editing and rewriting of their own and other material. Features ranging from personality profiles, personal experiences and historical features to columns and essays are chosen for publication each month in the student newspaper, The SLANT. Prerequisite: 801-245, Newswriting and Reporting; or 801-201, English Composition I; or equivalent experience and consent of instructor.

801-250 Women in Literature 3 credits
Examines women as both subjects and writers of literature. Students read works from a number of genres and eras, studying ways female writers have contributed to, challenged and enlarged the literary tradition. Introduces readers to literary works by and about women and teaches analytical skills, especially feminist literary criticism. The works are selected to represent varied perspectives in race, class and sexual preference. Prerequisite: 801-201, English Composition I.

801-311 English Fundamentals 3 credits
Prepares students to handle the fundamentals of English correctly and effectively through an intensive study of structure, grammar, mechanics, punctuation and usage.

801-312 Composition Fundamentals 3 credits
Meets the needs of students who have passed English Fundamentals, but who are not yet ready for Communication Skills 1 or English Composition I. Improves sentence completeness and structure, and provides practice to attain fluency and clarity in framing sentences.

801-351 Communications I 2 credits
Improves reading, writing, speaking and reasoning skills through the review and application of language as communication. In secretarial and stenographic sections, emphasis is given to the fundamentals of grammar and spelling.

801-352 Communications II 2 credits
This second-semester course builds upon material covered in the first semester. It further explores skills in job-related communications.

801-356 Communications 1 1 credit
Improves reasoning, speaking, listening, writing and studying skills. Where possible, the course is tailored to work situations. It differs from 801-351, Communications I (2 credits), primarily in depth.

801-357 Communications 2 1 credit
Improves reading, writing, speaking and reasoning skills through the review and application of language as communication. It differs from 801-352, Communications II (2 credits), primarily in depth.

801-221 Spanish 1 4 credits
For students beginning the study of Spanish. Emphasizes development of basic communicative skills through practice in listening, speaking and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in Spanish. Study of customs and values provides an increased awareness of the Spanish culture. On completion students are able to participate in uncomplicated conversations on everyday topics.

802-212 Spanish 2 4 credits
Emphasizes continued development of more complex communicative skills through practice in listening, speaking and writing. Upon completion, students possess the ability to handle simple, everyday survival tasks in the Spanish culture: Vocabulary and grammar are studied to enhance students' abilities to speak and write in Spanish. Prerequisite: One semester of college Spanish or one year of high school Spanish.

802-213 Spanish 3 4 credits
Designed for the student who has completed two semesters of college Spanish, or two years of high school Spanish. A review of grammar from previous semesters is initiated and vocabulary is broadened. Emphasis is placed on speaking and writing in Spanish in "paragraphs" as a full participant in a conversation. Everyday situations in Hispanic culture, including education, family life, eating customs and tourism will provide students with the opportunity to expand their survival skills in the Hispanic culture. Readings of cultural and literary significance will provide vehicles for discussion and composition. Prerequisite: Two semesters of college Spanish or two years of high school Spanish.

802-214 Spanish 4 4 credits
This course is designed for the student who has completed three semesters of college Spanish or three years of high school Spanish. The review of grammar from 802-213, Spanish 3, is completed and vocabulary is broadened. Emphasis is placed on speaking and writing creatively in Spanish on a variety of topics. Everyday situations in Hispanic culture, including daily routine, entertainment, shopping and sightseeing will provide students with the opportunity to expand their survival skills in the Hispanic culture. Readings of cultural and literary significance will provide vehicles for discussion and composition. Prerequisite: Three semesters of college Spanish or three years of high school Spanish.

802-221 French 1 4 credits
For students beginning the study of French. Emphasizes development of basic communicative skills through practice in listening, speaking and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in French. Study of customs and values provides an increased awareness of French culture. On completion students are able to participate in uncomplicated conversations on everyday topics.

802-222 French 2 4 credits
Emphasizes continued development of more complex communicative skills through practice in listening, speaking and writing. Upon completion, students possess the ability to handle simple, everyday survival tasks in the French culture. Vocabulary and grammar are studied to enhance students' abilities to speak and write in French. Prerequisite: One semester of college French or one year of high school French.

802-223 French 3 4 credits
Reviews grammar from previous semesters and broadens vocabulary. Emphasizes speaking and writing in French in "paragraphs" as a full participant in a conversation. Everyday situations in the French culture, including education, family life, eating customs and tourism, provide students with the opportunity to expand their survival skills in the culture and language. Readings of cultural and literary significance provide vehicles for discussion and composition. Prerequisite: Two semesters of college French or two years of high school French.

802-224 French 4 4 credits
The review of grammar from French 3 is completed and vocabulary is broadened. Emphasizes creatively speaking and writing in French on a variety of topics. Everyday situations in French culture, including daily routine, entertainment, shopping and sightseeing, provide students with the opportunity to expand their survival skills in the culture and language. Readings of cultural and literary significance serve as vehicles for discussion and composition. Prerequisite: Three semesters of college French or three years of high school French.
803 History

803-204 Making of Modern Europe 3 credits
Introductory course concentrating on examining the major political, intellectual, social and economic trends which characterized European society in the period from the Renaissance through the French Revolution. The primary focus is an examination of the conflicts and changes in European society which mark the transition from medieval to modern European society. Students examine four different societies in depth (15th-century Florence, 16th-century Nuremberg, 17th-century England and 18th-century France) as different points in that transition.

803-205 Europe and the Modern World 3 credits
Introductory course in European history concentrating on the 19th- and 20th-century experiences of European societies through examinations of major social, economic, political and intellectual development. One emphasis is on the changes which caused the transformation of Europe from a pre-industrial to a modern industrial society. A second emphasis focuses on a specific place and time period in order to understand how this process of transformation affected different European nations at different points in their history.

803-211 American History 1607 to 1865 3 credits
The origin and growth of the United States is studied. Surveys American political, economic and social development from the founding of the colonies through the Civil War.

803-212 American History 1865 to the Present 3 credits
A survey of American political, economic and social development from the end of the Civil War to the present.

803-213 History of the American West 3 credits
Covers the expansion, settlement and economic development of the American West, especially the region west of the Mississippi River. Much attention is devoted to the Native American people as well as to the theme "west" as American myth. Emphasizes developing institutions, utilization of resources and contributions of ethnic groups (including Native Americans) to this history. Particular attention is given to the settlement of Wisconsin. Completion of 803-211, American History 1607 to 1865, or 803-212, American History 1865 to the Present, is recommended.

803-214 Native American History 3 credits
Survey course focusing on Native American cultures and histories from early times to the present. Particular attention is placed on the variety of lifestyles of native peoples, their early reactions to Euro-Americans, outstanding native leaders, assimilation efforts and relations with the U.S. government. Completion of 803-211, American History 1607-1865; or 803-212, American History 1865 to Present, is recommended.

803-215 American History Since 1945 3 credits
Traces developments in politics, sociology and culture of the U.S. since 1945. Focuses on new social movements among African-Americans and other ethnic groups, youth and women, environmentalism and renewal of religion in American society in recent decades. Covered is the rise of the U.S. to global power and domestic consequences and responses to this new status.

803-220 History of Western Civilization I 3 credits
This course is an introduction to ancient and medieval periods of Western civilization which focuses on four periods and peoples whose lives and achievements have had a major impact on shaping Western society. It examines the primary social, political, economic and intellectual perspectives developed in New Kingdom Egypt, fifth century B.C., Athens, early Roman Empire and Medieval England. It also probes the physical setting in which each society existed and the technologies which each used.

803-221 History of Western Civilization II 3 credits
This is an introductory course tracing the development of Western Civilization since 1600. The course will be humanities based. The themes of industrialization, revolution, imperialism and nationalism will be developed through the use of art, music and literature.

803-223 History of the Third World: Asia 3 credits
An introduction to civilization in Asia, this course explores different lifestyles and ways of thinking significant to historical development in India, China and Japan from early times to the present. It offers perspectives on how and why these Asian societies developed their distinctive approaches to civilization, what happened to these societies as they came into contact with the West and how these societies have approached modernization. Prerequisite: One course in European History or History of Western Civilization.

803-224 History of the Third World: Africa 3 credits
An introduction to the civilizations of Africa from early man through the present which focuses on African society before western penetration, the basic nature of African institutions, the colonial experience of Africa and the development of Africa since independence in 1960. Prerequisite: One course in European History or History of Western Civilization.

803-225 The World in the Twentieth Century 3 credits
Focuses on the causes and consequences of the two world wars, the nature and impact of communism and fascism, the revolt against the West and the rise of the Third World, revolutionary movements and terrorism, the nuclear age and other technological and scientific developments and their consequences for the culture of the 20th century.

803-230 Women in History 3 credits
Introduces women's history and the various roles played by and assigned to women in Western civilization, focusing on the question of how and why women's lives changed during the past 20 centuries. Examines women's contributions and their images in the past. Also examines women's history as a historical discipline, concentrating on the basic content, concepts and the methodologies used in women's history. May include marriage, families, birth control and fertility, legal status, religion, education, work, class differences, visual images of and by women -- including fashion, male concepts of women and feminism.

803-240 African-American History 3 credits
Broad introductory survey of significant experiences that have shaped U.S. race relations, beginning with the west coast of Africa during the Middle Ages and moving through the last 30 years of this century in the United States. Special attention is given to slavery, family, politics, education and civil rights.

804 Mathematics

804-141 Industrial Mathematics 1 4 credits
Begins with arithmetic operations of fractions, decimals and percent. Use of a hand-held calculator is required. The metric and British measurement systems are compared along with exact and approximate numbers. Concepts of algebra and geometry are reviewed to allow students to solve applied problems that involve linear equations and inequalities in one variable, as well as the use of formulas for perimeter, area and volume. Basic trigonometry is introduced and is used to solve both right and oblique triangles. This course is broadly correlated with 906-141, Technical Science 1; and is preparatory to 804-142, Industrial Mathematics 2. Prerequisite: High school algebra.

804-142 Industrial Mathematics 2 2 credits
Continuation of Industrial Mathematics 1. Begins with the applications of right angle trigonometry including vectors are illustrated. This course is broadly correlated with 906-141, Technical Science 1; and is preparatory to 804-142, Industrial Mathematics 2. Prerequisite: 804-141, Industrial Mathematics 1.

804-151 Technical Mathematics 1 4 credits
Starts with a brief review of the basic algebra, including fundamental operations and laws of exponents. Studies the solution of linear equa-
tions in one unknown. Covers formula rearrangement, variation and the analytic geometry of a straight line. Trigonometry is studied from a viewpoint of the numerical solution of right and oblique triangles, as well as vectors. There is an emphasis on word problems, as they apply to technical programs. Scientific calculators are used throughout.

Prequisite: Required score on the placement test and a good knowledge of high school algebra.

804-152 Technical Mathematics 2 3 credits

804-171 Basic Computer Mathematics 2 credits
Covers problem-solving and software packages in the technical area using the IBM personal computer. Emphasizes application problems that students may meet in their specializations. Concepts of programming, input-output of data, decisions, interactive techniques, data storage, alphanumeric data handling and computer graphics may be included.

804-172 Introduction to PC Software 2 credits
Hands-on introduction to modern PC software, including word processing, spreadsheets, database management, graphics software and elementary computer programming.

804-173 Computer Mathematics 3 credits
Introduction to C programming language on the IBM-PC. The compiler used is Borland C. Emphasizes developing C as a structured programming language suitable for solving technical problems. Stressess function construction and modular program design. Discusses I/O, C data types, C control structures, arrays, pointers, structures and disk file handling.

804-174 Computer Graphics In C 3 credits
Introduction to Microsoft Windows programming on the IBM-PC. Proficiency in C is assumed. Windows fundamentals are discussed (messages, registering windows, etc.). Includes menus, dialog boxes, icons, cursors and input methods (keyboard and mouse). Windows graphics and “Graphics Device Interface” are discussed at length. Additional topics include bitmap and metafile handling, the clipboard, printing, Dynamic Link Libraries (DLLs) and debugging.

804-175 Image Processing 3 credits
Introduction to image processing with Adobe Photoshop, including selection methods, image restoration and retouching, filtering, colorization of gray scale images, brightness and contrast control and image combining. Features an ongoing discussion of image-processing terminology and concepts such as image resolution and color depth, histogram analysis and file formats.

804-201 Intermediate Algebra 4 credits
Study of real and complex numbers— their construction and resulting properties, how to simplify and factor algebraic expressions using fundamental laws and order of operations, how to solve first- and second-degree equations and inequalities in one variable, how to graph first- and second-degree equations and inequalities in two variables, how to solve systems of equations, how to work with fractional exponents and radicals and how to solve exponential and logarithmic equations. Meets five times per week. Prerequisite: High school algebra and geometry and a satisfactory placement test score.

804-206 Introduction to Computer Use 4 credits
Introduction to computers and how to use them. The major categories of microcomputer software are introduced, including word processors, spreadsheets, database managers and graphics packages. The BASIC programming language is studied as an introduction to computer programming. Addresses the history and social impact of computers with special emphasis on the computer’s role in math and science.

804-208 Computer Science 3 credits
Structured computer programming leading to an introduction to object-oriented programming is developed using the object-oriented programming language C++ to solve problems from the mathematical, physical or social sciences. The theory and use of computing machines are developed in the process of constructing algorithms and developing skill in and understanding of computer programming. Students write approximately eight programs and can expect to spend six to ten hours per week on their own time in addition to time in class. Meets four times per week. Prerequisite: 804-212, College Algebra; or concurrent enrollment; or consent of instructor.

804-212 College Algebra 3 credits
Includes fundamentals of topics covered in Intermediate Algebra with a more axiomatic study of the set of real numbers and emphasis on the concept of functions. Covers exponential and logarithmic functions, the theory of polynomial equations (including the factor and remainder theorems), the use of matrices and determinants in solving linear systems of equations, mathematical induction, sequences, series and the binomial theorem. Meets four times per week.

804-213 Trigonometry 3 credits
Covers the study of the six trigonometric functions, their inverse functions, the solution of right and oblique triangles, basic identities, graphs of the trigonometric functions, logarithms, trigonometric equations and functions of a composite angle. Meets four times per week. Prerequisite: 804-212, College Algebra. Transferability: those people planning to enter the math, engineering or science fields should check the school to which they plan to apply as to whether this credit is transferable.

804-229 Mathematical Analysis 5 credits
An integrated treatment of topics from college algebra and trigonometry lays a sound foundation for higher courses in mathematics. Includes linear and quadratic functions, other polynomial functions, exponential and logarithmic functions, the trigonometric functions and some analytic geometry in the plane. Meets five times per week. Prerequisites: Two years of high school algebra or equivalent; and a satisfactory mathematics placement test score.

804-231 Calculus and Analytic Geometry 1 5 credits
For students of mathematics, science and engineering. Provides introduction to plane analytic geometry, basic properties of limits, rate of change of functions, continuity, derivatives of algebraic functions, implicit relations, curve sketching, maxima and minima, indefinite integration with applications, approximating an integration and definite integration with applications, such as area between two curves, volumes, surface area of revolutions, centroids, hydrostatic pressure and work. Covers differentiation and integration of inverse trigonometric functions and natural logarithms. Meets five times per week. Prerequisite: 804-213, Trigonometry; 804-229, Mathematical Analysis; or consent of instructor.

804-232 Calculus and Analytic Geometry 2 5 credits
For students of mathematics, science and engineering. Covers the integrals involving the method of partial fractions, integration by parts, geometry of cones and conics. Polar curves, areas and integrals involving polar coordinates, parametric equations in kinematics and analytic geometry and vector differentiation are covered. Scalar and vector product of two vectors, differentiation of vectors, space curves, vector fields with application to work, circulation, flux, Green’s theorem, Divergence Theorem, Stokes’ Theorem; ordinary differential equations.

804-233 Calculus 3 5 credits
This course is designed for students of mathematics, science and engineering. It covers partial derivatives, differentials, the chain rule, gradients, maxima, minima, saddle points, infinite series, directional derivatives; multiple integrals in rectangular, polar, cylindrical and spherical coordinates, areas, volumes, moments, centers of mass; integration in vector fields with application to work, circulation, flux, Green’s theorem, Divergence Theorem, Stokes’ Theorem; ordinary differential equations.
including separable, exact homogeneous, power series solutions, operator methods, numerical methods. Meets five times per week.
Prerequisite: 804-232, Calculus and Analytic Geometry 2.

804-240 Basic Statistics 4 credits
Basic college statistics for persons with a minimum knowledge of algebra. Appropriate techniques are studied for the systematic collection, presentation, analysis and interpretation of experimental results. Formal procedures are developed that deal with the inherent uncertainty in inferences and decisions made when the underlying data are subject to random variation. Includes descriptive statistics, basic probability theory, the binomial, normal, student's t, chi-squared and F distributions. Develops and demonstrates the method of least squares and the one-way analysis of variance. The primary focus is the methodology of doing statistical inference (especially confidence intervals and hypothesis testing) about population parameters based on sample data. To this end, sampling distributions and the Central Limit Theorem are investigated.

804-302 Mathematical Fundamentals 3 credits
For students who need to review the fundamentals of arithmetic. Covers operations with whole numbers, decimals, fractions, percents, proportions, units of measurement, powers and square roots, areas and volumes, signed numbers and solving simple equations. No prerequisite.

804-306 Pre-College Algebra 3 credits
Basic algebra covers the four fundamental operations with signed numbers, fractions and polynomials in addition to graphing, solving linear equations and inequalities, factoring, solving quadratic equations by factoring, solving systems of linear equations in two variables and simplifying radical expressions. Prerequisite: Adequate skill in basic arithmetic.

804-308 Pre-College Geometry 3 credits
Covers the major concepts of geometry and is an accelerated version of the typical one-year course. Emphasizes the use and understanding of the important facts about parallel lines, congruent triangles, circles and right triangles. Prerequisite: Adequate skill in basic arithmetic.

804-379 Vocational Mathematics 1 1 credit
Involves a review of fractions, decimals and percentage including the metric system, measurement, geometry, instrumentation and an introduction to calculators. Modified to meet the needs of a particular vocation.

804-380 Vocational Mathematics 2 1 credit
Covers simple algebra (signed numbers, algebraic manipulations, equations), ratio and proportion, graphs and right triangle trigonometry. Modified to meet the needs of a particular vocation. Prerequisite: 804-379, Vocational Mathematics 1 or its equivalent.

804-381 Machine Tool Mathematics 1 2 credits
Involves a review of fractions, decimals and percentage including the metric system, measurement, geometry, trigonometry of right triangles and use of a scientific calculator. Prerequisite: Adequate skill in basic arithmetic.

804-382 Machine Tool Mathematics 2 1 credit
For machine tool students only. The trigonometry consists of solutions of right and oblique triangles with specific application, the arithmetic of which is done on the hand-held calculator. The binary system is compared with the decimal numeral system and application to numerical control is made. Graphing with rectangular coordinates is also applied to numerical control. In addition, formulas with application to the trade are studied. Prerequisite: 804-381, Machine Tool Mathematics 1 or its equivalent.

804-390 Computer Prep Mathematics 1 credit
Introduction to IBM-compatible personal computers. Each class hour starts with a brief explanation of the current topic followed by student work on the computer. Centers on 12 assignments, each of which requires one or more pages of printout. Students first become familiar with the keyboard, monitor, printer and disk drive so they can save, retrieve and print their files. The rest of the course introduces WordPerfect (a word-processing program), Windows, Quattro Pro (a spreadsheet program) and Paradox (a database program). Modified to meet the needs of a particular vocation.

805 Music

805-205 Class Voice 1: Strategies for Enhancing Your Singing 1 credit
A fundamental course in singing. Includes principles of voice production, correct breathing, tone placement, resonance, articulation and song interpretation. Meets two hours per week. Open to all college students.

805-215 Contemporary Music History 3 credits
A look at contemporary classical, pop and jazz music styles beginning with the turn of the century. Second semester only.

805-270 MATC Chorale 1 credit
A chorus of mixed voices open to all college students, faculty and townspeople who enjoy singing. Singers focus on music of diverse cultures and times. Provides an opportunity to participate in learning and performing choral music. Meets two hours per week.

805-227 Music Appreciation 3 credits
A survey course in music for those interested in learning through listening to recorded music performances. The course emphasizes learning how to listen to music more fully.

805-228 History of Music in Film 2 credits
Traces the importance of music in films. By tracing the evolution of music in films and concentrating on specific composers the student will learn the function of music in epic films to cartoons. The class will consist of lectures, observing films and listening to soundtracks.

805-260 Basic Music Theory 2 credits
Develops basic music concepts in notation, intervals, scales, chords and rhythm through elementary dictation. No previous musical knowledge is required.

805-261 Music Theory 1 4 credits
Develops an understanding of common musical structures from both classical and popular idioms. Emphasizes literacy in standard musical notation, understanding of keys and scales, chord structure and progression, harmony writing and arranging, form and composition. Requires a basic reading knowledge of music. Students should have a strong music background or have taken 805-260, Basic Music Theory.

805-262 Music Theory 2 4 credits
Special emphasis on secondary chord relationships, modulation, pop and jazz chord symbols and composition. Second semester only. Prerequisite: 805-261, Music Theory 1.

805-263 Jazz History 2 credits
Classroom lecture course to introduce students to the recordings, history, major figures, musical forms and social importance of this original American art form. Includes live demonstrations, videos and films, guided-listening experiences and group discussions. Out-of-class responsibilities primarily include reading and listening. Historical periods and jazz-related styles to be covered include ragtime, blues, traditional New Orleans jazz, big band swing, boogie-woogie, bebop, cool progressive, rhythm and blues, jazz/rock and contemporary fusion and funk styles. No prerequisites.

805-264 Great Composers in Music 3 credits
Covers outstanding composers in Western culture. A study of the history, music, accomplishments and lives of composers such as J.S. Bach, Ludwig Van Beethoven, Wolfgang Amadeus Mozart and Richard Wagner. No prerequisite required.
### COURSES

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805-265 General History of Music: Survey of western musical styles, 1600-1900, through extensive record listening and biographical studies of composers during the Baroque, Classic and Romantic Periods.

805-273 Broadway Musical Theater: Covers the history of the Broadway musical. Consists of lectures, video tapes and discussion of the numerous styles and aspects of musical performance, as well as the various techniques of production. Students learn the stories behind many of the most famous shows from Broadway and London stages. Provides the opportunity to see local musical productions. First semester only.

805-276 Music Television: A study of history and the analysis of music videos. Includes both their musical and visual content. Students produce a music video which they write, direct and film.

805-277 Techniques of Sound Recording: Covers the latest recording methods and equipment. Students experience recording various groups within the performing arts area. Emphasis is on practical techniques and hands-on methods.

806 Natural Science

806-104 General Cell Biology: Introduction to cells, emphasizing the structure, diversity, chemistry and physiology of cells. Basic processes, such as cellular respiration, photosynthesis and division, are discussed. Describes genetic principles, as well as the molecular activities involved in DNA, RNA and protein synthesis. Laboratory activities involve the study of measurement in biological systems and the use of statistics, population growth dynamics, respiration, fermentation and enzymology.

806-105 Principles of Animal Biology: Introductory-level course focusing on general biological principles, cell structure and function, comparative morphology of invertebrates, genetics and human anatomy and physiology. Some consideration is given to biological processes as they relate to human ecology.

806-110 Technical Chemistry: A one-semester course emphasizing solutions and acid-base chemistry. Other areas covered include an introduction to organic and biological chemistry. Basic laboratory skills are developed, including the use of pipetters and a UV-VIS spectrophotometer. Prerequisite: Students are expected to have background in chemistry equivalent to that taught in 806-377, Pre-College Chemistry.

806-111 Chemistry 1: Fundamental concepts of inorganic chemistry. Emphasizes learning the basic principles and quantitative measurements used in chemistry. Consists of three hours of lecture and one, two-hour laboratory period per week.

806-112 Chemistry 2: Further study of basic chemical principles (e.g., atomic and molecular structure, reactions, stoichiometry, thermochemistry and acid/base chemistry) and the application of these principles, including chemical equilibria, kinetics and nuclear chemistry. Introduces properties, structures and reactions of organic compounds. Elementary aspects of biochemistry are considered. Prerequisite: 806-111, Chemistry 1.

806-141 Technical Science 1-5: Basic concepts of chemistry and physics. Systems of units are first introduced, followed by elements, compounds, atomic structure, chemical symbols, the periodic chart and quantitative chemical relationships. Chemistry also includes properties of acids, bases and salts, acid-base indicators and selected areas of practical or applied chemistry. Physics includes fluids, elasticity and laws of heat and gas. Emphasizes qualitative phenomena with a de-emphasis on mathematical abilities. Broadly correlated with 804-141, Industrial Mathematics. Students enrolled in visual communications receive expanded study in the areas of light, vision, color, optics and optical instruments. Prerequisite: One year of high school science.

806-142 Technical Science 2-5: Introduces elementary concepts of physics and how these concepts are applied to basic technology. Includes vector mechanics, statics, dynamics and introductory rotational mechanics. Statics and dynamics of fluids are briefly introduced. Heat and temperature, illumination and geometric optics, elementary electricity and magnetism are presented. Includes approximately 34 hours of integrated laboratory exercises. It is more problem-oriented than Technical Science 1. Broadly correlated with 804-142, Industrial Mathematics 2. Prerequisite: 806-141, Technical Science 1-5, or equivalent.


806-152 Technical Science 2: Begins with the study of vector analysis and proceeds through statics and dynamics. Both translational and rotational mechanics are studied. After work, energy and power are introduced, thermodynamics is studied. A brief introduction to wave motion follows. Geometric and physical optics precede an introduction to electricity and magnetism. Emphasizes the application of basic scientific principles to the solution of practical problems encountered in modern technology. Prerequisites: 806-151, Technical Science 1, or equivalent; and 804-151, Technical Mathematics 1. Co-requisite: 804-152, Technical Mathematics 2.

806-155 Health Technical Science: Develops a conceptual foundation of the basic properties of physics and provides practical lab experience concerning the basic laws as applied to the field of respiratory therapy. Includes the metric system, motion, force, energy, heat, pressure, hygrometry, static electricity, electric current and electric supply.

806-156 Radiography Technology Physics: Develops a conceptual foundation of the basic properties of physics and provides practical lab experience concerning the basic laws and principles of physics as related to the field of radiation technology. Includes mechanics, structure of matter, electrostatics, magnetism, electric circuits, electromagnetism and rectification. Recommendation: High school algebra and physics or their equivalents are useful.

806-161 Electricity and Magnetism: Covers electrical concepts including Ohm’s law, circuits, and electrical equipment and principles. Includes the concepts of fields, and electron and photon interactions. Basic units and light optics are also considered.

806-201 General Chemistry: Primarily for students who need a modern, relevant chemistry course for one of the allied health fields. This is a survey course covering a broad range of topics. Lectures and laboratory experiences cover the fundamental aspects of inorganic chemistry followed by the essentials of organic chemistry and an introduction to biological chemistry. Includes elementary problem solving, atomic structure, periodicity and bonding, reactions and energy changes, nuclear chemistry, solutions, colloids, organic functional groups and their reactions, lipids, carbohydrates, proteins, hormones, DNA and an introduction to metabolism. Prerequisite: One year of high school chemistry or pre-college chemistry.
COURSES

806-203 Animal Biology 4 credits
Covers general biological principles and emphasizes cell structure and function, comparative morphology of invertebrates, vertebrate anatomy, physiology, and genetics. General consideration of biological processes and their relationship to human ecology, is given. Note: In combination with 806-205, Zoology Concepts, this will transfer as 5 credits of Animal Biology.

806-205 Zoology Concepts 1 credit
Discusses current issues in zoology and is supported by films, readings and student projects. The major part of the course is student-directed oriented upon topics of current biological importance. Prerequisite: Concurrent enrollment in or completion of 806-203, Animal Biology. Note: In combination with 806-203, Animal Biology, this will transfer as 5 credits of Animal Biology.

806-206 General Anatomy and Physiology 4 credits
Features lectures and laboratory dealing with the human body as an integrated structural and functional unit, including the circulatory, respiratory, digestive, excretory, reproductive, nervous, endocrine, muscular and skeletal systems, in addition to cell structure and physiology. Includes dissection of fresh and preserved material as well as examination of a human cadaver. Introductory college-level biology course recommended. This course is not acceptable in programs requiring two semesters of Anatomy and Physiology. Prerequisite: One year of high school chemistry.

806-207 Anatomy and Physiology 1 4 credits
Features lectures and laboratory dealing with the human body as an integrated structural and functional unit, including basic anatomical and directional terminology, fundamental concepts and principles of cell biology, histology, integrated, skeletal, muscular and nervous systems, and the special senses. Includes discussion of various fresh and preserved materials as well as examination of a human cadaver. This course is the first semester of a two-semester sequence. College-level chemistry is recommended. Introductory college level biology course recommended. Prerequisite: One year of high school chemistry or one semester of college-level chemistry.

806-208 Anatomy and Physiology 2 4 credits
Features lectures and laboratory exercises dealing with the human body as an integrated structural and functional unit including the cardiovascular system, respiratory system, digestive system and metabolism, urinary system, fluid/electrolyte balance and acid/base balance, and reproductive system. Includes dissection of a cut as well as examination of a human cadaver. NOTE: This is the second semester course of a two-semester sequence and is not acceptable where a one-semester Anatomy and Physiology course is required. Prerequisite: 806-207, Anatomy and Physiology I, or consent of instructor.

806-209 College Chemistry 1 5 credits
The first semester of a two-semester sequence in general college chemistry. Develops an in-depth understanding of chemical principles and concepts. Laboratory work assists in understanding chemical concepts and develops problem-solving skills. For students expecting to take more than one semester of college-level chemistry. Students may complete the year of general college chemistry with either 806-210 or 806-212. Prerequisite: One year of high school chemistry, or 806-377, Pre-College Chemistry and one year of high school algebra required.

806-210 College Chemistry 2 with Biochemistry 5 credits
Continues the quantitative inorganic emphasis established in College Chemistry 1. Includes the mathematical treatment of kinetics, equilibrium, thermodynamics and electrochemistry. A major portion of the semester is also devoted to an introduction to organic chemistry and biochemistry. Prerequisite: 806-209, College Chemistry 1; and 804-201, Intermediate Algebra including exponentials and logarithms, or its equivalent.

806-212 College Chemistry 2 5 credits
Continuation of College Chemistry 1. Includes application of principles to and mathematical treatment of kinetics, equilibrium, thermodynamics, electrochemistry, coordination compounds, nuclear chemistry, and organic structures and nomenclature. Prerequisites: 806-209, College Chemistry 1; and 804-201, Intermediate Algebra, including exponentials and logarithms, or its equivalent.

806-213 Organic Chemistry 1 5 credits
The first semester of a two-semester organic chemistry sequence. Includes the electronic structure and bonding of atoms and molecules; the nomenclature, mechanisms, reactions and properties of the following classes of compounds: aldehydes, ketones, carboxylic acids, aromatics, heterocyclic aromatics; chemical synthesis using enolates, carbanions and pericyclic reactions. Includes a three hour per week laboratory component as well as four hours per week lecture/discussion. Prerequisite: Two semesters of college chemistry, or consent of instructor.

806-214 Organic Chemistry 2 5 credits
Continuation of Organic Chemistry 1. Includes mass spectroscopy and UV-VIS spectrophotometry: the nomenclature, mechanisms, reactions and properties of the following classes of compounds: aldehydes, ketones, carboxylic acids, aromatics, heterocyclic aromatics; chemical synthesis using enolates, carbanions and pericyclic reactions. Includes a three hour per week laboratory component and four hours per week lecture/discussion. Prerequisite: Organic Chemistry 1, 806-213, or equivalent.

806-215 Botany 4 credits
Plant science deals with a wide variety of organisms that are of great interest and are basic to our survival. These organisms are viewed from various perspectives—taxonomic, physiological, ecological, etc.—in hopes of developing an overall understanding and appreciation of their value and beauty. Emphasizes taxonomy and evolution, physiology, anatomy and ecology. A survey of plants and plant-like organisms is presented. Note: When taken with 806-217, Biological Concepts, this class will provide students with 5 credits of college-level science.

806-217 Botanical Concepts 1 credit
Informal discussion period provides students a forum for discussing topics of their choice. The collection and free interchange of information and ideas are encouraged. Analysis and evaluation of student topics help the student understand and function in today's highly technical world. Note: When taken with 806-215, Botany, this class will provide students with 5 credits of college-level science.

806-221 General College Physics 1 5 credits
The first semester of a one-year introductory course. Develops a conceptual understanding of the basic properties of physics and provides practical hands-on lab experience, which helps to broaden the understanding of physics. Covers the basic properties of motion, force, energy, momentum, fluids, heat, thermodynamics and relativity. Stresses developing good problem-solving strategies. Prerequisite: Two years of high school algebra and one year of high school geometry, or equivalent. Trigonometry or high school physics or 806-358. Pre-College Physics are helpful if the student's algebra and problem-solving skills are weak.

806-222 General College Physics 2 5 credits
Studies electricity, magnetism, optics and atomic physics through lecture, demonstrations and laboratory work. Prerequisite: 806-221, General College Physics 1, or equivalent.

806-229 Introduction to Human Biology 5 Credits
This is an introductory course designed for students who want a laboratory course, but are not majoring in biology. It emphasizes the structure of the human body and the functional interrelationships of the body's systems. Consideration is also given to human genetics, human evolution, ecology, and the role that humans play in the environment. This course includes three hours of lecture per week, two hours of laboratory
and a one-hour discussion session. Prerequisite: Completion of high school Biology is recommended. Note: This course does NOT meet the requirements for 806-207 or 208, Anatomy and Physiology I or II, or 806-206, Anatomy and Physiology.

806-230 Human Anatomy 4 credits
Rigorous introduction to the structure of the human body for students in allied health or college transfer programs. Covers human development, histology and gross anatomy of each system. Normal functioning and selected dysfunctions are discussed in order to provide clear understanding of the role of each system. Detailed observation and dissection of human anatomical material (cadaver, selected organs, etc.) are used to develop a sound three-dimensional perspective on body structure. This course is not acceptable in programs requiring two semesters of anatomy and physiology.

806-231 Biology of Human Aging 4 credits
Focuses on biological phenomena associated with aging, including theories and characteristics of aging, the reversibility and irreversibility of bodily functions, and behavioral alterations as they are affected by neurological, immunological, endocrinological, myological, skeletal and circulatory changes. Prerequisite: A college-level biology, anatomy or physiology course, chosen from among 806-104, General Cell Biology; 806-105, Principles of Animal Biology; 806-203, Animal Biology; 806-206, General Anatomy and Physiology; 806-207, Anatomy and Physiology I; or an equivalent post-secondary course.

806-241 Earth Science 3 credits
Introduces the physical nature of the earth. Covers the atmosphere, hydrosphere and lithosphere. Physical processes and an understanding of their causes and effects are investigated.

806-242 Life in the Past 3 credits
Covers minerals, rocks, geologic time, origin of life, paleobiology, evolution and classification of fossil plants, invertebrates and vertebrates in lecture and lab. An optional field trip is featured.

806-243 Survey of Astronomy 4 credits
Introductory course covering the observations, theories and principles of astronomy. Includes the history of astronomy, telescopes, the earth and solar system, stars and their evolution, galaxies and the evolution of the universe. Consists of lecture-discussion sessions with some evening meetings for star viewing with the school's 8-inch telescope. Recommended prerequisite: High school algebra.

806-244 General Geology 4 credits
This course introduces the student to the composition and structure of the earth, its surface features and the processes that have shaped and produced these features. The course consists of three one-hour lectures per week and a two-hour weekly lab session. The laboratory is meant to reinforce topics and concepts covered in lecture, as well as new material.

806-245 Weather and Climate 3 credits
Discusses nature and variability of temperature, precipitation, clouds and wind - storm systems, fronts, thunderstorms, tornadoes, hurricanes and their predictions, climate, climatic change, seasonal changes, air composition, global winds and special problems related to meteorology.

806-265 Survey of Biochemistry 4 credits
A one-semester survey of basic biochemistry, especially appropriate for nursing students. The structures and functions of amino acids, proteins, carbohydrates, lipids and nucleic acids will be discussed. Other topics include bioenergetics, metabolism, enzyme function and inhibition, hemoglobin, membranes, hormones, nutrition, DNA replication, transcription and protein synthesis. Prerequisite: At least one semester of college chemistry; including a basic knowledge of organic functional groups and their reactions; or consent of the instructor.

806-273 Microbiology 3 credits
Covers general topics and specific microbial pathogens. Material is coordinated in such a way that the same topics are covered in lecture and laboratory at the same time. Includes morphology of microorganisms, sterilization and disinfection methods, pathogens causing disease in various body systems, normal flora of the body, drug sensitivity testing, complete blood counts, denial microbiology and serologic testing for viral infections and pregnancy testing.

806-274 General Microbiology 5 credits
Includes the structure, function, ecology, nutrition, physiology and genetics of microorganisms and a discussion of medical, industrial, agricultural and food microbiology. Also includes an introduction to standard techniques and procedures used in the microbiology laboratory.

806-275 Parasitology and Mycology 2 credits
Discusses protozoan parasites, roundworms and flatworms that cause human disease. Material is covered in lecture and identification of parasites is accomplished in lab. Covers fungal infections involving the skin, subcutaneous tissues and the body systems. Material is covered in lecture and identification of fungi is accomplished in lab.

806-280 Environmental Issues 4 credits
Introduces diverse issues of human impact on the earth's ecosystems and how humans must deal with the results as part of these ecosystems. Explores local, state, national and international environmental topics. Chemical and biological effects on the environment are studied using a systems approach to understand the whole and its parts, in an attempt to understand the nature of various environmental issues. Socio-economic, political and ethical aspects are examined to assess solutions to these complex problems.

806-307 Applied Physical Science 2 credits
Covers fundamental principles of physical science that have practical applications in the printing industry. Emphasizes the physical and chemical properties of matter as well as its composition.

806-358 Pre-College Physics 3 credits
A one-semester introductory course. Prepares students for algebra-based college-level physics, or for physics-based technical science. Introduces basic concepts of physics through lecture, demonstrations and lab experience. Develops algebra-based problem-solving skills and strategies. Covers the basics of scientific notation, metric system, significant figures, motion, force, energy, momentum and relativity.

806-363 Science 1 2 credits
Covers basic principles of physics which have frequent and common practical applications for students pursuing vocations in trade and industry. Relates applications to student vocational fields. Includes measurement, energy and power, machines, properties of matter, fluid principles and heat. Features lecture, discussion and laboratory.

806-377 Pre-College Chemistry 3 credits
One-semester course for students who have either not taken chemistry at the high school or post-high school levels or who need a review of basic chemistry before attempting college-level chemistry. Lectures and laboratory experiences cover some of the fundamental aspects of inorganic chemistry. Introduces relevant mathematical manipulations. Prepares students for college-level chemistry courses. Includes the metric system, scientific notation and significant figures, properties of matter, atomic theory, nomenclature of simple inorganic compounds, periodic properties of the elements, writing of chemical equations, use of the mole concept, calculations from balanced equations and studies of the liquid and gaseous states of matter.
## College Physical Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
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<td>807-150</td>
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<tr>
<td>807-183</td>
<td>Aerobic Exercise</td>
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<td>807-184</td>
<td>Group Exercise/Aerobic Leadership</td>
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<td>807-207</td>
<td>Introduction to Triathlon</td>
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<td>807-209</td>
<td>Baseball/Conditioning</td>
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<td>807-210</td>
<td>Conditioning/Weight Training</td>
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<td>807-223</td>
<td>Volleyball I</td>
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<td>Softball/Conditioning</td>
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<td>807-229</td>
<td>Aquatic Conditioning</td>
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<td>807-230</td>
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<td>807-235</td>
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<td>807-236</td>
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<td>807-238</td>
<td>Racquetball 1</td>
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<td>807-240</td>
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<td>807-241</td>
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<td>807-242</td>
<td>Bowling 1</td>
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<td>807-245</td>
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<td>807-246</td>
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<td>807-250</td>
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<td>807-266</td>
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<tr>
<td>807-270</td>
<td>Bicycle Conditioning/Maintenance</td>
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### Courses

- **Physical Education for Public Safety (807-150)**
  - Covers comprehension, self-defense and introduces the DAAT System.

- **Aerobic Exercise (807-183)**
  - Focuses on an aerobic approach to fitness. Activities such as walking, running, group aerobics, sea training and water exercise are highlighted.

- **Group Exercise/Aerobic Leadership (807-184)**
  - Consists of group exercise techniques and emphasizes a variety of teaching methods directed at training individuals as group exercise instructors. Students may also earn their Instructor Certificate, optional. Prerequisite: 807-183, Aerobic Exercise, or 807-283, Aerobic Dance.

- **Introduction to Triathlon (807-207)**
  - Develops an understanding of the principles of conditioning and exercise with specific application to triathlon training.

- **Baseball/Conditioning (807-209)**
  - Covers basic baseball skills, rules, strategy and play. Fitness methods and concepts are applied to the activity of baseball.

- **Conditioning/Weight Training (807-210)**
  - Techniques and methods for body development, conditioning, nutrition and safety. It is a personal program tailored to individual objects.

- **Advanced Weight Training (807-212)**
  - Increases knowledge of current weight-training practices and trends. Offers a review of beginning practices and terminology followed by an intensive program of physical development utilizing various techniques and equipment. Previous free-weight work is suggested.

- **Volleyball 1 (807-223)**
  - Introductory course in power volleyball. Includes skills basic to the power game as well as rules and strategy for the beginner player. Fitness activities specific to volleyball will be included.

- **Volleyball 2 (807-224)**
  - Covers advanced skills and team strategies for the serious power volleyball player. Includes conditioning appropriate to advanced techniques.

- **Softball/Conditioning (807-225)**
  - Introductory course covers basic softball skills, rules and strategy. Fitness methods and concepts are applied to the activity of softball.

- **Aquatic Conditioning (807-229)**
  - Swimming workouts which gradually increase fitness levels. Students should be able to perform the front crawl, back crawl and breaststroke.

- **Swim 1 (807-230)**
  - For non-swimmers or swimmers with limited water skills. Emphasizes floating, kicking and basic strokes.

- **Swim 2 (807-231)**
  - Covers stroke improvement for the front crawl, back crawl, elementary backstroke and the breaststroke while building endurance.

- **Water Aerobics (807-232)**
  - Covers principles and experiences in aerobic conditioning. Advantages of water as the medium for conditioning the body's cardiorespiratory endurance and muscle toning is the focus.

- **Lifeguard Training (807-233)**
  - Prepares individuals to assume the duties and responsibilities of lifeguards at swimming pools and protected non-surf, open-water beaches. American Red Cross certification received upon successful completion.

- **Scuba Diving (807-234)**
  - Includes classroom, pool and actual open-water diving which may lead to lifetime PADI certification. Equipment and other materials are not covered in course fees. No prior experience necessary.

- **Racquetball 2 (807-235)**
  - Reviews the basics of racquetball, continuing on into advanced skills and strategies of game play.

- **Tennis 1 (807-236)**
  - Focuses on basic stroke development. Rules and strategy of singles and doubles games are included.

- **Tennis 2 (807-237)**
  - Covers intermediate and advanced stroking and shot-making techniques. Game play includes advanced strategies in singles and doubles.

- **Racquetball 1 (807-238)**
  - Fundamentals of racquetball emphasizing skills and strategy for the beginner and intermediate player.

- **Golf 1 (807-240)**
  - Introductory course that stresses the development of the golf swing, putting, chipping and rules and playing strategies.

- **Golf 2 (807-241)**
  - For serious intermediate and advanced golfers who want to improve their game. Emphasizes practice routines, actual play and strategies for special shot-making techniques.

- **Bowling 1 (807-242)**
  - Basic bowling techniques for beginners and advanced beginners. Includes the principles and development of the approach and delivery, rules and competition.

- **Modern Dance (807-246)**
  - Introductory course in modern dance techniques using the Cunningham Method. Emphasizes development of axial and locomotor movement, short compositions and improvisation.

- **Jazz 1 (807-247)**
  - Introductory course in contemporary jazz dance technique. Emphasizes the development of warm-up sequences, isolations, contractions, jazz walks, progressions, turns, combinations and improvisation.

- **Ballet 1 (807-248)**
  - Introduces classical ballet technique. Emphasizes the acquisition of proper ballet technique, postural alignment and increased flexibility.

- **Tap Dance 1 (807-249)**
  - Introduces tap dance technique. Emphasizes the development of tap technique including warm-up sequences, compound steps, progressions, turns and combinations using march, soft shoe and waltz clog rhythms.

- **Badminton (807-250)**
  - Develops basic skills, strategy and knowledge of the rules of the game.

- **Archery (807-253)**
  - Stressing shooting techniques, equipment and safety, and competitions and their rules. For all ability levels.

- **Soccer (807-265)**
  - Incorporates basic playing skills and fundamentals into a team game.

- **Wellness Today (807-266)**
  - Contemporary approach to the total wellness concept. Covers fitness and exercise, nutrition and stress management, culminating with personal planning toward lifetime wellness.

- **Bicycle Conditioning/Maintenance (807-270)**
  - Covers basic conditioning concepts. Includes discussions of long distance bicycle touring and preventive maintenance for the bicycle.
are needed in reading textbook material. Critical reading and notes and marking a textbook, as well as taking notes to facilitate meaningful learning.

This fitness course combines aerobic exercise and weight training to condition the body.

807-290 Special Physical Education 1 credit
Emphasizes beginning lead-up skills and strength development based on individual needs. Provides opportunities for the development of muscular strength, organic vigor, joint function and endurance. Social interaction via recreational games is encouraged.

808 Reading

808-103 College Reading 2 credits
Helps prepare students to independently study introductory college textbooks. Students develop college textbook reading skills necessary to be successful college students. Skills developed include previewing material, taking notes, summarizing, preparing for tests, time management and recognizing bias and propaganda in written material.

808-107 College Vocabulary 2 credits
Teaches basic logic of commonly used adult vocabulary. Using knowledge of common Greek and Latin roots, as well as metric units, students learn how English is constructed and how usage creates semantic variations. Through lecture and discussion students learn to distinguish between synonyms, levels of meaning and abuse of words.

808-303 Introductory Reading (Developmental) 3 credits
For students reading at an introductory level (fifth- to eighth-grade level): Lecture, demonstration and discussion are used to develop effective reading and clear thinking. Develops comprehension and vocabulary skills that are recognized to be essential for sound comprehension. The ultimate goal is to help students become active and independent readers.

808-304 How to Study 1 credit
Lecture and discussion are used to instruct students in taking lecture notes and marking a textbook, as well as taking notes to facilitate memory and understanding. Covers time scheduling (crisis management), successful goal setting, nutrition's contribution to studying, concentration, being an independent learner while utilizing campus resources, mapping and preparing for and taking tests. Emphasizes the application of basic learning theory for efficient study and understanding.

808-310 Intermediate Reading 3 credits
For students reading at the high school level who need to develop and improve basic reading skills required for college textbook reading. Develops vocabulary and comprehension skills and some study strategies which are needed in reading textbook material. Critical reading and the ability to draw correct inferences are also discussed.

809 Social Science

809-125 Government: Process and Practice 3 credits
Focuses on the structure and functioning of state and local governments within the context of federalism. Emphasizes decision making, structure, theory, behavioral characteristics and citizen participation. Although this is not a course in Wisconsin state and local government, Wisconsin provides the most often utilized cases.

809-127 Human Development 3 credits
Focuses on human physical, motor, cognitive and social development across the life span. Emphasizes recognition of and adjustment to normal development stages and typical life problems. The roles of parents, peers and environmental factors on development and behavior are highlighted.

809-143 Family in America 3 credits
Covers problems facing the family in contemporary American society, including marital conflict and adjustment, parent-child relationships and societal pressures.

809-156 Aging and Its Social Problems 3 credits
Aging is a dynamic process which includes physical, social and psychological changes. Through current theory this course addresses both the problems and the challenges of aging and individual responses to them.

809-195 Economics 3 credits
Gives an overview of how a market-oriented economic system operates and surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues.

809-197 Contemporary American Society 3 credits
Interdisciplinary course covering issues that illustrate how our traditional institutions (such as family, education, media, the workplace, the economy and government) are being changed by global political, demographic, multicultural and technological trends. By exploring contemporary issues, students expand their use of critical-thinking skills.

809-199 Psychology of Human Relations 3 credits
Explores the relationship between general psychological principles and our everyday lives. Students are given the opportunity to achieve a deepened sense of awareness of themselves and others. This understanding is applied to human relations at home and on the job.

809-202 Social Disorganization 3 credits
Examines the major issues confronting society: economic and political change, nationalism, racial and ethnic relations, sexism, socio-economic class, crime and justice, health and education, and family life. Discusses causes, effects, possible solutions and future trends. This course requires student participation in reading, writing and discussion.

809-203 Introduction to Sociology 3 credits
-Defines and examines the concepts and realities of social structure, culture, socialization, complex organizations, class, inequality, social groups and social change. Special emphasis is given to institutions such as the family, religion, education, politics, economics and the media.

809-204 Marriage and the Family 3 credits
Assists students in obtaining an understanding of dating, love, mate selection, sexuality, marital adjustment and parenting in American society: gaining personal insight into how to grow and develop as individuals, partners and parents within the institution of the family; and achieving a meaningful and satisfying marriage and family life.

809-205 Contemporary Society 3 credits
Describes and analyzes key social, political and cultural aspects of American life. It examines the tension between the American ideals of individual freedom and equality, social and political realities of class, and racial and gender inequality. The course requires student participation in reading, writing and discussion. Allows students to evaluate competing moral and political claims about our social life and its future directions.
809-206 Women In Society; Social Institutions and Social Change 3 credits
Women's status and roles in contemporary U.S. society are investigated by analyzing various disciplines and institutions such as the family, law, medicine, psychology, education, religion and the media as they impact upon the socialization process and the classification of people by gender.

809-207 Criminology 3 credits
This course is about understanding crime in American society. The emphasis is on why people become delinquent and criminal and especially about why the U.S. has so much violence and crime. The course also examines how we currently deal with delinquency and crime: what's working, what isn't and the current debates and emerging trends on crime policies.

809-208 Contemporary African-American Society 3 credits
Analyze forces which bear on the diverse aggregate of people who compose the African-American community. Emphasizes the effects of racism and oppression. Focuses on diversity within the African-American community, economic life, occupational pursuits, earned income and business ventures. Gives special attention to problems in education, family structure, political behavior and the diversity of lifestyles.

809-209 Women's Work/Women's Lives 3 credits
Examines the role of paid and unpaid work in the lives of women. Using an interdisciplinary approach, specific occupational areas are analyzed from an historical, economic and sociological perspective. Current issues and their impact on the women's labor force and work performed by women - traditional and nontraditional - are presented and discussed.

809-210 Men: Social and Psychological Perspectives 3 credits
Examines and analyzes ways in which society shapes human identity and life experiences of the American male. Included in the course are historical views, socialization, manliness, competitiveness and sports, violence and war, work and success, sexuality, health, relations with other men, women and children, and alternatives for men.

809-211 Macro-Economics 3 credits
This introductory course describes and analyzes factors which influence the overall performance of the economic system. Supply-demand analysis, national income determination models, fiscal policy, money, financial institutions, monetary policy, inflation, unemployment, international trade, economic growth and public sector participation in economic affairs are among the topics considered. Description, analysis and critique of the economy's performance are included among various approaches to course content.

809-212 Micro-Economics 3 credits
This introductory course examines the economic concepts influencing allocation of resources, production and distribution of final products in the U.S. economy. Supply-demand analysis, the implications of various market structures, determination of payment to economic resources, income distribution and government participation in economic activity are among the topics considered. Description, analysis and critique of the economy's performance are included among various approaches to course content.

809-213 Comparative Economic Systems 3 credits
Describes and analyzes various approaches to the resolution of the basic economic problem of production and distribution of goods and services. Discusses classical capitalism, managed capitalism, socialism and democratic socialism. Compares and evaluates systems in terms of such criteria as growth, efficiency, stability and equity. Covers various systems' historical development, institutional characteristics and application to contemporary functioning economies. Prerequisites: 809-211, Macro-Economics; or 809-212, Micro-Economics; or consent of instructor.

809-214 Introduction to International Economics 3 credits
Presents logic supporting trade among nations. Covers trade theory, explanations of trade as it is actually practiced, implications of trade restrictions, mechanics of foreign exchange markets, balance of payments accounts, balance of payments adjustments and macroeconomic policy in an open economy. Includes history of international payments systems and selected topics in international economics (e.g., multinational corporations, European Economic Community). Prerequisites: 809-211, Macro-Economics; or 809-212, Micro-Economics; or consent of instructor.

809-217 Dealing with Diversity 3 credits
This introductory course examines ethnic, racial, religious and cultural origins of Americans. The course focuses on social interactions that contribute to the understanding of different groups in diverse settings.

809-220 American Foreign Policy 3 credits
Addresses conduct of the U.S. as an international actor. Covers problems, challenges and persistent patterns in American policy since the close of World War II. How foreign policy is made is included and attention is given to the interactions of individuals, groups, roles and organizations.

809-221 American National Government 3 credits
Utilizes a systems approach to emphasize the relationships between structure and behavior. Stresses political theory and methodology. Students are encouraged to improve research and analytical skills. Includes the U.S. Constitution, elections, interest groups, parties, mass media, congress, judiciary, the presidency and bureaucracy.

809-222 State and Local Government, 3 credits
Addresses the functioning of state and local governments and relates them and their activities to the federal government. Stresses behavioral characteristics of state and local governments in the total decision-making process. Covers the importance and functioning of political parties, special interest groups, elections, legislatures, courts and executives.

809-223 International Relations 3 credits
Covers methods employed by nation-states in interacting with each other and the forces influencing the nature of interaction. Includes institutions that have been erected in nation-states' quest for power, peace and security. Emphasizes internationalism, ideology, regional integration and trade.

809-224 Government Practice 3 credits
May be taken by people who have received credit for 809-222, State and Local Government, or 809-125, Government Process and Practice, or those currently taking either course. Students are assigned approximately 10 hours a week to work for a state or local government official as a volunteer. The nature of the work depends on the official the student is assigned to work for. Work experiences may include constituent requests, policy research, writing reports, office work and attending meetings. Students may be able to apply skills acquired in their program of study to some area of state and local government. Emphasizes career observation, public administration, articulation, research, writing and human relations skills.

809-225 Social Psychology 3 credits
Study of the individual in the social setting. Includes interpersonal attraction, aggression, sex roles, attribution, altruism, obedience, conformity, attitude change and others. Prerequisite: 809-211, Introduction to Psychology; or 809-203, Introduction to Sociology.

809-231 Introduction to Psychology 3 credits
Study of individual and social behavior including its psychological and physiological bases, development, motivation, emotion, perception, learning and behavior disorders. This course is a prerequisite for several college transfer courses in psychology.

809-233 Developmental Psychology 3 credits
Covers the principles of human growth and behavioral development, from conception to death. Includes methods of studying human behavior, theoretical approaches, individual differences, patterns and sequences of development, and relationships with peers and others. Prerequisite: 809-231, Introduction to Psychology.
809-235 Psychology of Personal Adjustment 3 credits
Emphasizes factors contributing to the development of personality and
adolescent and adult behaviors. Explores psychological theories and
concepts, such as stress and self. Tackles strategies of adjust­
ment, nonverbal behaviors, and coping skills. Prerequisite: 809-231. Introduction to Psychology.

809-236 Applied Psychology 3 credits
Based on a broad spectrum of content in general psychology with
emphasis on applying established principles to the common problems of
normal adjustment, i.e. learning, modification of behavior, creative
problem solving, decision making and social relationships. Emphasizes ways
people can learn to adjust to an almost constantly changing physical,
social and economic environment.

809-237 Abnormal Psychology 3 credits
Emotional, cognitive and behavioral disorders are studied. Covers types of
disorder, therapy and theories. Prerequisite: 809-231. Introduction to Psychology.

809-240 Introduction to Latin America 3 credits
Provides an interdisciplinary introduction to Latin America. Focuses on
history, politics, economics, society and culture. Provides a broad and
multi-faceted exposure to several themes: historical legacies which shape Latin American life, the experience of revolution and
counter-revolution, various economic development strategies, contempo­
rary social change and cultural expression. All of these themes include
specific case studies as well as a general overview.

809-250 Women in the Arts 3 credits
Introduces contributions of women in the visual arts, music, theatre and
related performing arts. Covers theory, content, styles and issues related
to women's works in various art fields and the criteria to assess their
achievements. Traces the constant presence of women in all the artistic
media and explores women's significance in influencing how human
beings perceive themselves and how the arts help to make all life more
fully human.

809-260 Introduction to Philosophy 3 credits
Introduces various fields of philosophy, philosophical methodology and
the history of philosophy. Examines some philosophical issues in depth
and develops the ability to think, speak and write critically about these
problems that have concerned human beings for centuries.

809-261 Logic and Critical Thinking 3 credits
Presents the laws of logic — traditional and modern — governing induc­
tion and deduction, and the common fallacies in reasoning. Includes
defining and classifying concepts, evaluating evidence, drawing sound
inference and problem-solving techniques.

809-262 Ethics: Theory and Application 3 credits
Examines values systems, both traditional and current as theories and as
they affect decisions including recognizing, abortion, euthanasia, capital
punishment and social and economic justice.

809-263 East/West World Views 3 credits
Examines world views and their underlying assumptions. World views
are sometimes rooted in philosophy, religion and myth, each character­
ized by its rituals and symbols. The course focuses on the religions origi­
nating in India (Hinduism and Buddhism); in East Asia (Confucianism,
Taoism, Shintoism, Zen Buddhism); and in the Middle East (Judaism,
Christianity, Islam). Also includes Western rationalism and the scientific
view of the cosmos. Studies the ways in which philosophy and/or reli­
gion affects the concepts of nature, self, society and ultimate reality.

809-264 Reason in Communication 3 credits
Examines argument in familiar contexts. Develops critical skills in com­
prehending, evaluating and engaging in contemporary forms of reason­
ing, emphasizing the uses of argument in mass communication media.

809-265 Philosophy and the Arts 3 credits
Introduces the problems of art and aesthetics; the nature of art; the
description, interpretation and evaluation of works of art; and the nature
of the aesthetic experience. Recommended prerequisite: 809-260, Introduction to Philosophy.

809-266 Ethics in Medicine 3 credits
Examines value systems, both traditional and current as theories and as
they affect decisions including recognizing, abortion, euthanasia, capital
punishment and social and economic justice.

809-267 Leadership as an Art 3 credits
This course has as its central focus the development of leadership
and group dynamics theory and assists the student in developing a personal
philosophy of leadership, an awareness of moral and ethical responsibil­
ities of leadership and an awareness of one's own ability and style of
leadership. Provides the opportunity to develop essential leadership skills
through study and observation of the application of these skills. The course
courages participants to develop their leadership behavior.

809-269 Energy and Society 3 credits
Examines value systems, both traditional and current as theories and as
they affect decisions including recognizing, abortion, euthanasia, capital
punishment and social and economic justice.

809-270 Leadership: Theory into Practice 1 credit
This one-credit course, focuses on the various skills used in leadership
roles, including public speaking, resolving conflict, understanding group
dynamics, and verbal and nonverbal communication, as well as many
others. Emphasis will be placed on adapting various theories into prac­
tice. It is recommended for students who are active in leadership posi­
tions in MATC organizations.

809-271 Families in Transition 3 credits
Examines the study of changes in the structure and function of the family
and challenges created through the rapid transformation of family during
the 20th century. Emphasizes development of an understanding of differ­
ten types of contemporary family structures.

809-272 The Nation's Health 3 credits
Examines the development of an understanding of different

types of contemporary family structures.

809-273 Anthropology 3 credits
Examines the study of human beings and their culture, which includes a
survey of three major sub-disciplines of anthropology: physical anthro­
pology, which explores human biology, evolution and the emergence of
human culture; archaeology, which examines the physical evidence of past

cultures; and cultural anthropology, which focuses on contemporary culture.

809-352 Human Relations 2 credits
Examines the study of human beings and their culture, which includes a
survey of three major sub-disciplines of anthropology: physical anthro­
pology, which explores human biology, evolution and the emergence of
human culture; archaeology, which examines the physical evidence of past

cultures; and cultural anthropology, which focuses on contemporary culture.

809-356 Human Relations Survey 1 credit
Examines the study of human beings and their culture, which includes a
survey of three major sub-disciplines of anthropology: physical anthro­
pology, which explores human biology, evolution and the emergence of
human culture; archaeology, which examines the physical evidence of past

cultures; and cultural anthropology, which focuses on contemporary culture.
810 Speech

810-201 Fundamentals of Speech 3 credits
Includes theoretical examination of the process of communication, the role of speech in self-development, the nature of meaning and the art of persuasion. Provides practice in selecting speech topics, analyzing audiences, organizing speech content, improving speech delivery and critiquing speeches via presentation of informative and persuasive speeches. Several graded and ungraded small group discussions sharpen additional communicative skills.

810-211 Fundamentals of Oral Interpretation 3 credits
Covers concepts and techniques of oral reading via selected projects in reading of children's literature, prose, poetry, drama and readers' theatre.

810-220 Introduction to Drama 3 credits
Beginning program of self-development in the techniques necessary to become a versatile and sensitive actor – physical and vocal expressiveness, analytical insight and the creative synthesis of these skills in role-playing and theatrical production. Emphasizes the technical elements of production for both theatre and television as the course finale is staged for television.

810-231 Intermediate Drama 3 credits
Continues the examination of the theatre, focusing on production and technical roles, started in 810-220, Introduction to Drama. Emphasizes the director, set, sound, and lighting design. Students learn through practical participation in a staged production.

810-235 Technical Theater 1 3 credits
An overview of the backstage elements involved in theatrical production. Provides basic knowledge of scenery, lighting, rigging, sound, props, costumes and stage management. Students have the opportunity to mix classroom with practical experience.

810-236 Technical Theater 2 3 credits
Develops the skills introduced in Technical Theater 1 and explores the design aspects of scenery, lighting, sound and costumes for the stage. Students are encouraged to develop interest in theory, design execution and portfolio preparation. Prerequisite: 810-235, Technical Theater 1.

810-242 Public Speaking 3 credits
Initially seeks to sharpen student awareness of speaker-audience relationships. From that theoretical base, students are familiarized with the creative process of speech construction and organization which is applied to interpretive, informative and persuasive speech projects. Special emphasis is placed on stage fright, audience analysis, selection of topic, preparation and organization of content and delivery of the speech.

810-250 Introduction to Film 3 credits
Examines techniques of film production and explores the relationship between film form and film meaning. Students view films that represent significant movements in the evolution of the medium and learn how to research and write analytical essays about these films.

810-260 Basic Drama Production 1 credit
This practicum stresses self-development in techniques necessary to become sensitive to all aspects of the theatrical production. There is a minimum of 20 hours required in community theatrical production during practicum. No prior acting or production experience is necessary.

815 Art

815-200 Introduction to Art History 3 credits
Involves a chronological survey of art from early cave paintings to current trends. Emphasizes aesthetic and technical innovations due to changing religious, social, economic and political traditions in various countries and cultures.

815-201 Design Fundamentals 3 credits
Provides involvement with the creative process, the traditional elements and principles of design and various techniques for solving two-dimensional design problems.

815-202 Color and Design 3 credits
Provides involvement with practical and theoretical color problems while building knowledge of advanced design concepts. Prerequisite: 815-201, Design Fundamentals.

815-203 Three-Dimensional Design 3 credits
Explores the fundamental concepts of three-dimensional design through the development and construction of form and space structures ranging from the simple to the complex.

815-205 Drawing Fundamentals 3 credits
Introductory drawing class emphasizing sound craftsmanship and the study of basic freehand drawing skills. Includes the study of perspective, proportion, construction of solid forms, light and shade, and rendering in line and tone with a variety of media.

815-210 Art Survey: The Modern Era 3 credits
Surveys the development of European and American art and architecture from the time of impressionism in the 1870s to the contemporary period.

815-211 Art Survey: Women in the Arts 1 credit
This course will present a broad survey of selected outstanding women artists from the 12th to the 20th century. The focus is on painting, sculpture and mixed media from the Medieval Era to the Modern Era, considering a variety of individual European and American artists and their works.

815-219 Life Drawing 3 credits
Introduces student artists to drawing the figure in a variety of situations. Different drawing media are utilized for reasons of expression, detail, articulation, dramatic effect and reproducibility. Includes study of the human anatomy.

815-220 Advanced Life Drawing 3 credits
Continuation of life drawing with emphasis placed on expression, articulation, dramatic effect and refinement of technique. Prerequisite: 815-219, Life Drawing.

815-224 Photography 3 credits
Basic course in 35mm black-and-white photography featuring instruction in camera operation, film developing, printing and mounting techniques. Students provide their own cameras and film.

815-225 Creative Photography 3 credits
Basic 35mm camera and darkroom techniques are reviewed. Personal expression of photography as a fine art is encouraged through a series of problems stressing personal vision and mastery of the photographic medium. Recommended prerequisite: Photography, 815-224.

815-226 Advanced Creative Photography 3 credits
Continues the exploration of photography as a fine art as presented in 815-225, Creative Photography. Further exploration of camera and darkroom techniques intended to foster the understanding of photography as a means of artistic expression. Prerequisite: 815-225, Creative Photography.

815-241 Painting 1 3 credits
Introduction to basic painting techniques. Covers laying out the palette, preparing painting backgrounds and the use of oil or acrylic media.

815-242 Painting 2 3 credits
Intermediate-level course emphasizing picture-making, composition, personal expression in still life, landscape and figure painting. Prerequisite: 815-241, Painting 1.
815-253 Jewelry 1 - Art Metal 3 credits
Basic introduction in designing and fabricating jewelry. Covers flatwork in copper, brass, silver and casting. Some of the various processes covered are piercing, repoussé, casting, bezel setting, enameling, etc.

815-254 Jewelry 2 - Art Metal 3 credits
Advanced course for students with previous experience in basic processes. Instruction is offered in the casting of silver and gold, fabrication in a variety of materials such as copper, brass, silver, wood and plastics. The making of settings is also covered. Prerequisite: 815-253, Jewelry 1 - Art Metal.

815-255 Printmaking 3 credits
Introductory course in various relief print media. Emphasizes development of the single-color print. Recommended prerequisite: 201-102, Design Fundamentals; or 201-103, Drawing Fundamentals.

815-286 Serigraphy 3 credits
Serigraphy is silk screening uses fine screens. Color, design and painterly techniques, as well as printmaking skills, are covered. All students are expected to complete three printed editions of 15.

815-290 Ceramics 1 3 credits
Introduces clay as an art medium through demonstration and experimentation with basic hand-building methods. Encourages individual involvement with the medium. Emphasizes personal expression and exploration of texture, form and surface decoration. Covers electric and raku firing, relevant vocabulary and some of the technical aspects of clay.

815-291 Ceramics 2 3 credits
Covers either the development of basic wheel throwing skills or advanced hand-building techniques. Students work with glaze development through both judicious testing and empirical formulas. Electric firing and raku firing will be explored.

815-292 Watercolor 1 3 credits
An introductory course in the basics of watercolor painting. The course includes information and demonstrations on handling washes and supplies, as well as lessons on color theory, composition and working from a studio setup.

Alternative Learning

851-410 Communications 1
Introduces students reading at a beginning level (zero through fifth-grade) to practical writing, including friendly letters, business letters and resumes. Covers various forms of expressive writing, including poetry, personal journals and biographies. Emphasizes creating more complicated sentences and paragraphs. A student newsletter is produced. Students maintain portfolios of their completed work. Students work in small groups to generate and clarify ideas for writing.

851-440 Communications 2
Develops general reading, writing, vocabulary and comprehension skills at the sixth- through eighth-grade reading level. Emphasizes critical higher-order thinking skills and cooperative learning activities. Students read selections from various types of literature and general and practical topical areas. Writing-to-learn activities and collaborative projects enhance students' abilities in oral, as well as written, vocabulary. Focuses on organization and process of writing an effective and meaningful essay from the introduction to conclusion.

851-470 Communications 3
Covers the transition from sentence-level writing to paragraph-level development for students at the ninth- through 12th-grade reading level. Students are introduced to classical literature and read a novel, short stories, plays and poetry. They also learn to interpret and appreciate popular literature which includes nonfiction, prose fiction, poetry and drama. A multicultural selection of literature is used with an emphasis on critical literacy skills. Skills emphasized include reading comprehension (literal and inferential), applications, and analysis of essays and commentaries. Also included are vocabulary-building, note-taking and outlining skills.

851-494 Communications GED
Basic concepts of behavioral science at the ninth- through 12th-grade reading level. Includes psychology, sociology, anthropology and cause-and-effect relationships. Presents overview of basic concepts in economics and political science. Emphasizes the active engagement of students with the course material, each other and the instructor. Exercises in reading, writing, reflection and discussion improve understanding of central terms and concepts, assist in developing informed opinions/beliefs and prepares for the Writing Skills, Social Studies and Literature GED tests.

854-410 Mathematics 1
Basic concepts of addition, subtraction, multiplication and division at the zero through fifth-grade level. Individualized work involving these four arithmetic operations is conducted during half of each class period. Half of each class covers application topics such as reading and writing numbers; balancing checking accounts; solving word problems; and using calculators, statistics, geometry measurements and graphs. Hands-on experience in applied mathematics is shared through the use of physical measurements such as weight, length and time.

854-440 Mathematics 2
An empirical approach to mathematics at the sixth- through eighth-grade level. Includes fractions, ratio and proportion, decimals, percents, measurement, statistics, geometry, graphs and integer arithmetic. Emphasizes critical thinking, problem-solving and writing activities.

854-470 Mathematics 3
Individualized instruction is offered at the 9th through 12th+ grade level at District Learning Centers to help students who need assistance in any credit or noncredit math courses offered at MATC.

854-490 Communication And Mathematics Learning Centers
The Learning Centers are a complement to all levels of the ABE program. Instruction is provided by Adult Basic Education instructors in an instructional learning center concept. Content and appropriate materials are identified on an individual basis based on the need of each student. These open-entry, open-exit settings offer individualized instruction following a prescribed sequence of materials to achieve students' long- and short-term goals set up with the instructors. Students may study any of the following: basic reading, math, employability or everyday living skills, composition skills, GED/HSED and career education.

854-494 Mathematics GED
Basic concepts of mathematics and science at the ninth- through 12th-grade level, preparing students for Math and Science GED tests.

851-499 and

854-499 Communication And Mathematics Outreach

The Communication and Math Learning Centers complement all levels of the ABE program. Instruction is provided by Adult Basic Education instructors in an Instructional Learning Center concept. Content and appropriate materials are identified on an individual basis based on the need of each student. These open-entry, open-exit settings offer individualized and/or small group instruction following a prescribed sequence of materials to achieve students' long- and short-term goals set up with the instructors. Students may study any of the following: basic reading, math, English as a second language, employability or everyday living skills, composition skills, GED/HSED and career education.

856-440 Science 2
Basic concepts of science at the sixth- through eighth-grade reading levels. Includes earth and environmental sciences, biology and health sciences and hands-on science experiences. Emphasizes critical thinking, problem-solving, group discussions, cooperative activities, laboratory research and writing-to-learn activities.
856-470 Science
Basic concepts of sciences at the ninth- through 12th-grade reading level.
Earth science topics include astronomy, geology, oceanography, meteorology, and environmental issues. Covers basic chemistry concepts and their applications in practical settings. Introduces concepts and characteristics of living things (organisms). Major topics include cell structure, life functions, systems of the body, photosynthesis and nutrition.

858-410 Reading 1
For the adult who reads at the zero through fifth-grade level. Word attack, including phonics and pronunciation of printed words already in the student's spoken vocabulary are stressed. Also stresses intensive teaching of all sound-symbol relationships, both vowel and consonant, from the start. Following these skills, the course shifts to an emphasis on vocabulary expansion and comprehension. The language experience approach is widely used depending on the needs of the students. Basic reading skills, spelling and handwriting skills are integral parts of the course.Repeated reading of low-level material is highly recommended.

858-440 Reading 2
Develops general reading vocabulary and comprehension skills at the sixth- through eighth-grade reading level. Emphasizes critical higher-order thinking skills and cooperative learning activities. Students read selections from literature, general and practical general topic areas. Writing-to-learn activities and collaborative projects enhance students abilities in oral, as well as written, vocabulary. Students keep a journal of their reactions to their reading and writing.

858-470 Reading 3
For students preparing for the GED/HSED who are reading at the ninth- through 12th-grade level. Covers use of structural analysis and context clues in unlocking the meaning of unfamiliar words in all areas of reading -- current affairs, psychology, women's studies, black studies, science, social studies and literature. Sentence writing, dictionary skills and group/peer interaction are also emphasized. Prepares students for college by developing independent study capabilities, time-management techniques, test-taking methods and basic library research skills.

859-420 Social Studies 1
Traces the origin and growth of American social, political and cultural traditions from the age before European discovery of the continents through the present. Through readings at the sixth- through eighth-grade reading level, group discussion, writing-to-learn activities and library research, students practice critical literacy skills that enhance their understanding of subtle cause-and-effect relationships and their ability to make their own historical judgments. An attempt will be made to integrate multicultural perspectives on historical development of the Western Hemisphere and the cultural development of the people who call America their home.

859-430 English as a Second Language 3
High-level beginning course for adult speakers of English as a second language. Class activities consist of 70 percent oral/aural skills and 30 percent literacy skills.

861-440 English as a Second Language 4
Low-intermediate course for adult speakers of English as a second language. Improves listening, speaking, reading and writing skills. Roughly 70 percent of class time is spent in oral/aural work and 30 percent in reading and writing.

861-450 English as a Second Language 5
Middle-intermediate course for adults of English as a second language. Improves listening, speaking, reading and writing skills. Roughly 65 percent of class time is spent in oral/aural work and 35 percent in reading and writing.

861-460 English as a Second Language 6
High-intermediate course for adult speakers of English as a second language. Class activities consist of 60 percent oral/aural skills and 40 percent reading and writing skills.

861-470 English as a Second Language 7
The most advanced ESL class in the program, this class is for relatively advanced students before, or concurrent to, their entry into the regular ABE courses. Roughly 55 percent of class time is spent in oral/aural skills and 45 percent reading and writing skills.

861-490 English as a Second Language Lab
A complement to all levels of the ESL program. Students can practice oral/aural skills with audio and video tapes, or they can use computer programs to improve reading, grammar, spelling or vocabulary.

861-499 Civic Literacy
Open-entry, open-exit and/or structured course offers activities and exercises for people who have a command of the English language and desire to become familiar with United States history and government. Primarily intended to prepare students for the examination for U.S. citizenship.

861-500 Vocational ESL For Business
Develops speaking, reading, writing, vocabulary, life skills and employability skills of people whose native language is not English. Develops vocational language skills necessary for transition into business programs at MATC.

861-505 Vocational ESL For Technology
Develops speaking, reading, writing, vocabulary, life skills and employability skills of people whose native language is not English. Develops vocational language skills necessary for transition into Technical and Industrial programs offered at MATC.

862-470 Employability Skills
Addresses the trends and issues in job seeking, application for employment, gathering information, resume organizing and formatting, cover letter preparation, job interviews and job-search training. Students acquire the necessary skills to obtain full- or part-time employment.
EMPLOYER MEMBERS
Raymond Allen
Leslie Ann Howard

EMPLOYEE MEMBERS
Linda Christman
Gary L. Cluver

MEMBERS-AT-LARGE
James Roth
Elizabeth Henry
Manuel Lugo

ELECTED OFFICIAL
Judy Rendall

SCHOOL DISTRICT ADMINISTRATOR
Richard Magnuson, Ed.D.
Sauk Prairie School District

AREA BOARD
Madison Area Technical College functions within the system of Vocational, Technical and Adult Education in the state of Wisconsin.

The MATC District includes most of Columbia County, Dane County, Jefferson County, Marquette County, Sauk County, and specific school districts in Adams County, Dodge County, Green County, Iowa County, Juneau County, Richland County and Rock County.

The college is operated under the direction of the MATC District Board. The board consists of nine members: two employers, two employees, three members-at-large, an elected official and a school district administrator.

The members of the board are appointed by a board appointment committee composed of the county board chairpersons of the counties included, all or in part, in the MATC District. The chairperson of the most populous county serves as chairperson of the appointment committee. Representation on the board is apportioned throughout the district as set forth in section 38.108, paragraph 2 of Wisconsin statutes, 1982. Current board members include:

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Raymond Allen
Leslie Ann Howard

EMPLOYEE MEMBERS
Linda Christman
Gary L. Cluver

MEMBERS-AT-LARGE
James Roth
Elizabeth Henry
Manuel Lugo

ELECTED OFFICIAL
Judy Rendall

SCHOOL DISTRICT ADMINISTRATOR
Richard Magnuson, Ed.D.
Sauk Prairie School District

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Paula M. Mesko, Sign Language Interpreter: A.D., College of Southern Idaho, Twin Falls
Debra Olsen, Student Services Counselor: B.A., Luther College; M.S., University of Wisconsin-Madison
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Karen Roberts, Student Life Administrator: B.S., University of Wisconsin-Madison; M.S., University of Wisconsin-Madison; Special Study, Tulane University, New Orleans, LA; Doctoral Candidate, University of Wisconsin-Madison
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Accreditation & Memberships

Accreditation
MATC, including its campuses in Fort Atkinson, Madison, Portage, Reedsburg and Watertown, is accredited by the:

- Wisconsin Board of Vocational, Technical and Adult Education
- North Central Association of Colleges and Schools
- National League for Nursing
- Wisconsin State Board of Nursing
- Commission on Dental Accreditation of the American Dental Association
- American Association of Medical Assistants
- American Dietetic Association
- Council on Medical Education of the American Medical Association
- American Occupational Therapy Association
- American Association of Clinical Pathologists
- American Society of Medical Technologists
- National Shorthand Reporters Association
- Wisconsin Department of Health and Social Services Barbering Division
- State of Wisconsin Educational Approval Board (for the education of veterans and war orphans)
- American Culinary Federation Educational Institute
- Retail Bakers of America

Memberships
MATC holds memberships in the:

- Alliance for Community College Innovation
- American Association of Community Colleges
- American Association for Women in Community Colleges
- American Council on Education
- American Council on International Intercultural Exchange
- American Technical Education Association
- Association of Community College Trustees
- Consortium for Institutional Effectiveness and Student Success in the Community College
- Council of North Central Two-Year Colleges
- Greater Madison Chamber of Commerce
- League for Innovation in Community Colleges
- National Community College Hispanic Council
- National Council on Black American Affairs
- National Council for Occupational Educators
- North Central Association of Colleges and Schools
- Wisconsin Economic Development Association
- Wisconsin Manufacturers and Commerce
- Wisconsin Vocational Association

Instructional Design & Curriculum Development
MATC is working toward describing all occupational and related courses in a Competency Based Education form. Instructors develop Competency Course Outlines which list the skills students will perform by the end of the semester. Each competency statement is followed by a measurement statement that describes how well the student must perform the skill. Competency Course Outlines are distributed at the beginning of the course. MATC now has about 900 of its courses described in this format. If a Competency Course Outline has been developed for a course, copies are available from the instructor and the division office.

Competency lists for occupational programs are derived from occupational analyses conducted at MATC. We use a process called DACUM (Developing a Curriculum); each DACUM workshop involves 10-12 expert workers in the occupation who identify tasks they perform on the job. MATC instructors then base course competencies on these lists of tasks. The process is used worldwide in technical colleges and in business and industry. Approximately 50 of the occupational programs at MATC have DACUM charts; these are available in division offices for students who wish to examine the job skills in given occupations.
The Mission of Madison Area Technical College is to provide innovative leadership to build a socially and economically strong, flexible, and competitive community for a changing, global marketplace. The College provides a comprehensive curriculum of vocational, technical, liberal and basic studies. The College directs its resources to ensure accessible, quality education to students.