MADISON AREA TECHNICAL COLLEGE

CATALOG

MADISON AREA TECHNICAL COLLEGE
MATC-TRUAX
3550 Anderson St.
Madison, WI 53704
608/246-MATC

COMMERCIAL AVENUE EDUCATION CENTER
2125 Commercial Ave.
Madison, WI 53704
608/246-5202

FIRE SERVICE EDUCATION CENTER
1750 Pearson St.
Madison, WI 53704
608/246-6911

SOUTH MADISON EDUCATION CENTER
1602 S. Park St.
Madison, WI 53715
608/255-2568

STOUGHTON EDUCATION CENTER
356 E. Main St.
Stoughton, WI 53589
608/259-2935

MATC-FORT ATKINSON
827 Banker Rd.
Fort Atkinson, WI 53583
414/563-6611

MATC-PORTAGE
330 Collins St.
Portage, WI 53901
608/742-2151

MATC-REESEBURG
300 Alexander Ave.
Reedsburg, WI 53959
608/524-4386

MATC-WATERFORD
1300 W. Main St.
Watertown, WI 53094
414/261-3776

EDUCATION FOR THE REAL WORLD

1993-1995
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 awhile, 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

MISSION
The mission of Madison Area Technical College is to provide innovative leadership to help build a community which is socially and economically strong, flexible and competitive in a changing global marketplace.

The college will provide a comprehensive curriculum which includes vocational, technical, liberal and basic studies.

The college will continually direct its resources to ensure accessible, quality education to enable current and prospective students to become productive, civic-minded citizens.

EQUAL OPPORTUNITY POLICY & AFFIRMATIVE ACTION COMMITMENT
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 in its educational programs, admissions, activities or employment policies.

Services, financial aid and other benefits of the Wisconsin Board of Vocational, Technical and Adult Education are provided on a nondiscriminatory basis, as required by the Civil Rights Act of 1964.

MATC is in full compliance with Title VI and VII of the 1964 Civil Rights Acts, 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, Wisconsin Fair Employment Law, and equal opportunity ordinances, Madison, Wis.

Inquiries regarding compliance with the above named regulations may be directed to the Affirmative Action Office, Madison Area Technical College, 3550 Anderson St., Madison, Wis. 53704 (phone 246-6045) and to the vice-president—Student Services (phone 246-6091).

Individuals applying for or receiving assistance through this agency who believe that discrimination on the ground of race, color or national origin is being practiced by the Wisconsin Board of Vocational, Technical and Adult Education may file a written complaint with the state agency, the federal agency or both.

Any written complaint is to be signed by the complainant, shall give in detail the time, place, pertinent facts and circumstances of the alleged discrimination and shall be submitted to the State Director, Wisconsin Board of Vocational, Technical and Adult Education, 310 Price Place, P.O. Box 7874, Madison, Wis. 53707.

Cover art: Mary Ann Highsmith, MATC commercial art student
# Table of Contents

## General Information
- General Policies
- Academic Policies & Procedures
- Student Rights & Responsibilities
- Facilities
- Student Resources
- Alumni Association
- Community Outreach
- Accreditation & Memberships

## Student Services
- Admissions & Registration
- Affirmative Action
- Alcohol & Other Drug Abuse
- Assessment & Orientation
- Counseling Center
- Disabled Student Services
- Financial Aid
- Health Services
- Housing
- Minority Recruitment & Retention
- Student Life
- Activities & Organizations
- Child Care
- Athletics
- Music
- Women's Services

## Academic Programs
- Degrees
- Diplomas
- College Transfer
- Vocational-Technical Development
- Alternative Learning
- Apprenticeship
- Programs of Study
- Business & Applied Arts
- General Education
- Health, Human & Protective Services

## Program Descriptions (listed alphabetically)
- See Programs of Study
  for index of programs

## Courses

## Board, Administration & Faculty Directory

## Index

## Phone Directory
GENERAL INFORMATION

General policies

Student Handbook
Current and complete academic and general policies of Madison Area Technical College are published each year in the Student Handbook. Listed below is selected information of the greatest significance to incoming students.

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. Students who wish to submit items for the Bulletin should bring them, preferably typed, to the Student Life Office, Room 140, Truax, by noon the Wednesday preceding publication.

Class Size
The college reserves the right to discontinue any class that has an attendance of less than 10.

Classroom Attendance & Visits
In accordance with the provisions of Wisconsin Statutes 38.22 and 118.15, persons must be 16 years of age or older to enroll in or attend classes offered by MATC.

Nonstudents, regardless of age, shall be permitted to visit classes offered by the MATC Board with the consent of the instructor teaching the class to be visited or by obtaining a visitor's permit from the appropriate administrator. Consent and permission will be granted only for the purpose of becoming knowledgeable about a course or oriented to the educational mission of the district.

This policy shall not inhibit anyone from receiving personal services in the dental laboratories, the barbershop, or elsewhere. In these instances, the person shall follow the established appointment practice or procedure.

Students or nonstudents are prohibited from leaving a child under the age of 16 years in MATC facilities unattended. This policy does not include allowing children in class where they contribute to the instructional 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.

Lockers
The locker rental period begins the first day of registration in July and extends through the last day of final exams in May. Summer school rental is for the summer school term. Current fees may be obtained from the Student Life Office. Individuals must have a current MATC identification card or registration receipt in order to rent a locker. Individual responsibility includes the following:

1. Each student is responsible for the security of the contents of his/her assigned locker and shall supply an adequate lock.

2. Damaging, defacing or altering an assigned locker will result in fines and/or forfeiture of deposit. The 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 narcotic or illegal drugs, firearms, 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 must be cleaned and all items, including locks, must be removed by the last day of final exams in May or the day of withdrawal. Lockers that are not cleaned will prompt a deposit forfeiture, and items will be removed and discarded.

6. Locker fees are for the academic year which includes the fall and spring semesters. Locker fees will not be prorated for less than a semester.

7. 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 Office, Room 140, 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 at the Student Life Office. 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.

8. If an individual requests a different locker after assignment has been made and confirmed, there will be a $2 processing fee. Any other adjustments or charges will be determined by the student life staff. It is understood that a locker is being issued with the
agreement that the locker is district property. The dis-

trict board or designee reserves the right to inspect it
at any time for any reason.

Please refer any questions or concerns about lockers to the
Student Life Office or call 246-6228.

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 ticket-
ing and removal. Parking tickets are processed through the
Dane County Court System.

Fees are payable at time of registration. Carpools with
four or more individuals do not pay the additional parking
fee. Mopeds and bicycles will be provided free parking.
Visitors’ vehicles shall display a visitor parking permit.

Drop-off/loading areas are provided free of charge.
Disabled parking is also provided without charge; howev-
er students parking in disabled stalls must register with the
Parking Office. Call 246-6031 with parking concerns or
questions.

Tobacco Products
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. The use of tobacco products is only allowed in
designated outdoor areas.

Drugs
The Drug Free Schools and Communities Act Amend-
ments of 1989 (Public Law 101-226) requires that all col-
leges comply with certain standards related to issues sur-
rounding drug abuse prevention on campus. These stan-
dards are addressed in MATC Board 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 stu-
dent’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

Work Study or Clinical Affiliation Policy for
Temporarily Disabled or Pregnant Students
A student enrolled in a program which requires a clinical
affiliation or work experience and who becomes tem-
porarily disabled or pregnant or incurs a temporary physi-
cal condition may participate until a physician or certified
nurse-midwife reviews the program and 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.

Visitors
The board and the staff welcome visitors to the college.
However, if a visitor conducts him/herself in such a way
that would endanger the safety or welfare of students, staff
or other visitors the MATC District 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 visi-
tors and property of the district.

3. File a formal complaint and bring charges.

Weather
In case of bad weather, students are requested not to call
the college to inquire if classes will meet. In severe weath-
er, MATC students should monitor designated radio
and television stations. The college seldom closes because
of bad weather. Students are urged to use their own judg-
ment regarding road conditions, safety and other factors,
Social Security Number

Social security numbers are used for identifying student records and are kept in strict confidence. Failure to furnish this number may delay processing.

Transcripts

Transcripts are confidential and are only released by the college when students submit a signed request. Each student is entitled to three free transcripts. A charge of $1 is made for each additional transcript.

Grades & Grade Reports

Grade reports are issued at midterm and two weeks after the end of each semester. Grade reports are mailed directly to students if all financial obligations have been met. Additional student copies may be obtained from the division dean/chairperson.

Grade Point Average

Grade point averages are figured on a 0 to 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 an I, incomplete.

If any course is repeated during continued enrollment, the higher grade is recorded on the permanent academic record, and the lower grade is deleted. Both courses are 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 

\[ (4 \times 4) + (4 \times 3) + (4 \times 2) + (4 \times 1) = 40 \text{ total grade points}. \]

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, you should 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.

Incompletes

An incomplete is given if a student has done passing work, and because of illness or 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 may change to an F. No student is allowed to graduate without removing all incompletes.

Health Occupations

Students may receive an incomplete if deficiencies in clinical performances are such that the instructor believes they may be corrected in sequential courses that have clinical components. When the identified deficiencies are corrected, the student is given a grade for the course. If deficiencies in clinical performance are not corrected by the end of the sequential course which has a clinical component, the instructor will change the grade to an F.
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. High honors are assigned to those students with a semester grade point average of 3.50 or better for the preceding semester. Honors are assigned to those students with a semester grade point average of 3.0 through 3.49 for the preceding semester.

Degrees, Diplomas & Graduation
Under the provisions of Chapter 51, Laws of 1961, the Wisconsin Board of Vocational, Technical and Adult Education authorizes local vocational and adult education boards to grant vocational diplomas and associate degrees 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- to 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 attain a GPA of 2.0 or better in their major field subjects and have an overall GPA of less than 2.0.

Certificates of attendance are issued to students who attain a GPA of less than 2.0 in their major field subjects. Overall GPA is of no significance for attendance certificates.

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.

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.

Scholastic Residency
At least one-half of the credit requirements necessary for obtaining a diploma or an associate degree in any program must be taken at the college (see advanced standing and transfer of credits). Scholastic residency mandates that the student be registered in and satisfactorily complete applicable program courses in the semester that he/she is completing the program requirements. Any exception to this mandate shall be approved in writing by the dean/chairperson of the division in which the program is offered.

To obtain an additional diploma or degree, a student must acquire one-half or more of new, additional credits in residency. No more than one-half of previously earned credits from a diploma or degree may be applied toward an additional diploma or degree.

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 three semesters. Graduating students in one-year programs become eligible by achieving a 3.75 cumulative GPA after one semester. Candidates are designated on the graduation program and will wear a white cord at the graduation ceremony. Final determination and the awarding of Graduation Academic Honor Award certificates include graduates achieving a 3.75 after program completion. Students receive their certificates in the mail with their diplomas.

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 received in the mail with the student’s diploma.

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

A student may not request advanced standing by testout for any course during the semester in which he or she has registered for that course 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.

Attendance

Students who do not attend their first class meetings must inform the appropriate dean/chairperson in writing. Students should inform the division office of extenuating circumstances arising on the first day of class. Failure to comply may jeopardize continued enrollment. Attendance is the responsibility of the individual student. In cases of absence, students must make arrangements with the instructor to make up work missed. Missing a final examination without notifying the instructor and without having a satisfactory excuse results in an F on the examination.

Auditing Courses

A student may audit a course for no credit or grade, with the consent of the division dean/chairperson. Audit selections must be made at the time of registration. Credit or no credit, the same fee is charged. After classes begin a student taking a course for audit may not change to credit, nor can a student change from credit to audit without the written permission of the dean/chairperson. The course is indicated as “Au” for audit on the transcript. An auditor must meet attendance requirements, participate in classroom work and complete assignments, but may not take examinations.

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 usually refers 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.

Outside Work

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.

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 been enrolled for a minimum of six semester credits during the spring semester and must indicate intention to enroll in the succeeding fall semester.

Study Load

A full-time student in an associate degree program may take a maximum of 18 credit hours. In some occupational programs, 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 20 periods per week is considered a full-time student.

Withdrawals

Nonattendance does not constitute a cancellation of a fee arrangement. (See Refund Policy, under Admission & Registration, for refund information.)

Program Withdrawals

A student accepted to 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 divisional 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.

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 Records and Registration and/or their department/division office at the Truax Campus and/or the appropriate campus office. It is strongly recommended that students who plan to withdraw from a course should discuss the withdrawal with their instructor. Students should be aware that in some programs, withdrawal from certain courses may result in pro-
gram withdrawal. Students should contact their respective division/department office to clarify this issue.

Health Occupations Special 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 Health Occupations Department.

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

Academic standards–Associate Degree Nursing Program
A student must have obtained satisfactory achievement (C or 2.0) in major field subjects and support courses. A student must have a minimum grade of a C in theory and an S (satisfactory) in clinical practice to pass a course in the nursing area of instruction (510 courses).

Nursing course withdrawal
1. A student may repeat the same nursing course once.
2. A student who fails a nursing course or withdraws from the program may re-enroll. A student may re-enroll in the program only one time. The chairperson of Nursing and the faculty may make exception to the above policy in unusual circumstances.

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 800 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 world-wide in technical colleges and in business and industry. Approximately 40 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.

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 and to be familiar with all rules and regulations. The following principles and rules apply to all students of MATC:

1. Students are expected to comply with all state statutes, city ordinances and college policies.
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 procedures as may be appropriate, for the following offenses:
   a) Obstruction or disruption of the normal operations of the college or activities authorized by the college.
   b) Physical or verbal abuse or detention of any person(s) on college property or at college activities when such endangers the health, safety or rights of such person(s).
   c) Theft or damage to property of the college or property of any visitor or member of the college community.
   d) Unauthorized entry to or use of college property or facilities.
   e) Dishonesty (cheating, plagiarism, etc.) or knowingly furnishing false information to the college.
   f) Gambling as defined by law.
   g) Smoking or the use of tobacco products as prohibited by MATC policies.
   h) Use, possession or distribution of narcotic or illegal drugs, firearms, explosives, dangerous chemicals, etc. on college-owned or controlled property or at college-sponsored activities. (For a synopsis of this information please refer to the brochure, Alcohol...
and Other Drug Prevention Programs, available in campus libraries and Student Services.)

Any violation of an 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 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.

**Probation & Dismissal**
The MATC 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 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 Harassment, page 9. Also see Nonacademic Probation & Dismissal, on this page.)

**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 or 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.

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 or the student's right to be present on campus and attend classes should not be altered, 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 District 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 an appeal from the decision of the Academic Appeals Committee. A hearing before the MATC 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 as to its decision.

Appeal from academic actions and 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

Discrimination
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, or a record of arrest or conviction in its educational programs, admissions, activities or employment policies.

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 future careers and success of students and to the operation of MATC.

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, and/or marital status. Harassment is also illegal if it is based on 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 tangibly effects or interferes with an individual’s job performance or other employment or academic opportunities.

Anti-Harassment Committee
There is an Anti-Harassment Committee that consists of one counselor appointed by the president of the Teachers’ Union, one teacher appointed by the president of the Teachers’ Union, one student appointed by the Student Senate, three administrators appointed by the president, and one support staff member appointed by the president of the Support Staff Union. A chairperson will be selected by the committee. An up-to-date list of committee members may be obtained from the president’s office, the Student Services Office, or the Student Senate Office. All members of the committee shall maintain confidentiality.

The committee is responsible for the organization’s Anti-Harassment Program, including development of anti-harassment policy and procedures and anti-harassment-
Discrimination and 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 recrimination and will be assured a prompt and confidential investigation. Any person who has a complaint brought against him/her will have the same assurance of a prompt and confidential investigation before any determination of probable cause.

Responsibility of staff and faculty
Under both Wisconsin and federal laws, MATC has a responsibility to address discrimination/harassment which comes to the attention of administrators 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 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 the 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 Student Handbook.

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 policy and procedure, will 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 complainants and the names of the accused shall be held in confidence and not revealed unless a formal complaint is 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 or Women’s Initiative Office. Upon request, MATC shall preserve the anonymity of any employee or student who is the aggrieved party and a complainant of discrimination/harassment. However, the names of the complainants and 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.

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 administrative staff member 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 20 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.

Substantial evidence of discrimination/harassment may also be grounds for beginning a formal disciplinary process against either students, staff or faculty under any applicable Student Handbook rules, collective bargaining agreement, or other administrative procedure.

An accused party who is not satisfied with the results of the president’s decision may pursue the standard grievance process set forth in the Student Handbook, a collective bargaining agreement, other administrative procedures or may defend against any disciplinary proceeding against them as a result of the discrimination/harassment complaint process.

**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:

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.

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.

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 of Instructional Services. Complaints concerning student services should be addressed to the vice president of Student Services. Complaints concerning support staff should be addressed to the vice president of 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.

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 student senators chosen by the Student Senate 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 Board.

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.

**General Information**
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.

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 pertinent facts relating to the nature of the conferences where they were involved.

Facilities
Locations offering MATC programs and courses, include:

- **Truax Campus**
  3550 Anderson St.
  Madison, WI 53704

- **Fire Service Education Center**
  1750 Pearson St.
  Madison, WI 53704

- **Commercial Avenue Education Center**
  2125 Commercial Ave.
  Madison, WI 53704

- **Downtown Education Center**
  211 N. Carroll St.
  Madison, WI 53703

- **South Madison Education Center**
  1602 S. Park St.
  Madison, WI 53715

- **Stoughton Education Center**
  356 E. Main St.
  Stoughton, WI 53589

- **MATC–Fort Atkinson**
  827 Banker Road
  Fort Atkinson, WI 53538

- **MATC–Portage**
  330 Collins Street
  Portage, WI 53901

- **MATC–Reedsburg**
  300 Alexander Avenue
  Reedsburg, WI 53959

- **MATC–Watertown**
  1300 West Main Street
  Watertown, WI 53094

Student Resources

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 Truax campus. Staff and students are welcome.

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
Necessary books and supplies are sold 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. The Truax bookstore is open from 7:30 a.m. to 4 p.m., Monday through Friday. The Downtown Education Center bookstore is open from 8 a.m. to 3:45 p.m., Monday through Friday.

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 used textbooks on consignment and/or purchase textbooks at a reduced price.

The Used Book Sale Office, located in rooms 140D 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 the office.

Cracker Barrell
The Cracker Barrell is a small shop located within the college. It is operated by fashion merchandising students and serves MATC students, staff, faculty and nearby residents. Students design the decor each year, establish the image, create the promotional materials, and buy and sell the merchandise, which varies each season. Customers usually find a good selection of gift items, candy, greeting...
cards and note papers, bath products, leather items, jewelry, apparel for men and women, tote bags, wicker and plush animals. This little shop serves as a laboratory for fashion merchandising students and provides opportunities 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. Dental hygiene students perform oral prophylaxis (cleaning) and other dental services such as x-rays, study models, topical fluoride treatments, and oral hygiene instruction. Services are available to students for a small fee.

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 proper interpretations of diagnostic materials 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 Campus.

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 Barrel. 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.

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
The six information resource centers are located at the Truax Campus, the Downtown Education Center, MATC–Fort Atkinson, MATC–Portage, MATC–Reedsburg and MATC–Watertown.

The largest information resource center, located at the Truax Campus, seats 525 people and has 1.25 miles of shelving with a capacity for 100,000 volumes. On-line computer catalogs in all information resource facilities provide students with access to titles in all collections.

Representative services and collections offered at one or more information resource centers include:
- Print and media collections
- Periodicals to support all programs
- Reserve collection
- Reference collection
- Circulating materials collection
- Microformat collection
- Computer catalog access to more than 500 Wisconsin libraries
- Class and Individual orientations to collections, services, databases, facilities
- Interlibrary loan
- InterCampus loan
- Microcomputer laboratory
- Scheduling and reserve of software and print materials
- Access to 400 on-line databases
- Indexes and complete text of periodicals and reference works on CD-ROM
- Audiovisual playback equipment
- Photocopyers
- Individual and group study areas

Instructional Learning Centers
Instructional Learning Centers are located at the Downtown Education Center, Truax campus, Commercial Avenue site, the satellite campuses at Portage, Reedsburg, Fort Atkinson, Watertown, and at various outreach sites throughout the district. Classes and individual help are provided in basic skills (reading, writing, math, social studies and science), GED exam preparation, English as a second language, citizenship and pre-employment skills.

Support instruction and peer tutoring is provided to students enrolled in vocational-technical programs. Academic testing is available in the area of math, reading and English on an individual or group basis. A variety of other academic supportive services are provided to include: Job Training Partnership Act programs, minority recruitment-retention and single parent, displaced homemaker programs.

Microcomputer Labs
At the Truax campus, the Information Resource Center has IBM and Apple 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.
Mitby Theater

The Mitby Theater is a 986-seat proscenium theater which hosts a variety of events during the year. Student and community productions as well as touring professional artists are part of MATC’s Performing Arts Series. The theater also serves community organizations presenting works. The beautiful acoustics, comfortable seating and pleasing surroundings have made the Mitby Theater a favorite place to see the performing arts in Madison. For information, contact the theater box office, located in front of the theater at the Wright Street entrance, or phone: 246-6006.

Optical Dispensary & Vision Screenings

The Optical Dispensary is operated by optometric technician students under instructor supervision and serves students, staff and faculty. Free services include adjustments and minor repair of eyewear, fitting of prescription safety glasses, 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; contact the Optometric Technician Office. Hours are posted every semester.

Placement Office

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 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. Job notices received from employers are kept on file, 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.

Recreation Center

The Recreation Center’s services include film sales and one-day developing: newspaper, pizza and health item sales; and camping equipment rental.

The Recreation Center offers video games, billiards, foosball and board games. The center hosts the Association of College Unions-International and campus tournaments in billiards, backgammon, table soccer and other events. The facility may be used for club or group functions by making arrangements with the recreation center manager.

Telecommunications

Telecommunications, a part of MATC’s media group, serves three major functions: video courses (including College by Cassette), teleconferencing, and operating instructional television fixed services.

Video courses include business, general studies, and technical and industrial offerings which may be applied to MATC’s vocational degrees and diplomas. Typically, registered students take courses at home or work using textbooks, television study guides and videotaped lectures. Instructors provide support, including giving and grading assignments and exams. Students are typically expected to attend three to six campus sessions during the semester.

Teleconferencing is fed to the district by MATC’s two commercial satellite antennas, which receive programs from almost all of the available satellites. Many teleconferences are scheduled each month; make inquiries through the Telecommunications Office. Topics range from medicine to business to marketing and computers. Conferences feature top national and international experts who make live presentations to conference participants all over the world. Participants, in turn, may speak with these professionals directly via a telephone interconnect.

Instructional television fixed services is a video microwave system which interconnects MATC campuses and other institutions and households. Instructional television fixed services allows MATC to provide teleconferences, video courses, general information, and administrative and in-service communications to the district. For information, call Telecommunications, 246-6288.

Alumni Association

The MATC Alumni Association promotes activities for the more than 39,000 MATC graduates. Alumni provide an excellent resource for students seeking jobs. Their financial contributions to the MATC Foundation have assisted many individuals in completing their educations. Alumni receive regular communications from MATC, and their feedback is solicited to ensure current curriculums appropriate for today’s jobs and jobs of tomorrow. The association also works with the college staff to coordinate the Alumni Ambassadors Program. Ambassadors volunteer to answer questions from prospective students, speak at career days and job fairs, and represent their program areas when the college needs assistance.

Community Outreach

Outreach Services

The primary focus of MATC’s Outreach Services Office is on adult continuing education beyond traditional courses associated with formal classroom activities. Its center of operations is at the Downtown Education Center and its activities are district-wide in scope.
By cooperating with industry and business, public and private agencies, community groups and other institutions of learning, MATC is able to sponsor and develop a wide variety of institutes, seminars and workshops. Objectives and goals reflect the desires and concerns of the populations served. Need assessments and other research activities are carried out periodically to determine new offerings and to evaluate on-going ones. The Outreach Services Office seeks and welcomes contacts, requests, inquiries and suggestions in its effort to expand and become more effective in the adult continuing education area. Programs include:

- Tax workshops: personal, business, corporate, etc.
- Skill upgrading workshops: modern data processing systems, computer desktop publishing, human relations, etc. (available on the job site or at MATC).
- Small business workshops: quality control, statistical control, etc.
- Workshops for property assessors, municipal clerks, and treasurers; workshops for secretaries and office personnel.
- Seminars for apartment building owners and managers.
- Workshops of general public interest—home buying, home management, basic home repair, fitness, career planning, financial planning, parenting, nutrition, etc.
- Self-improvement and life enhancement workshops.

**Small Business Procurement Assistance Center**

MATC's Small Business Procurement Assistance Center began its fifth year of operation in October of 1992. This ongoing program is the result of a cooperative agreement grant between the Defense Logistics Agency and MATC. The SBPAC serves the community by assisting businesses that are competing for government contracts. Last year the program's effort directly and indirectly accounted for 46 million of federal dollars being spent in the state. This impact can be measured in the form of added tax revenue, jobs, and a healthy business climate for the MATC district. Activities include:

- **Computerized Bidmatching Service:** the SBPAC provides a sophisticated search of advertised and unadvertised contracting opportunities at state, federal and international levels. The search is customized to the product/service capability of each business.

- **Bid Counseling Service:** SBPAC staff contract specialists work directly with businesses to provide technical assistance on bid projects. Assistance given enables a business to properly interpret government terminology, prepare proposal documentation, and become a "responsive" bidder.

- **In-House Specifications and Standards:** the SBPAC has a weekly updated CD-Rom service to provide businesses with military specifications and federal standards. Documents that take weeks to receive from the government are sent within 48 hours.

**Market Research:** the SBPAC has on-line research capabilities that enable staff experts to compile information on past bid solicitations, awards, and contracts for interested clients. Within minutes a business can accurately determine if there is any potential for their products or services in the federal government or international market place.

**Past Procurement Histories:** the SBPAC has a CD-Rom listing of 20 major Department of Defense buying activities. This listing contains records of past purchases and can be researched by national stock number, vendor part number, or product description.

**Accreditation & Memberships**

**Accreditation**

MATC, including its campuses in Fort Atkinson, Madison, Portage, Reedsburg and Watertown, is accredited by:

- 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 Society of Clinical Pathologists
- American Society for Medical Technologists
- American Veterinary Medical Association
- 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

**Memberships**

MATC holds memberships in the:

- American Association of Community and Junior Colleges
- American Council on Education
- American Education Association
- American Technical Education Association
- American Vocational Association
- Association of Community College Trustees
- Council of North Central Community-Junior Colleges
- Greater Madison Chamber of Commerce
- League for Innovation in Community Colleges
- NCHEMS (Higher Education Management)
- North Central Association of Colleges and Schools
- Wisconsin Vocational Association
- Wisconsin Education Association
STUDENT SERVICES

Admissions & Registration

Admissions Requirements
MATC is open to all adults and to youths 16 years of age and older who are capable of profiting from instruction. Post-secondary programs are open to:

1. Applicants who have graduated from high school.
2. Applicants who have passed high school equivalency tests.
3. Mature applicants who, through work experience, can prove they are capable of mastering the subject matter.
4. High school students attending under the Post-Secondary Options Program.

High school equivalency is interpreted to mean a passing score on all parts of the State of Wisconsin High School Equivalency Test or a passing result on the GED test; a photocopy of GED test scores or Wisconsin High School Equivalency Test results are required in these cases.

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

Every applicant must complete an application form. 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 MATC classes. In all cases, the student must be 16 years of age or older at the time classes start, and the student must have parent or guardian permission and consent of the high school principal. 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.

Admissions Procedures
Applications for post-secondary programs are accepted beginning the third Monday in November (except when Wis. Act 336 applies) for the following school year. Application forms may be obtained from local high school counselors or by writing the Admissions Office, MATC, 3350 Anderson St., Madison, Wis. 53704. Applicants currently enrolled in high school must have completed six semesters prior to applying. The closing date for advance application by mail, for admission in fall semester, is July 1. After this date, students may register for courses where openings are available.

Whenever possible, the applicant should have the high school send a transcript of high school records. If currently enrolled in high school, the applicant should also send a listing of senior year courses and credits. If a graduate, the applicant should arrange to supply a complete high school transcript as well as a transcript of any additional education. These should be sent by the high school or colleges attended directly to MATC. If the applicant has taken the ACT, although it may not be required, please have the results sent to Madison Area Technical College.

Depending on program choice, the applicant is notified of a date for additional tests when a complete application and transcript have been received. Evaluation of application, transcript, and test results are made by the program dean/Chairperson, and the applicant is notified of the status of his/her application. Those who do not qualify for the program of their choice may consult with a counselor to consider alternatives.

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, students shall be randomly selected by computer.

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

Admissions Tests
Certain programs require testing, others do not. Current application forms indicate testing requirements. After MATC receives an application form and transcripts, notice of a test date is sent to the applicant for programs where special tests, not ACT or SAT, are required.

Students who wish their pre-admissions test results interpreted, may consult with a counselor. Assessment and orientation programs are provided for the purpose of determining appropriate course placement. Additional interest and aptitude testing is available for students interested in developing educational and occupational plans.

Health Forms & Physical Examinations
Barber and cosmetology students must pass the physical requirements set by the Wisconsin State Board of Health.

Students in Health, Human and Protective Services programs are required to have a physical examination prior to registration. Their physician must mail examination results directly to the Health, Human and Protective Services Division. Forms are provided. If results of the physical examination have not been received by the regis-
Prior to registration, a student may be allowed to register at the discretion of the appropriate dean/chairperson. Under no circumstances, however, are students assigned to the clinical area until this requirement is met.

All students in Health, Human and Protective Services must show evidence of measles immunity prior to clinical affiliation. Specific programs in the Health, Human and Protective Services Division may also recommend that students be immunized against hepatitis after enrollment. Vaccines are available through the Student Health Office.

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 show evidence of health insurance coverage prior to their assignments for clinical experience. 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

MATC is approved for the attendance of nonimmigrant students under the immigration and nationality laws and the issuance of I-20 forms. All visa students are accepted on academic probation. Nonimmigrant foreign applicants must:

1. Demonstrate a level of proficiency in English to pursue the program of their choice;
2. Have an MATC district resident as a sponsor;
3. Sign an MATC training agreement;
4. Submit English-worded transcripts;
5. Submit TOEFL or Michigan Test scores;
6. Obtain an I-20AB or I-20MN visa; and
7. Deposit $7,000 toward semester fees.

### 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 that 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

Registration for classes is conducted differently for program students than special or nondegree students. Phone and in-person registration for special students enrolling in degree and nondegree credit classes is available to the public after program students have registered. Classes are listed in the MATC timetable with supplemental listings in district newspapers.

Students do their own on-line course scheduling. Letters are sent to give students the specifics of registration.

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.

### Fees

Information on current fees is published in each semester Timetable.

#### Advance reservation fee

An advance reservation fee of $50 is due within 15 days after notification of acceptance. Receipt of this fee is the assurance of a place in the program or on the waiting list for the program in which the student 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.

#### 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

At the time of registration, a $15 graduation fee is paid by each student planning to graduate at the end of the semester. If the student is dropped for academic, medical or other reasons, or withdraws, 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.

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.

Program and materials fees
Program and materials fees are established annually by the Wisconsin Board of Vocational, Technical and Adult Education according to Wisconsin state statutes.

Supplemental fee
A supplemental fee is charged all students enrolling in post-high school courses. This fee, which supports co-curricular activities, is not refundable unless MATC cancels the course or the student withdraws before classes begin.

Textbooks and class materials
Students purchase their own textbooks and class materials.

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 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.
   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 policy for program, material and 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 period. In the event of extenuating circumstances students should consult with their division dean or a counselor. The 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 checks does not constitute 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.

**Refund policy for all courses regardless of length**

<table>
<thead>
<tr>
<th>COURSE LENGTH</th>
<th>80% of total fees</th>
<th>60% of total fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>A semester or longer</td>
<td>first 14 calendar days</td>
<td>15-28 calendar days</td>
</tr>
<tr>
<td>Less than a semester</td>
<td>less than 11% of hours</td>
<td>11-20% of hours</td>
</tr>
</tbody>
</table>

*See paragraphs below for exceptions.*

1. If the district cancels a course, the refund is 100 percent of all fees paid.

2. Late, supplemental and parking fees are not refundable after the 100-percent period, unless the college cancels the course.

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 materials 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 the class which the student is scheduled to attend has begun, the refund is 100 percent of above fees paid.

5. A student who drops one course and adds another during the first 14 calendar days of the term shall receive credit for all applicable program fees, material fees and out-of-state tuition for the course dropped. The fees must be applied to the course added:

   a) If the applicable program fees, material fees and out-of-state tuition for the course added exceed the fees for the course dropped, the student will be assessed the additional amount.

   b) If the applicable program fees, material fees and out-of-state tuition for the course dropped exceed the fees for the course added, refunds will be made pursuant to Wis. Administrative Code, A-V 10.09.

6. Under extenuating circumstances students should consult with their divisional dean or a counselor.

**Affirmative Action**

The affirmative action officer administers MATC’s compliance with affirmative action guidelines and serves as an advocate on minority student issues. Refer to page 9 for MATC’s discrimination and harassment policies.

**Alcohol & Other Drug Abuse Prevention**

The district recognizes drug and alcohol dependency or abuse as major health problems, as well as a safety and a security problem. A student in need of assistance in dealing with such problems is encouraged to use the student services referral system and 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 local alcohol and drug abuse treatment is provided in a brochure, Alcohol and Drug Abuse Prevention Program. These and other informational brochures may be obtained from any campus library or any counseling office. For information, call 246-6076.

**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 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 orientation session. This session lasts approximately two hours. You may be excused from the testing process if you are a college transfer student who has acceptable grades or are a student who has satisfactory scores on college entrance tests such as ACT or SAT. Test accommodations are arranged for students who have documented disabilities. At this session, students receive a brief orientation to student services and campus resources.

**Abuse Prevention Program. These and other informational brochures may be obtained from any campus library or any counseling office. For information, call 246-6076.**
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.

Counseling Center
Counseling
Students and prospective students are welcome to consult with counselors in the student services offices about any academic, career or personal problems. Since many students face difficult and often perplexing decisions in their college years, they should feel free to make use of counseling services. Counselors are available to help with financial problems, housing, adult high school, student activities, testing, career counseling and employment.

Counseling services include vocational guidance, career information, assistance with academic and study problems, specialized testing and personal counseling. Students who desire it are given the opportunity to work with a counselor in a confidential relationship in which they can explore their aspirations, abilities, interests or any special problems they may have. The special needs of all students are taken into account by each counselor.

Students who are having academic difficulties, and who need to discuss the effects of such difficulties on future financial aid, may also make counseling appointments. Counselors are available to help students who may be withdrawing make plans for their future education.

The professional counseling staff is located in Room 159 at Truax and Room D105, downtown. Part-time counselors are available at satellite campuses.

Career Planning Resources
Career planning is an important step toward academic success and career satisfaction. The career planning resources of Student Services at MATC are designed to help match students’ skills, interests and values with appropriate careers. Counselors can provide up-to-date career information and decision-making strategies.

Resources available are the Career Planning Program (a group assessment and career orientation program available to inquiring adult students, high schools and community groups), individual counseling, career planning groups, additional assessment instruments, computerized career guidance programs, and a career resource center.

The use of the computer-based guidance system offers a systematic career development program designed to enhance career planning for students and other adults.

Disabled Student Services
MATC provides reasonable and appropriate instructional and non-instructional support services and activities for persons with disabilities. The Truax Campus was designed to allow maximum accessibility, and other campuses have been modified to do the same.

Students in need of specialized personal care, such as toileting, feeding, wheelchair lifting, medicating, etc., are expected to have these needs provided by an agency other than MATC.

Accommodations that can be made for students include, but are not limited to: extended time for testing, oral testing, taped testing, computer-assisted testing, preferential seating, enlarged materials, writer-scribe, Braille materials, and alternate format materials, such as black/white copy.

Reasonable facility accommodations and educational auxiliary aids are available for qualified students with disabilities. They include, but are not limited to: special parking, registration assistance, reader services, notetaker services, interpreter services for the deaf, arrangements for specialized auxiliary aids (including caption tapes and Braille materials), magnification devices, enlarged print, mobility assistance referrals, and building tours for accessibility.

Persons who wish to access support services at MATC should contact the transition facilitator, located in Student Services, as early as possible. Staff persons or outside agency personnel who know someone with disabilities that may be attending MATC should also refer them to the transition facilitator.

MATC will make every effort to match students’ physical and academic abilities with an appropriate vocational objective. To accomplish this, students with disabilities who need special instructional or non-instructional support services should contact the transition facilitator in Student Services, 246-6791.

Students with special needs at MATC receive the following services: academic coaching, at the Truax Campus and the Downtown Education Center; access to the visually impaired lab; instruction in use of adaptive equipment; advocacy; accessibility (ramps, lowered water fountains and telephones, automatic door openers); assistance with course selection, registration and scheduling of classes; Business Open Lab, both at the Truax Campus and at the Downtown Education Center; career exploration/planning; Cooperative Food Service Program; counseling; financial aid form completion assistance; health services by the school nurse; job placement; liaison with instructors; loaning of adaptive equipment for the sensory impaired; loan-
Financial Aid

A comprehensive financial aid program is offered to provide assistance to students who would otherwise be unable to afford an education. The opportunity for education is extended to qualified men and women with financial need through loans, grants and work study employment.

The financial aid program is administered on the principle that financial assistance should be viewed only as supplementary to the efforts of the family. In order to determine need and make awards, the parents of aid applicants and the students 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 resource 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 through the use of a federally approved needs analysis formula.

Independent student definition

Any individual who:

- is 24 years of age or older by December 31 of the award year;
- is an orphan or ward of the court;
- is a veteran of the Armed Forces of the United States;
- is a graduate or professional student;
- is a married individual;
- has legal dependents other than a spouse;
- is a student for whom a financial aid administrator makes a documented determination of independence by reason of unusual circumstances.

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 past assistance must reapply each year in order for the award to be renewed. Applications 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: the student receives this report after he/she completes the financial aid application and it's processed by the federal processing center.
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 has been accepted and 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.
4. Completed Verification Statement: this form will be sent to the applicant by the Financial Aid Office at MATC and is used to verify information on the application. It must be completed by the student and returned to the Financial Aid Office.
5. Additional documents which are necessary to verify items such as citizenship status, nontaxable income, social security benefits, prior financial aid, etc.

Satisfactory progress requirements

To retain eligibility to continue receiving financial aid, a student must earn at least six new credits each semester and have a semester grade point average of at least 2.0. When students earn 48 credits, they must have a cumulative grade point average of 2.0 or higher to retain eligibility for financial aid. New credits are defined as courses in which the student has not been previously enrolled in and appear on the student's academic transcript.

Types of Aid

Federal Pell Grant

This federal program is 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 grant, the student must be enrolled in 12 or more credits. To receive 75 percent, the student must be enrolled in 9, 10 or 11 credits. To receive 50 percent, the student must be enrolled in 6, 7 or 8 credits.

Federal Supplemental Educational Opportunity Grant

Federal grants, as provided under the Higher Education Act, are available to students on the basis of financial need. The grant becomes part of a student's financial aid package. To receive a 100-percent grant, the student must be enrolled in 12 or more credits. To receive 50 percent, the student must be enrolled in 9, 10 or 11 credits. To receive 50 percent, the student must be enrolled in 6, 7 or 8 credits.

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 halftime.

**Subsidized Federal Stafford Loan**
This is a guaranteed loan program for students with financial need as determined by the federally approved needs analysis. Students must be enrolled in at least six credits to be eligible. Students may borrow up to the following limits as determined by their year in school: first year, $2,625; second year, $3,500.

**Unsubsidized Federal Stafford Loan**
This is a guaranteed loan program for students without financial need. Students must be enrolled in at least six credits to be eligible. Loan limits are the same as the Subsidized Federal Stafford Loan.

**Federal Supplemental Loan for Students**
A loan program for independent students. Students may borrow up to $4,000 annually. Amount of annual loan is determined by subtracting the financial aid the student is eligible to receive from the student’s cost of education.

**Federal Plus Loan**
This is a loan program for parents of students allowing the parent to borrow up to the amount of the cost of the students education minus the amount of financial aid the student is eligible to receive.

**Wisconsin Higher Education Grant**
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.

**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 show financial need and be enrolled at least half time (six credits). The Minority Student Grant Program provides financial assistance to Black, Hispanic, Native American and Southeast Asian (Cambodia, Laos and Vietnam) 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 State Indian Assistance Grant.

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

**Veteran’s Educational Benefits—Federal**
To qualify for monthly educational benefits through the Veteran’s Administration, a veteran must be enrolled in an approved associate degree or vocational diploma program at least half time. Most programs of study at MATC are approved for veteran’s 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 veterans missing in action may be eligible for VA monthly educational assistance.

It is the responsibility of the student receiving veteran’s educational benefits to notify the MATC Office of Veteran’s Affairs of any changes in enrollment status or withdrawal. All veterans and dependents must also make satisfactory progress in their programs of study.

**Veteran’s Educational Benefits—Wisconsin**
Students who were Wisconsin residents upon entry into the military service, and who served during the Vietnam Era, may be eligible to receive, each academic year, an education grant of up to $200 for a single veteran and $400 for a married veteran or one with dependents. These veterans must be enrolled full-time, and application must be made prior to the end of the enrollment period for which they are applying. Applications may be obtained from the MATC Office of Veteran’s Affairs.

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 veteran's 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.
Disbursement of Financial Aid Funds
Grant and loan checks require two to six weeks for processing, depending on the source of 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 show: 1) an authorization card; 2) a current student identification card; and 3) a current registration form. There will be no exceptions. 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. Actual repayment of grant funds is applicable during the fee refund period. Continued eligibility for aid is outlined under "Satisfactory Progress Requirements", below.

Time Limits for Receiving Financial Aid
Regulations require that financial aid be restricted to time increments. For the maximum number of semesters a student maintaining satisfactory progress can receive financial aid, contact the Financial Aid Office.

Satisfactory Progress Requirements
Government regulations require that recipients of financial aid make satisfactory progress in the programs for which they are enrolled. To maintain satisfactory progress, a student must maintain a grade point average of 2.0 or better and earn at least six credits each semester of enrollment. Failure to meet satisfactory progress requirements will result in financial aid probationary status during the next semester of enrollment. During the semester a student is on financial aid probation, the student must achieve satisfactory progress or lose eligibility for any financial aid, including loans and grants, for a period of two semesters.

Students who completely withdraw from school, or earn less than 1.0 grade point average for any semester, will lose their eligibility for financial aid. A student who becomes ineligible for financial aid can re-establish eligibility to apply by successfully meeting standards of progress requirements for a period of two semesters of enrollment while not receiving financial aid. During these two semesters of enrollment, a student must earn a minimum of six credits each semester and obtain a semester grade point average of at least 2.0 each semester.

Evaluation of standards of progress and 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 supervisor within 30 calendar days from the time the student is notified that he or she has lost financial aid eligibility. A review will be made by the financial aid supervisor of 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 supervisor. 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.

Veteran's Administration 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 the Veteran's Administration for unsatisfactory progress.

The reporting of unsatisfactory progress, results in the immediate suspension of the student's educational benefits pending review by the Veteran's Administration.

Health Services
Health services are provided to students to aid them in maintaining 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 at each campus. Health Services is designed to supplement the basic care the student receives from physicians and dentists in their own community.

Student health insurance plan
A student health insurance plan covering accident and illness is available at nominal cost to students in full-time programs. Information and enrollment forms are available during registration and in the Student Services Office.
Housing
MATC 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 St. - 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.

MATC 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.

Minority Recruitment & Retention
MATC 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 coordinator and a staff of educational assistants and counselors provide an array of supportive services which include: financial aid application assistance, application and registration assistance, educational and career planning, personal counseling, tutorial assistance and other referral services to meet individual needs.

Please, feel free to call or stop by the Minority Student Services Office 246-6059, Room 135A, Truax Campus.

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

The Recreation Center, multipurpose room, meeting rooms, student lounge, Student Senate, Programs and Activities Council, SLANT newspaper, student publications, child-care centers, and student clubs and organizations are all part of Student Life. For more information, refer to the student handbook or call 246-6228.

Student Development Transcript
The Student Development Transcript is an 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.

The Student Development Transcript is available through the Student Life Office. Studies have shown that experiences outside the classroom complement educational processes. Students involved in activities and professional associations gain valuable experience, knowledge and acquaintances that benefit them in the job market.

For more information regarding the Student Development Transcript, please stop by the Student Life Office, Room 140 at the Truax Campus or Room D237 at the Downtown Education Center.

Additional Student Activities
Professional development
Student Life sponsors several events that focus on developing students' job skills, including a 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.

Leadership recognition programs
MATC offers students a variety of leadership opportunities through involvement in professional clubs and other student organizations.

Wisconsin Technical College Ambassador Program
The Ambassador Program features annual recognition at the district and state level. The winner of the state award enjoys prestige and year-long visibility as an ambassador of vocational education promoting vocational education and the Ambassador Program throughout the state.

Academic All-American Team
The Academic All-American Program recognizes scholarly achievements of students enrolled in America's community, technical and junior colleges.

Community service
"Across the country, an exciting new movement is taking shape. In larger numbers than ever before, today's students - from middle schools to universities - are actively involved in serving their communities. They are responding with compassion and creativity to meet the social needs that are so evident on street corners and in the headlines. Now, more than ever, we must seize the opportunity to expand college student participation in service and reinforce their leadership and initiative."

— Donald Kennedy, president, Stanford University
This community service “movement” thrives today in community colleges. Many of the best programs in the country are found on community college campuses, and more schools are getting involved every day.

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

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.

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.

Entertainment and recreation
The Student Life Office, in cooperation with the Programs and Activities Council (PAC) and other clubs and organizations, offers a wide variety of entertainment, recreational and social activities for students. We invite you to get involved and help us plan even more activities. These events include the fall and spring picnics, spring trip, camping outings, ski trips, tournaments, Brewers ball games, and bicycle maintenance and cross country skiing workshops.

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

Announcements will be run in SLANT, MATC Events: Beyond the Classroom and the Student Bulletin.

Student Activities Board
Student activities are funded through the Student Activities Board. The Board, established by the MATC District Board, is comprised of four faculty members or administrators and five students. 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 Board.

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

Programs & Activities Council (PAC)
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.

Student Senate
The Student Senate is the representative body for students enrolled in diploma or degree programs at the Madison college.

Established Student Senate committees:
- Budget Committee
- WSG Committee
- Constitution & Bylaws Committee
- Survey Committee
- Parking Lot Committee
- Special Needs Committee
- Downtown Committee
- Facilities/Services Committee

Elected senate members are appointed members of the following joint boards or committees:
- Affirmative Action Committee
- Anti-Harassment committee
- Child Care Committee
- District Minority Planning Committee
- Facility/Safety Committee
- Graduation Committee
- Infectious Disease Education and Prevention Committee
- Institutional Objectives Committee
- Legislative Committee
- Marketing Committee
- Newspaper Publications Board
- Student Assistance Program Advisory Board
- Transportation and Parking Committee

The Student Senate’s constitution and bylaws are available in the Student Life Office.

Student Newspaper, SLANT
SLANT (Student Life and News Today) is the official newsmagazine of the college. This national prize-winning
publication is created and produced for and by MATC students. Its editors, artists, reporters, photographers and salespeople are either taking courses related to publishing or they are volunteers who want experience and the distinction of working with SLANT to appear on their resumes at graduation time. SLANT publishes a 16 to 20 page issue twice monthly during the school year and circulates 5,000 copies of each issue.

Editors and publications board members encourage photographers, writers and artists to volunteer their time and talents to join what one scholastic journalism critic called “a truly superior college newsmagazine.”

Clubs on Campus

The Student Organizations Office is located in 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.

MATC’s clubs and organizations fit into three categories: networking organizations, special interest groups, and program-affiliated clubs. Refer to the student handbook for more information on student clubs.

Networking associations
- African Descendants Student Organization (ADSO)
- Asian-American Student Association
- Gay/Lesbian Organization (GLO)
- Native American Student Association
- Organization De Latinos Unidos
- Special Needs Organization (SNO)

Special Interest groups
- Drama Club
- Outdoor Recreation Club
- Spanish Club
- Students and Staff for Christ

Program-affiliated clubs
- Architectural Technology Club
- Association for Biotechnology Technicians
- Association of Civil Technicians
- Association of Electronic Technicians
- B.I.K. (derived from “believing in kids”)
- Business Professionals of America
- Connoisseurs Club
- Data Processing Management Association (MATC Chapter)
- Dental Technician Club
- Electron Microscopy Club
- Health Occupations Students of America (HOSA)
- Hospitality Management Association
- Interior Design Club
- Marketing Club
- M.L.T. Electrolytes
- Optometric Technician Club (Spec Techs)
- Pharmaceutical Technician Club
- Police Science Association
- Post-Secondary Agricultural Students Organization (PAS)
- Radiography Club
- Recreation Association
- Respiratory Therapy Association - The Ventilators
- Student Dental Hygienists Association
- Student Nurse Club
- Student Occupational Therapy Association (SOTA)
- Vocational Industrial Clubs of America - MATC Chapter (VICA)
- Wisconsin Industrial Machinist Club (WIMC)
- Wisconsin Society of Architects - MATC Chapter
- Wisconsin Student Association of Veterinary Technicians (WSAVT)

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 reviewed 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.

Athletics

MATC athletic programs are designed to give interested men and women the opportunity to participate in athletic activities.

Intercollegiate athletics

MATC is a member of the Wisconsin Technical College Conference, the Wisconsin Junior College Athletic Association, and the National Junior College Athletic Association. 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:

Men
- Baseball
- Basketball
- Bowling
- Cross Country
- Golf
- Tennis
- Track & Field
- Volleyball
- Wrestling
- Wrestling Softball

Women
- Basketball
- Bowling
- Cheerleading & Pomp Pom
- Cross Country
- Golf
- Tennis
- Track & Field
- Volleyball

For further information, stop in the Athletic Director’s Office, Room 200, or call 246-6099.
Intramural programs are open to all MATC students enrolled in degree credit classes. Information on sports and weekly events is found in the Student Bulletin.

- Basketball
- Softball (coed)
- Bowling
- Sport days
- Soccer
- Volleyball
- Schick Super Hoops
- Certs-Trident Volleyball

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

Wellness facilities provide students with a variety of fitness opportunities as well as promoting fitness. Any student enrolled for degree credit is eligible to participate by purchasing day passes or a membership.

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

Downtown Education Center facilities include a gymnasium with a weight-training room, lockers and showers.

Programming includes tournaments, aerobic classes, aquatic activities, prescribed exercise, the use of lockers and showers, as well as individualized fitness programs.

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

Music

The Music Department offers a variety of activities and courses for students. Experienced performers may audition for the Madison Symphony Orchestra, the Madison Symphony Chorus, the Madison Opera or the Madison Municipal Band.

New College Singers

MATC's New College Singers have appeared throughout the United States. The Singers performing ensemble has been critically acclaimed as "emphatically contemporary" and "the most dramatic and sensational stage action to be seen by any choir of its kind." The group forms an integral part of the growing music program at MATC.

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 their featured performance with Maynard Ferguson and his band, the Jazz Ensemble has drawn enthusiastic support from Wisconsin's jazz "freaks." Membership is by audition and offers students one credit.

Instrumental Ensemble

MATC's Instrumental Ensemble provides students with the opportunity to participate in smaller ensembles covering a wide range of musical styles, ranging from rock to classical. It is open to all students and offers one credit.

Community Show Choir

The Community Show Choir is a group dedicated to singing popular music. It is open to anyone in the Madison community as well as to any student at MATC. Music is selected from popular styles which include Broadway, Rock, Motion Picture, etc. This group is open to everyone; students don't need to 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.

Women's Services

Professional counselors provide assistance and support services to meet the needs of women. Special programs also provide specialized services for single parents, displaced homemakers and single pregnant women.

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

Associate in Applied Science Degree
This degree leads graduates 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). Program areas 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 Degree
This degree leads graduates 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 like commercial art, photography, interior design or occupational therapy.

Associate in Arts & Associate in Science Liberal Studies Degrees
Both of these degrees are designed for students who seek a broad general education which can be beneficial when seeking employment or when transferring to a four-year institution. 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 coursework emphasizes mathematics and science. The Associate in Arts Degree is earned by students whose liberal studies coursework emphasizes the social sciences and humanities.

Vocational Diploma
Vocational diploma programs offer students 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
Students enrolled in the Wisconsin Technical College System who wish to continue their education in the UW System may be eligible to transfer credits toward their bachelor's degree in the following ways:

- Students enrolled in the Associate of Arts/Sciences program at MATC, Milwaukee Area Technical College or Nicolet Area Technical College may transfer up to 72 credits toward a bachelor’s degree.
- Students who have successfully completed an Associate of Applied Arts/Sciences Degree may be eligible to transfer up to 15 credits of General Education coursework.
- Students who have successfully completed an Associate of Applied Arts/Sciences Degree may be eligible to transfer certain technical support and/or occupational credits when there is a direct relationship between a Technical College Associate Degree Program and a program offered in the UW System.
- Students transferring from the Technical College System may earn credit by earning appropriate scores on national standardized examinations (e.g., College Level Examination Program) or examinations developed by the UW System transfer institution.

For more information about these transfer opportunities, students should consult with their advisors or the admissions office at a UW System institution.

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.

Vocational-Technical Developmental Program
Courses in this program are designed to:

1. Provide classes which correct deficiencies in past training, making students eligible for the vocational or technical programs of their choice.
2. Strengthen and refresh academic competencies to better ensure success in vocational or technical studies.

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 and 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)
Individuals who want to obtain an HSED must pass all the GED requirements and must also meet requirements in health and civic literacy and employability skills.

External High School 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 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 that brings parents and children together in activities to enhance skills and relationships.

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

Workplace education programs
Through cooperative efforts with business, industry, labor and city and county government agencies, basic skills instruction is provided at numerous work sites throughout the district. On-site instruction is often workplace specific and scheduled at hours convenient to the employees.
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 coursework. The tutoring program is provided free of charge to students.

The Student Literacy Volunteer Program provides students enrolled in selected programs at MATC with the opportunity to be trained in tutoring adults within the district. The experiential program helps students to see the need for and the benefits of a volunteer literacy effort. At the same time, clients profit from the one-to-one instruction.

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 receive 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.

Apprenticeship
An apprenticeship is a training program that involves an agreement between 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.

Barber/Cosmetologist
Bricklaying and Masonry
Carpentry
Cement Finishing
Construction Electrician
Garage Mechanic
Heating, Ventilating and Air Conditioning
Industrial Electrician
Ironworking
Machine
Millwright
Painting and Decorating
Plastering
Plumbing
Sheet Metal
Steamfitting
Tool and Die

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. Term 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.
5. Wages to be paid in step increases 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 Counseling Service**

Prospective applicants for apprenticeship may receive counseling relative to job opportunities, nature of work, and special aptitudes required for the apprenticeship trades by contacting the campus administrator/apprenticeship chairperson at 2125 Commercial Ave., 246-5202.

**Application for Apprenticeship**

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

**Program Offerings**

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

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

**Industrial trades**
- Electrician (industrial)
- Machinist
- Millwright (maintenance mechanic)
- Sheet Metal (industrial)
- Tool and Die

**Service trades**
- Barber/Cosmetologist

The Apprenticeship Department also offers courses and programs in occupational and trade retraining or upgrading. For further information, call 246-5201.

- Ground Water
- Job Safety and Training--Telecommunications
- Plumbing Code Review
- Quality Development
- Supervisory Management
- Wastewater Treatment
- Related evening courses for apprentices and journeypersons
- Customized Training

**Barber/Cosmetologist**

Apprentice barber/cosmetologists may 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 recordkeeping.

There are two types of barber/cosmetologist apprenticeship programs. One is for persons without any training and the other is for persons with training. People who have no training are required to attend 288 hours of related training, and those with previous training who are not graduates of approved barber/cosmetology schools will be required to attend related training as well.

**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 do frame building for such items as floors, beams, joists, wall columns, stairs, etc. They also do
rough framing, roof framing, stair framing and scaffold 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 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; test 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 from those listed.

Ironworking
Ironworker apprentices might assist journeypersons to unload and distribute; learn about various materials; and handle tools and equipment, always employing good safety practices. Other types of activities may include ornamental work, including layout, fabrication and erection, reinforcing layout, bending, cutting, placing and tying structural work, including layout, fitting, connecting, hooking on, rigging 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.

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, or test with inspection equipment to diagnose malfunction of machine or to test repaired machine; and perform flamecutting 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 either 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 texturing, 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 browning (all bases), including preparing walls and ceilings which are to receive tile, using sand and lightweight plaster; lining, dotting and screeding of different surfaces which are to receive tile; and how to apply thinwall and finishes, such as whitecoating, sandfinishing, acoustical 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.

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 human 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 craftsmen 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 and 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.

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 sequences 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.
## Programs of Study

### Program Directory

**Satellite location key**

Unless otherwise noted, all programs are offered at MATC’s Madison campuses and centers.

- **F** = MATC-Fort Atkinson
- **P** = MATC-Portage
- **R** = MATC-Reedsburg
- **W** = MATC Watertown

* = First year or limited course offerings

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

### Agriscience, Apprenticeship, and Technical and Industrial Division

#### Agriscience and Technology

<table>
<thead>
<tr>
<th>Program</th>
<th>Satellite locations</th>
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</thead>
<tbody>
<tr>
<td>Advanced Auto Body and Paint Technician</td>
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<td></td>
</tr>
<tr>
<td>Agricultural Equipment Technology</td>
<td>p. 38</td>
<td></td>
</tr>
<tr>
<td>Auto Body and Paint Technician</td>
<td>p. 40</td>
<td></td>
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<tr>
<td>Automotive Technician</td>
<td>p. 40</td>
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<tr>
<td>Agricultural Technology</td>
<td>p. 41</td>
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<tr>
<td>Biotechnology Laboratory Technician</td>
<td>p. 41</td>
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<tr>
<td>Diesel and Heavy Equipment Technician</td>
<td>p. 49</td>
<td></td>
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<tr>
<td>Farm Business Production and Management</td>
<td><strong>PPRW</strong></td>
<td>p. 53</td>
</tr>
<tr>
<td>Farm Business Production and Management/Agri-development</td>
<td><strong>P</strong></td>
<td>p. 54</td>
</tr>
<tr>
<td>Farm Business Production and Management-Sheep Production</td>
<td><strong>PPRW</strong></td>
<td>p. 54</td>
</tr>
<tr>
<td>Horticulture</td>
<td>p. 57</td>
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<tr>
<td>Laboratory Animal Technician</td>
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<tr>
<td>Taxidermy</td>
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<tr>
<td>Veterinary Technician</td>
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#### Apprenticeship

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<tr>
<td>Bricklaying and Masonry</td>
<td>p. 31</td>
<td></td>
</tr>
<tr>
<td>Carpentry</td>
<td>p. 31</td>
<td></td>
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<tr>
<td>Cement Finishing</td>
<td>p. 32</td>
<td></td>
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<tr>
<td>Construction Electrician</td>
<td>p. 32</td>
<td></td>
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<tr>
<td>Carriage Mechanic</td>
<td>p. 30</td>
<td></td>
</tr>
<tr>
<td>Heating, Ventilating and Air Conditioning</td>
<td>p. 30</td>
<td></td>
</tr>
<tr>
<td>Industrial Electrician</td>
<td>p. 32</td>
<td></td>
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<tr>
<td>Ironworking</td>
<td>p. 32</td>
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<td>Machinist</td>
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<tr>
<td>Millwright</td>
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<tr>
<td>Painting and Decorating</td>
<td>p. 33</td>
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<tr>
<td>Plastering</td>
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<tr>
<td>Plumbing</td>
<td><strong>W</strong></td>
<td>p. 33</td>
</tr>
<tr>
<td>Sheet Metal</td>
<td>p. 33</td>
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<tr>
<td>Steamfitting</td>
<td>p. 33</td>
<td></td>
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<tr>
<td>Tool and Die</td>
<td>p. 33</td>
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#### Technical and Industrial

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Architectural Technician</td>
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<td>p. 39</td>
</tr>
<tr>
<td>Barber/Cosmetologist</td>
<td></td>
<td>p. 41</td>
</tr>
<tr>
<td>Civil Engineering Technology (Public Works Technician)</td>
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<td>p. 43</td>
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<tr>
<td>Drafting-Architectural</td>
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<tr>
<td>Electronic Servicing</td>
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<td>Electronics</td>
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<tr>
<td>Industrial Maintenance</td>
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<tr>
<td>Industrial Welding Technician</td>
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<tr>
<td>Machine Tooling Technician</td>
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<td>p. 64</td>
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<tr>
<td>Mechanical Design Technician</td>
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<td>p. 66</td>
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<tr>
<td>Motorcycle, Marine and Outdoor Power Products Technician</td>
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<td>p. 69</td>
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<tr>
<td>Welding</td>
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<td>p. 80</td>
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<tr>
<td>Wood Technics</td>
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#### Alternative Learning Division

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<tr>
<td>Basic and Remedial Skills</td>
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<td>p. 29</td>
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<tr>
<td>General Education Development (GED)</td>
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<tr>
<td>High School Equivalency Diploma (HSED)</td>
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<td>p. 29</td>
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<tr>
<td>External High School Diploma Program (EDP)</td>
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<tr>
<td>High School Completion Options</td>
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<tr>
<td>English as a Second Language (ESL)</td>
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<tr>
<td>Civics literacy classes</td>
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<tr>
<td>Intergenerational Literacy Program</td>
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<tr>
<td>Sheltet Basic Skills Program</td>
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<tr>
<td>Workplace education programs</td>
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<tr>
<td>Institutionalized Adult Program</td>
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<tr>
<td>Compulsory Education Program</td>
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<tr>
<td>Special Programs and Services</td>
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<td>p. 25</td>
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<td>Supplemental Services and Instruction</td>
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<tr>
<td>Tutoring</td>
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<td>Special needs student services</td>
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<td>Basic skills testing</td>
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</table>

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**Academic Programs**
Business and Applied Arts Division

Economics

Satellite
locations

page

Commercial Art
W* p. 44
Interior Design
W* p. 60
Photography
P p. 72
Printing
p. 73
Printing and Publishing Technology
p. 74
Visual Communications
p. 80

Business

Accounting
FRW p. 36
Accounting Assistant
FRW p. 36
Administrative Assistant-Information Processing
FRW p. 36
Administrative Assistant-Secretarial
FRW p. 37
Business Mid-Management
FRW p. 42
Computer Information Systems-Midrange Analyst/Programmer
p. 44
Computer Information Systems-Operations
p. 45
Computer Information Systems-Programmer/Analyst
p. 45
Court and Conference Reporting
p. 46
Data Entry Operations
FP p. 47
Finance
FRW p. 55
Legal Transcriptionist
p. 61
Medical Office Mid-Management
FRP p. 68
Medical Secretary
p. 68
Medical Transcriptionist
p. 69
Office Assistant
FRW p. 70
Culinary Trades

Culinary Arts
p. 47
Food Service Aide
p. 56
Food Service Production
p. 56
Marketing

Hospitality Management
p. 57
Insurance Services
p. 59
Marketing
FRW p. 65
Marketing-Fashion Merchandising Management
FRW p. 65
Real Estate
p. 75
Recreation Resource Operation
p. 75
Small Business Operation
p. 77
Supervisory Management
FRW p. 77
Tourist Recreation
p. 78

General Education Division

Electronics Microscopy
W* p. 50
Liberal Studies
FRP p. 62
Vocational-Technical Developmental Program
p. 28

Health, Human and Protective Services Division

Health Occupations

Associate Degree Nursing
RW p. 39
Dental Assistant
p. 47
Dental Hygienist
p. 48
Dietetic Technician
p. 50
Medical Assistant
p. 66
Medical Coding Specialist
p. 67
Medical Laboratory Technician
p. 67
Nursing Assistant
FRW p. 69
Occupational Therapy
p. 70
Optometric Technician Program
p. 71
Pharmacy Technician
p. 71
Practical Nursing
F p. 73
Radiography
p. 74
Respiratory Care Practitioner
p. 76
Surgical Technician
p. 78

Human and Protective Services

Child Care and Development
p. 43
Human Service Associate
p. 57

Protective Services

Emergency Medical Services Specialist
p. 52
Emergency Medical Technician-Basic (EMT-B)
p. 52
Emergency Medical Technician-Intermediate (EMT-I)
p. 52
Emergency Medical Technician-Paramedic (EMT-P)
p. 52
Fire Protection Technician
p. 55
Fire Recruit Academy
p. 56
Police Academy
p. 73
Police Science
p. 72

1Not offered in Madison, only offered at satellite campuses listed.
### Accounting

**Associate in Applied Science Degree**

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.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Hrs per week in class</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tr>
<td><strong>First Semester</strong></td>
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<td>101-111 Accounting I-Principles</td>
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<td>102-05 Math of Finance</td>
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<td>103-130 Microcomputer Applications</td>
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<td>801-151 Communication Skills I</td>
<td>3</td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
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<tr>
<td>101-113 Accounting 2-Principles</td>
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<td>101-23 Tax I</td>
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<td>101-138 Accounting and Payroll Systems</td>
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<tr>
<td>102-160 Business Law I OR</td>
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<td>809-197 Contemporary American Society</td>
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<tr>
<td>101-121 Accounting 3-Intermediate</td>
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<td>101-125 Cost Accounting 1</td>
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<td>102-126 Corporate Finance</td>
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<tr>
<td>101-137 Computerized Accounting Applications</td>
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<tr>
<td>103-161 Machine Calculation</td>
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<td>102-104 Business Statistics</td>
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<td>809-195 Economics</td>
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<td>101-127 Tax 2</td>
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<td>101-129 Governmental Accounting</td>
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<td>102-143 Management Techniques</td>
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<td>102-160 Business Law I</td>
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<td>102-161 Business Law II</td>
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<td>103-132 Lotus-Intermediate</td>
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<td>106-172 Administrative Office Management</td>
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<th>REQUIREMENTS FOR GRADUATION</th>
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<td>One-half of the total 68 credits must be completed at MATC. Minimum grade point average of 2.0.</td>
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### Accounting Assistant

**One-Year Diploma**

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.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>101-312 Sole Proprietorship Accounting</td>
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<td>102-305 Applied Business Math</td>
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<tr>
<td>102-360 Business Law</td>
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<tr>
<td>103-161 Machine Calculation OR</td>
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<td>103-355 Machine Calculation</td>
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<td>105-131 Keyboarding 1 OR</td>
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<td>105-331 Keyboarding 2</td>
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<td>801-351 Communications</td>
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<td><strong>Second Semester</strong></td>
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<td>101-315 Partnership and Corporation Accounting</td>
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<tr>
<td>101-313 Payroll Accounting-Tax</td>
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<td>102-333 Principles of Business</td>
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<td>103-330 Microcomputers</td>
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<td>106-376 Job Survey</td>
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**REQUIREMENTS FOR GRADUATION**

One-half of the total 29 credits must be completed at MATC. Minimum grade point average of 2.0.

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

### Administrative Assistant—Information Processing

**Associate in Applied Science Degree**

This program provides the educational background for employment in information processing careers with an emphasis on word processing, and for advancement into supervisory and managerial positions in these and related areas of office technology. Admission requirement: English composition, grade of C.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>102-102 Business Mathematics</td>
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<tr>
<td>106-133 Document Processing 2 (Typing 2) OR</td>
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<td>(2.5-2.5)</td>
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<td>106-137 Document Processing 3 (Typing 3)</td>
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**REQUIREMENTS FOR GRADUATION**

One-half of the total 68 credits must be completed at MATC. Minimum grade point average of 2.0.
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<td>Applied Accounting I</td>
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<td>106-103</td>
<td>Filing Procedures</td>
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**SECOND YEAR**

### First Semester

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<td>Psychology of Human Relations</td>
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Elective 3 below

**Second Semester**

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<td>Business Mathematics</td>
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<td>Shorthand 2 (Speed Development)</td>
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Elective 3 below

### ELECTIVES

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<td>Desktop Publishing</td>
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<td>Typing Workshop-Skillbuilding</td>
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### REQUIREMENTS FOR GRADUATION

Rapidly changing needs of business and industry may cause changes to be necessary in the curriculum listed for this program. A curriculum may change at any time to assure that instruction is keeping pace with changing technology and changing requirements in the workplace.

Administrative Assistant—Secretarial

**Associate in Applied Science Degree**

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 background 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.

**FIRST YEAR**

### First Semester

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<th>Course Title</th>
<th>Credits</th>
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<td>Government: Process and Practice</td>
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**SECOND YEAR**

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Elective 3 below

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<td>809-199</td>
<td>Psychology of Human Relations</td>
<td>3</td>
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Elective 3 below

### REQUIREMENTS FOR GRADUATION

One-half of the total 67 or 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 Keyboarding 1 (106-131) may apply the 3 credits toward elective requirements.
Advanced Auto Body and Paint Technician

Two-Year Diploma

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

Agricultural Equipment Technology

Two-Year Associate Degree

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.

PROGRAM DESCRIPTIONS
Associate in Applied Science Degree

Second Semester

* Hay forage, combine and harvesting equipment.

Architectural Technician

Associate in Applied Science Degree

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 relocations and alterations. The ASSET assessment test is required for placement in math and English.

**RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>Course Name</th>
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<tbody>
<tr>
<td>070-184 Advance Hydraulics/Diagnostics</td>
<td>3</td>
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<td>070-185 Equipment Maintenance</td>
<td>3</td>
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<td>104-103 Marketing Principles</td>
<td>3</td>
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<td>104-104 Selling Principles</td>
<td>3</td>
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<td>806-142 Technical Science 2-S</td>
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<tr>
<td>070-186 Basic Electricity and AC/DC Circuits</td>
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First Semester

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<td>614-111 Architectural Theory and Drafting 1</td>
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<tr>
<td>614-121 Construction Materials 1</td>
<td>3</td>
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<td>614-124 Industrial Computer Applications</td>
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<td>801-151 Communication Skills 1</td>
<td>3</td>
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<td>804-151 Technical Mathematics 1</td>
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Second Semester

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<tr>
<td>614-112 Architectural Theory and Drafting 2</td>
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<td>614-118 Architectural Rendering</td>
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<td>804-152 Technical Mathematics 2</td>
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<td>806-152 Technical Science 2</td>
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SECOND YEAR

First Semester

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<tr>
<td>607-134 Surveying 1 (Architecture)</td>
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<td>607-178 Mechanics</td>
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<td>614-123 Electrical and Mechanical</td>
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<td>809-105 Economics</td>
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Second Semester

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<td>607-140 Strength of Materials</td>
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<td>614-132 Building Estimating</td>
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<td>614-145 Concrete and Steel Detailing</td>
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<td>614-193 Job Orientation</td>
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RECOMMENDED ELECTIVES

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<td>614-114 Architectural Theory and Drafting 4</td>
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<td>614-135 Building Codes</td>
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<td>614-190 Special Problems</td>
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<td>804-171 Basic Computer Mathematics</td>
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REQUIREMENTS FOR GRADUATION

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

Associate Degree Nursing

Associate in Applied Science Degree

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. The program emphasizes self-direction and independence. Helpful aptitudes 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 include: 1) high school graduation or GED; 2) one year of high school chemistry and satisfactory score on the MATC chemistry test or chemistry equivalent; 3) one year of high school algebra with a grade of C or better or equivalent; and 4) satisfactory scores on the ACT test or another comparable substitute.

Alternative educational opportunities are offered for licensed practical nurses who desire an associate in applied science degree. Advanced standing in nursing courses may be earned through written and skills examinations. Credit by examination may be attempted only once for a given course. All nursing majors have the same admission, progression and general education requirements. Other requirements for LPNs seeking advanced standing are: 1) graduation from an approved practical nursing program; and 2) current licensure as LPN. LPN students are diverse in their educational and work experiences; therefore, they are encouraged to seek information early in order to plan and prepare for their educational programs.

**RECOMMENDED ELECTIVES**

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<tr>
<th>Course Name</th>
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<tr>
<td>510-150 Nursing Fundamentals</td>
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<td>806-207 Anatomy and Physiology 1*</td>
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<td>806-273 Microbiology*</td>
<td>3</td>
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<tr>
<td>809-199 Psychology of Human Relations* OR</td>
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<tr>
<td>809-231 Introduction to Psychology*</td>
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## Second Semester

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<td>Introductory Medical-Surgical Nursing, A</td>
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<td>510-152</td>
<td>Introductory Medical-Surgical Nursing, B</td>
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<td>806-208</td>
<td>Anatomy and Physiology*</td>
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<td>809-223</td>
<td>Developmental Psychology*</td>
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### Summer Session

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<td>Communication Skills 1* OR</td>
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<td>801-201</td>
<td>English Composition</td>
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<td>809-197</td>
<td>Contemporary American Society* OR</td>
<td>3</td>
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<td>809-203</td>
<td>Introduction to Sociology*</td>
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## SECOND YEAR

### First Semester

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<td>Intermediate Medical-Surgical Nursing</td>
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<td>Parent-Child Nursing</td>
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<td>801-152</td>
<td>Communication Skills 2* OR</td>
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<tr>
<td>810-201</td>
<td>Fundamentals of Speech*</td>
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### Second Semester

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<td>Nursing Ethics and Trends</td>
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<td>510-156</td>
<td>Nursing Management/Psychiatric Nursing</td>
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<td>Advanced Medical-Surgical Nursing</td>
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### 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 a C in theory and an S (satisfactory) in clinical practice to pass a course in the nursing area of instruction (510 courses). A student who fails a nursing course or withdraws while the course is in progress may re-enroll; however, a student may re-enroll in the program only one time. A student may repeat the same nursing course once.

*Students may meet some or all of the general studies requirements at MATC or at 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.

## Auto Body and Paint Technician

### One-Year Diploma

The Auto Body Servicing Program provides the student with the necessary skills for job entry into the metal finishing and painting areas of the auto body and light truck trade. The program includes welding, panel replacement, metal forming, sheet metal alignment and finishing.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>405-330</td>
<td>Collision Repair/Refinishing 1</td>
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<td>804-379</td>
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<td>809-356</td>
<td>Human Relations Survey</td>
<td>1</td>
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</table>

### REQUIREMENTS FOR GRADUATION

62 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 Technician

### Two-Year Diploma

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

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>Heating and Air Conditioning</td>
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<td>404-305</td>
<td>Brakes and Suspension*</td>
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<td>Human Relations Survey</td>
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<tr>
<td>402-331</td>
<td>Metal Processing</td>
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<tr>
<td>404-355</td>
<td>Automatic Transmissions*</td>
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<td>404-356</td>
<td>Power Train*</td>
<td>5</td>
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<td>804-390</td>
<td>Auto Computer Application</td>
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<tr>
<td>806-363</td>
<td>Science I</td>
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</table>

### REQUIREMENTS FOR GRADUATION

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

Associate in Applied Science Degree

Employment opportunities for the automotive technician include all aspects of automotive sales and service businesses. In the automotive service business, technicians and service writers are needed. With proper background and experience, advancement to shop foreman, service manager and 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 assessment test is recommended prior to program acceptance.

FIRST YEAR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<td>602-102</td>
<td>Service Repair Procedures*</td>
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<td>602-156</td>
<td>Comfort Control Systems</td>
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<tr>
<td>602-166</td>
<td>Driveability and Fuel Systems*</td>
<td>4</td>
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<tr>
<td>804-141</td>
<td>Industrial Mathematics 1</td>
<td>1</td>
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<td>801-151</td>
<td>Communication Skills</td>
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<td>602-157</td>
<td>Technical Brake/Steering Systems*</td>
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<td>602-163</td>
<td>Vehicle Suspension and Alignment*</td>
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<td>Industrial Mathematics 2</td>
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<td>806-141</td>
<td>Technical Science 1-S</td>
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<td>Economics</td>
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Barber/Cosmetologist

One-Year Diploma

This three-semester (48-week) program provides training in the combination Barber/Cosmetologist Program. Graduates receive training in both of the title areas and may be licensed to practice in either area.

FIRST SEMESTER

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<td>Barber/Cosmetology Theory 1</td>
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<td>Barber/Cosmetology Science 1</td>
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<td>Barber/Cosmetology Sales and Advertising 1</td>
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<td>801-351</td>
<td>Communications 1</td>
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SECOND SEMESTER

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<tr>
<td>502-391</td>
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Twelve-Week Summer Session

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REQUIREMENTS FOR GRADUATION

52 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

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.

Admission to the program is by demonstrating compe­tence in basic mathematics, science and English usage.
Suggested coursework for recent high school graduates
includes high school algebra, biology, chemistry and
vocaiional agriculture. Competency may be assessed by a
combination of testing (ASSET, ACT or equivalent)
and/or personal interviews.

FIRST YEAR

First Semester
007-100 Introduction to Biotechnology 3 3-0
007-101 Hazardous Materials/Radioisotopes 2 1-2
007-102 Radioisotopes 1 0-3
007-103 Instrumentation 3 1-4
006-104 Cell Biology 4 3-2
006-111 Chemistry I 4 3-2
17 23

Second Semester
007-104 Bioseparation Techniques 2 1-3
007-105 Fermentation Technology 3 1-6
007-174 General and Applied Microbiology 5 3-4
801-151 Communication Skills I 3 3-2
806-112 Chemistry 2 4 3-0
17 25

SECOND YEAR

First Semester
007-121 Applied Biochemistry 3 2-3
007-122 Bioseparation Modules I 3 3-3
007-123 Cell Culturing 3 1-6
801-152 Communication Skills II 3 3-0
809-197 Contemporary American Society Elective 3 3-0
below 18 25+E

Second Semester
007-124 Cloning Techniques 3 1-6
007-125 Bioseparation Modules II 3 3-6
007-126 Occupational Work Experience 3 0-12
809-195 Economics 3 3-0
809-199 Psychology of Human Relations Elective 3 3-0
below 18 32+ E

RECOMMENDED ELECTIVES
007-129 Research Techniques I 3 1-3
806-213 Organic Chemistry I 5 4-3
806-214 Organic Chemistry 2 5 4-3
102-130 Microcomputer Applications 2 2.2-8
103-131 Lotus 1 1-2
102-132 Lotus-Intermediate 1 1-2
103-135 dBase 1 1-2
013-144 WinWord Perfect 1 1-2
103-330 Microcomputers I 3 2.5-2.5
804-201 Intermediate Algebra 3 5-0
806-215 Botany 4 3-2
806-231 Animal Biology 4 3-2
804-306 Pre-College Algebra* 3 2-0
806-377 Pre-College Chemistry* 3 2-2

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

Business Mid-Management

Associate in Applied Science Degree

To be accepted into company training programs in middle
management, or for running and operating a business, the
Business Mid-Management Program provides a well­rounded
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. Other career paths could
be in such specialty areas as sales, accounting or office
operations.

FIRST YEAR

First Semester
101-111 Accounting I-Principles 4 4-0
102-105 Math of Finance 3 3-0
106-163 Microkeyboarding 2 15-1.5
801-151 Communication Skills I 3 3-0
809-195 Economics 3 3-0
809-199 Psychology of Human Relations 3 3-0
18 19

Second Semester
101-113 Accounting 2-Principles 4 4-0
102-160 Business Law I OR 3 3-0
809-197 Contemporary American Society 3 3-0
102-134 Business Organization and Management 3 3-0
103-130 Microcomputer Applications 2 2.2-8
801-152 Communication Skills 2 3 3-0
15 16

SECOND YEAR

First Semester
101-118 Management Accounting 4 4-0
102-126 Corporate Finance 3 3-0
104-109 Principles of Insurance 3 3-0
104-179 Marketing Techniques 3 3-0
Elective 3 below 16 13-15

Second Semester
101-138 Accounting and Payroll Systems 3 2-2
102-104 Business Statistics 3 3-0
102-143 Management Techniques 3 3-0
106-172 Administrative Office Management Elective 3 3-0
below 15 13-15

RECOMMENDED ELECTIVES
101-123 Tax 1 4 4-0
101-125 Cost Accounting 1 3 3-0
101-127 Tax 2 3 3-0
102-137 Computerized Accounting Applications 3 2-2
102-161 Business Law 2 3 3-0

REQUIREMENTS FOR GRADUATION
One-half of the total 64 credits must be completed at MATC. Minimum
grade point average of 2.0.
Child Care and Development  
**Associate in Applied Science Degree**

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 day-care homes.

Graduates become responsible for the care and education of a group of children in the birth-to-6 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.

Admissions requirement: an eighth-grade reading level, minimum as determined by a reading test or its equivalent.

**FIRST YEAR**

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<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lab-Lec</th>
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**SECOND YEAR**

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**Civil Engineering Technology**  
**Public Works Technician**  
**Associate in Applied Science Degree**

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.

**FIRST YEAR**

<table>
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**SECOND YEAR**

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**RECOMMENDED ELECTIVES**

- 307-121 Issues in Infant and Toddler Care and Development
- 307-123 Working with Children who Challenge

**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.
- Prerequisites required. Consult faculty.
Commercial Art

**Associate in Applied Arts Degree**

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, advertising and art departments within a company, art studios or as a freelance artist. 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 typing or computer skills. Students should have good command of the English language, having attained a B in English courses.

**RECOMMENDED ELECTIVES**

- 607-176 Water Supply and Sewage 2 2-0
- 607-190 Special Problems-Civil 2 0-6
- 614-114 Architectural Theory and Drafting A 3 3-3

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-E 6 of the Wisconsin Administrative Code.

- 607-168 Legal Elements of Land Surveying 3 3-0
- 607-175 Boundary Location 3 3-0

**REQUIREMENTS FOR GRADUATION**

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

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**Second Semester**

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**SECOND YEAR**

**First Semester**

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**RECOMMEND ELECTIVES**

- 201-124 Advanced Problems/Illustration 2 2-2
- 201-127 Advanced Problems/Graphic Design 2 2-2
- 201-183 Electronic Illustration 2 2-2
- 201-184 Electronic Page Layout 2 2-2
- 201-180 Commercial Art Internship 4 0-4

1 General education courses may be taken in any order and may be taken during summer school as offered.
2 Student must take one of these two courses. However, if they would like to take both, the second course may be taken as an elective.
3 Electives must total 6 credits: students may elect to take 2 credits one semester, 4 another.
4 Student must be enrolled in Portfolio Preparation to take Internship (201-180).

**Computer Information Systems-Midrange Analyst/Programmer**

**Associate in Applied Science Degree**

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 utilizing 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.

**FIRST YEAR**

**First Semester**

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**PROGRAM DESCRIPTIONS**
Computer Information Systems—Operations

Associate in Applied Science Degree

This program prepares students for highly responsible positions in computer center operations. Each student specializes in a technical core of courses in computer system operation, computer programming, data communications systems, and computer operating systems. 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.

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RECOMMENDED ELECTIVES

107-111 Programming I (COBOL) 3 3-2
107-140 Microcomputer Software 3 1-4
804-171 Computer Mathematics (C Programming) 3 2-2

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

Computer Information Systems—Programmer/Analyst

Associate in Applied Science Degree

This two-year program meets the specific skills and knowledge requirements of technical and professional jobs within the computer information systems 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.

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RECOMMENDED ELECTIVES

106-163 Micro Keyboarding 2 1.5-1.5
107-195 Programming 9-SAS 2 2-2
107-140 Intro. to Interactive Software 3 1-4

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

*Requires grade of C or better in all data processing (107) courses.
# Court and Conference Reporting

## Associate in Applied Science Degree

Court and conference reporters record the testimony, opinions, charges, sentences or other proceedings in a court of law and 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. Many men and women have found personal satisfaction, stimulation of mind and monetary rewards in the profession. The program is approved by the National Shorthand Reporters Association. Admission requirements: typing, 50 wpm; English composition, grade of C.

---

## REQUIREMENTS FOR GRADUATION

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

*Contact the Business Department for a list of substitute courses.

---

## COURT AND CONFERENCE REPORTING

### RECOMMENDED ELECTIVES

- **102-146** Parliamentary Procedure 2 2-0
- **102-132** Typing Workshop-Skillbuilding 2 1-2
- **102-381** Information Processing Operations 3 2.5-2.5
- **509-181** Medical Terminology 2 2 2-0
- **106-155** Advanced Court Reporting-Skillbuilding 1 0-2

### 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.

*Graduation from the program requires a net typing speed of 60 wpm for five minutes.

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

*Graduation 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 tests with 95 percent accuracy).

*Internship 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 classes required where applicable.
# Culinary Arts

**Associate in Applied Science Degree**

The Culinary Arts Program is for students wishing to pursue careers within the hospitality field in food preparation and service in commercial food-service operations such as large restaurant hotel chains, privately-owned supper clubs, small diners, gourmet restaurants, school food service operations, health care facilities, and cruise ships.

Graduates 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.

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<td>Gourmet Foods</td>
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<td>Ice Sculpture/Diurective Foods</td>
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<td>Food Service Layout/Equipment</td>
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<td>Electives/</td>
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### RECOMMENDED ELECTIVES

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<th>Credits</th>
<th>Hrs per week</th>
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<td>103-130</td>
<td>Applied Micro Computers</td>
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<tr>
<td>511-140</td>
<td>Culinary Language*</td>
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<tr>
<td>511-179</td>
<td>Restaurant Law</td>
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*These courses are less than one semester in length.

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# Data Entry Operations

**One-Year Diploma**

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 types of equipment and software. In addition to providing instruction in general clerical areas, specialized training on currently used 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.

### FIRST SEMESTER

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<td>Related Accounting</td>
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<td>102-305</td>
<td>Applied Business Math</td>
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<tr>
<td>103-303</td>
<td>Data Entry 1*</td>
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<tr>
<td>103-330</td>
<td>Microcomputers 1</td>
<td>3</td>
<td>2.5-2.5</td>
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<tr>
<td>105-303</td>
<td>Filing Procedures OR</td>
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<td>Filing Procedures</td>
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<td>106-333</td>
<td>Keyboarding Applications 2 OR</td>
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<td>106-133</td>
<td>Document Processing 2(Typing 2) OR</td>
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<td>Keyboarding Applications 3</td>
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**SECOND SEMESTER**

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<td>103-357</td>
<td>Microcomputers 2</td>
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<td>106-376</td>
<td>Job Survey</td>
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<td>106-335</td>
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<td>106-137</td>
<td>Document Processing 3</td>
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<td>106-308</td>
<td>Proofreading/Editing</td>
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**REQUIREMENTS FOR GRADUATION**

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

*Offered only semester 1.

---

# Dental Assistant

**One-Year Diploma**

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, to follow instructions and establish procedures, and to work under pressure and handle emergency situa-
Clinical and diagnostic tests, completes dental x-rays, and the hygienist inspects the mouth, removes stains and deposits from teeth, applies preventive agents, prepares dental emergency, and is prepared to help individuals maintain oral health and prevent oral diseases. Under the supervision of a dentist in a denial office or clinic.

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 in a denial office or clinic.

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.

*All Health Occupations students must show evidence of a physical examination and measles immunity prior to clinical affiliation. Under no circumstances, however, are students assigned to the clinical area until these requirements are met. In addition, specific programs in Health Occupations may recommend that students be immunized against hepatitis after enrollment. This vaccine is available through the Student Health Office at the student’s expense.

Dental Hygienist
Associate in Applied Science Degree

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 hygiene 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.

Upon completion of this program and prior to employment, dental hygiene 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 the Central Regional Dental Testing Service.

Entrance requirements: graduation from an accredited secondary school with a college preparatory course or the recognized equivalent (GED) 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.**

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**Second Semester**

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<td>508-123</td>
<td>Clinical Dental Hygiene Theory 4</td>
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<td>508-124</td>
<td>Clinical Dental Hygiene Lab 4</td>
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<tr>
<td>801-201</td>
<td>English Composition</td>
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<tr>
<td>809-203</td>
<td>Sociology</td>
<td>3</td>
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<td>809-236</td>
<td>Applied Psychology</td>
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<tr>
<td>810-210</td>
<td>Fundamentals of Speech</td>
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</tbody>
</table>

**REQUIREMENTS FOR GRADUATION**

The student must achieve at least a 2.0 (C) grade in microbiology, nutrition, chemistry, and all dental hygiene and general education courses.

*Courses which may be taken prior to admission to the program.

*Recommended program elective—students must have CPR for clinical dental hygiene and licensure exam.

**All health occupations students must show evidence of a physical examination and measles immunity prior to clinical affiliation. Under no circumstances are students assigned to the clinical area until these requirements are met. Specific programs in Health Occupations may recommend that students be immunized against hepatitis. Vaccines are available through the Student Health Office at the student's expense.

Note: An elective may be any three-credit college transfer course of the student's choice.

---

**Diesel and Heavy Equipment Technician**

**Two-Year Diploma**

This program provides students with the knowledge and skills necessary for entry level jobs in exciting and challenging careers as diesel and heavy equipment technicians. Students receive hands-on training to learn the latest technology in trucks, construction, and agricultural equipment.

Students will receive detailed instruction in and gain hands-on experience with, operation and repair of diesel engines, transmissions, fuel injection systems, electrical systems, air brakes, heavy-duty truck wheel alignment and steering. Training includes technical experiences with air conditioning, refrigeration, hydraulics, welding, electronics, and computers.

Job opportunities in the field include truck technician/mechanic, construction equipment technician/mechanic, agricultural equipment technician/mechanic, bus technician/mechanic, fuel injection technician, factory service representative, engine test technician, DOT inspector, service manager, industrial power/generator technician, marine diesel technician, fleet maintenance, shop foreman, fleet maintenance manager.

Admission requirements: high school diploma or equivalent. Good reading, writing and math skills to master and understand the subject matter in the program.

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**FIRST YEAR**

**First Semester**

<table>
<thead>
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<th>Course Code</th>
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<td>412-345</td>
<td>Diesel Electrical Fundamentals*</td>
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<tr>
<td>412-346</td>
<td>Diesel Electronics*</td>
<td>2</td>
<td>3-5</td>
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<tr>
<td>412-347</td>
<td>Heavy Duty Charging/Starting Systems*</td>
<td>2</td>
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<tr>
<td>412-363</td>
<td>Heavy Duty Hydraulic Brakes*</td>
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<tr>
<td>412-366</td>
<td>Air Brakes*</td>
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<td>412-367</td>
<td>Heavy Duty Truck Wheel Alignment*</td>
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<td>420-332</td>
<td>Metals Working Processes</td>
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<td>801-356</td>
<td>Communications 1</td>
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<td>804-379</td>
<td>Mathematics 2</td>
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<td>806-363</td>
<td>Science 1</td>
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**SECOND YEAR**

**First Semester**

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<td>Mobile Hydraulics</td>
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<td>412-323</td>
<td>Air Conditioning</td>
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<td>412-385</td>
<td>Diesel Engine Fundamentals*</td>
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<td>412-386</td>
<td>Diesel Engine Repair Procedures*</td>
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<td>412-387</td>
<td>Diesel Engine Component Repair*</td>
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<td>412-388</td>
<td>Diesel Engine Overhaul*</td>
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**Second Semester**

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<td>412-326</td>
<td>Refrigeration Systems—Diesel</td>
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<td>412-337</td>
<td>Diesel Shop Operations</td>
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<td>412-375</td>
<td>Diesel Fuel Systems 1*</td>
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<td>412-376</td>
<td>Diesel Fuel Systems 2*</td>
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<td>412-377</td>
<td>Diesel Engine Performance*</td>
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<td>412-378</td>
<td>Diesel Electronic Fuel Systems*</td>
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**REQUIREMENTS FOR GRADUATION**

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

*Nine-week courses.

Notes: Prerequisites can be waived with program director approval. Advanced standing may be gained through division dean/program director. Certain associate degree or higher post-secondary courses specific to the curriculum may substitute for courses upon approval of division dean/program director.

Enrollment at nine-week intervals with advanced standing and approval of division dean.
Dietetic Technician

**Associate in Applied Science Degree**

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, nursing homes and community settings. Graduates are eligible to take the ADA credentialing examination to become Dietetic Technician Registered.

Dietetic technicians may work under the direction of registered dietitians in hospitals and nursing homes 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.

### FIRST YEAR

<table>
<thead>
<tr>
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<th>Credits</th>
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<td>303-105 Introduction to Dietetics and the Health Care Field</td>
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<td>303-110 Food Science/DT</td>
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<td>303-111 Basic Nutrition 1</td>
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<td>303-122 Medical Terminology in Nutritional Care</td>
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<td>303-123 Principles of Bio-Organic Chemistry</td>
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<td>303-112 Basic Nutrition 2</td>
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<td>303-120 Supervised Field Experience 1</td>
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<td>303-128 Food Systems Management</td>
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<td>303-150 Physiology for Dietetics</td>
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<td>801-152 Communication Skills 2</td>
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### SECOND YEAR

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<td>303-130 Diet Therapy I</td>
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<td>303-132 Supervised Field Experience 2</td>
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<td>809-156 Aging and its Social Problems</td>
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<td>809-157 Contemporary American Society</td>
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<td>809-199 Psychology of Human Relations</td>
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<tr>
<td>303-129 Employment Orientation and Research</td>
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<td>303-131 Diet Therapy 2</td>
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### RECOMMENDED ELECTIVES

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<th>Course</th>
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<th>Lec-Lab</th>
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<tbody>
<tr>
<td>303-115 Food Service Management in Health Care Facilities</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>303-119 Applied Clinical Care</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

---

**Drafting-Architectural**

**One-Year Diploma**

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.

### Hrs per week in class

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403-303 Construction Drawing 1</td>
<td>5</td>
<td>3-6</td>
</tr>
<tr>
<td>403-315 Introduction to Computer Graphics</td>
<td>2</td>
<td>1-3</td>
</tr>
<tr>
<td>403-316 Building Construction 1</td>
<td>3</td>
<td>3-3</td>
</tr>
<tr>
<td>403-330 Mechanical Systems 1</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td>801-356 Communications 1</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>804-379 Mathematics 2</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>806-363 Science 1</td>
<td>2</td>
<td>2-2</td>
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<td><strong>Total</strong></td>
<td>16</td>
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<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td><strong>Second Semester</strong></td>
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</tr>
<tr>
<td>403-302 Architectural Drawing</td>
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<td>3-6</td>
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<tr>
<td>403-304 CAD Applications</td>
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<td>403-308 Codes and Regulations</td>
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<tr>
<td>403-317 Building Construction 2</td>
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<td>2-2</td>
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<tr>
<td>403-331 Mechanical Systems 2</td>
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<tr>
<td>804-380 Mathematics 3</td>
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### REQUIREMENTS FOR GRADUATION

- 31 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**

The Electron Microscopy Program is a two-year Associate Degree 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 observation 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...
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.

### ELECTRONICS

#### Associate in Applied Science Degree

The electronics industry offers a wide range of job opportunities installing and maintaining electronic equipment in manufacturing, research and development, medicine, and communications. Communications and industrial electronics continue to expand, and there is a high demand for technicians or 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>
<th>Hrs per week</th>
</tr>
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<tbody>
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<td>DC Fundamentals</td>
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</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 Circuits Fundamentals</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>605-171</td>
<td>Applied Electronics Math</td>
<td>3</td>
<td>2-3</td>
</tr>
<tr>
<td>601-151</td>
<td>Communication Skills</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>809-197</td>
<td>Contemporary American Society</td>
<td>3</td>
<td>3-0</td>
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<td><strong>RECOMMENDED ELECTIVES</strong></td>
<td></td>
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<tr>
<td>804-175</td>
<td>Image Processing</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>806-273</td>
<td>Microbiology</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>613-100</td>
<td>Principles of Metallurgy</td>
<td>3</td>
<td>2-2</td>
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**SECOND YEAR**

<table>
<thead>
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<th>Credits</th>
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<td>605-116</td>
<td>Advanced Analog Solid State Circuits</td>
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<td>605-130</td>
<td>Instruments and Industrial</td>
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<td>605-173</td>
<td>Electronic Computers and Assembly Language</td>
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<td>605-176</td>
<td>Introduction to Digital Electronics</td>
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<tr>
<td>806-152</td>
<td>Technical Science 2</td>
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**REQUIREMENTS FOR GRADUATION**

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

### FIRST YEAR

**FIRST SEMESTER**

<table>
<thead>
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<th>Hrs per week</th>
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<tbody>
<tr>
<td>636-111</td>
<td>Scanning Electron Microscopy</td>
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<tr>
<td>636-112</td>
<td>Transmission Electron Microscopy</td>
<td>4</td>
<td>3-3</td>
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<tr>
<td>636-115</td>
<td>Transmission Electron Microscopy</td>
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<tr>
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<td>Technical Mathematics I</td>
<td>4</td>
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<tr>
<td>804-172</td>
<td>Introduction to Computer Electronics</td>
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<tr>
<td>806-111</td>
<td>Chemistry</td>
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**SECOND SEMESTER**

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<td>Biological Sample Prep for SEM and TEM</td>
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<tr>
<td>636-122</td>
<td>Physical Materials Prep for SEM and TEM</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>804-173</td>
<td>Computer Mathematics</td>
<td>3</td>
<td>3-2</td>
</tr>
<tr>
<td>804-152</td>
<td>Technical Mathematics 2</td>
<td>3</td>
<td>4-0</td>
</tr>
<tr>
<td>806-161</td>
<td>Electricity and Magnetism</td>
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</tr>
<tr>
<td>901-151</td>
<td>Communication Skills</td>
<td>3</td>
<td>3-0</td>
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</table>

**SECOND YEAR**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>636-131</td>
<td>Advanced Biological Techniques and Ultrastructure Studies</td>
<td>3</td>
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<tr>
<td>636-132</td>
<td>Advanced Physical Techniques and Material Science Studies</td>
<td>4</td>
<td>3-2</td>
</tr>
<tr>
<td>636-135</td>
<td>Laboratory and Microscope Maintenance</td>
<td>2</td>
<td>1-3</td>
</tr>
<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-197</td>
<td>Technical Report Writing</td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>Elective</td>
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<td>below</td>
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**RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>804-175</td>
<td>Image Processing</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>806-273</td>
<td>Microbiology</td>
<td>3</td>
<td>2-2</td>
</tr>
<tr>
<td>613-100</td>
<td>Principles of Metallurgy</td>
<td>3</td>
<td>2-2</td>
</tr>
</tbody>
</table>

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**Program Descriptions**

Electronic Servicing

**One-Year Diploma**

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.
Emergency Medical Services Specialist

Less Than One-Year Diploma

This course includes the EMT-Basic curriculum. The EMS specialist will need to learn safe driving skills for transport of patients, rescue principles for cooperation with fire or other rescue services, EMS management techniques, hazardous materials and interpersonal communication skills. This program is undergoing review and some modifications to the curriculum may take place after the publication of the catalog. All potential students should contact the Emergency Medical Services Section Office regarding the status of the program requirements prior to enrollment.

Emergency Medical Technician-Basic (EMT-B)

Less Than One-Year Diploma

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.

Emergency Medical Technician-Intermediate (EMT-I)

Certification Course

Less Than One-Year Diploma (approval pending)

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 EMS Section Office for course offering and enrollment procedures. Prerequisite: EMT-Basic.

Emergency Medical Technician-Paramedic (EMT-P)

Two-year Associate Degree

Madison Area Technical College offers an education track in the art and science of pre-hospital advanced life support. 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 as an Emergency Medical Technician-Paramedic. This program is provided jointly by Madison Area Technical College and the University of Wisconsin Hospital and Clinics. This course is offered to full-time students only.

Admission requirements: 1) high school graduate or equivalent; 2) one year of high school algebra and chemistry; 3) must have 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 runs. All potential students MUST contact the EMS Section Office for strict admission requirements and enrollment procedures.

**FARM BUSINESS PRODUCTION AND MANAGEMENT**

**Less Than One-Year Diploma**

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: group 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 the course “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).

<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>

<table>
<thead>
<tr>
<th>Elective 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 veteran’s benefits.
Farm Business Production and Management/Agridevelopment
Less Than One-Year Diploma

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. Prescheduled 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 the "Operating the Farm Business" course when enrolling in the Farm Business Production and Management Program.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>090-381 Operating the Farm Business</td>
<td>3</td>
</tr>
<tr>
<td>090-382 Soils Management</td>
<td>3</td>
</tr>
<tr>
<td>090-383 Crop Management</td>
<td>3</td>
</tr>
<tr>
<td>090-384 Livestock Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>090-385 Livestock Management</td>
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<tr>
<td>090-386 Farm Records and Business Analysis</td>
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</tr>
<tr>
<td></td>
<td>18</td>
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</tbody>
</table>

Note: This program does not qualify for federal veterans benefits.

Farm Business Production and Management—Sheep Production
Less Than One-Year Diploma

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 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 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. Enrollees 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 the course 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, utilizing its advisory committee(s). To graduate from this program, a student must successfully complete the six required courses (18 credits).

<table>
<thead>
<tr>
<th>Course</th>
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</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 (Sheep Prod.)</td>
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<tr>
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</table>

Elective Course
090-387 Sheep Management Update
       (course for graduates) 3

Note: This program does not qualify for federal veterans benefits.
Finance

**Associate in Applied Science Degree**

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.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-111</td>
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<td>102-128</td>
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<td>801-151</td>
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<tr>
<td>809-199</td>
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<table>
<thead>
<tr>
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<th>Hrs per week in class</th>
</tr>
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<tbody>
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<td>102-160</td>
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**SECOND YEAR**

<table>
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<th>First Semester</th>
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<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
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<td>102-130</td>
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<td>102-126</td>
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<td>3-0</td>
</tr>
<tr>
<td>103-132</td>
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<td>809-195</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>Elective</td>
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<td><strong>Total</strong></td>
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<table>
<thead>
<tr>
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<th>Credits</th>
<th>Hrs per week in class</th>
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<tbody>
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<td>809-197</td>
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**RECOMMENDED ELECTIVES**

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<th>Hrs per week in class</th>
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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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Fire Protection Technician

**Associate in Applied Science Degree**

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. The Fire Protection Technician Program has undergone some review, and some modifications to the curriculum may take place after the publication of this catalog, so potential students should contact the Protective Services Department chairperson regarding the status of the program requirements prior to enrollment.

**FIRST YEAR**

<table>
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<tr>
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**SECOND YEAR**

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</table>
Second Semester

503-145 Water Supply Hydraulics 3 3-0
503-153 Strategic Operation and Disaster Planning 3 3-0
503-160 Hazards of Industrial Processes 3 3-0
801-197 Technical Report Writing 3 3-0
809-197 Contemporary American Society 3 3-0
Elective 2 below 17 15+6

RECOMMENDED ELECTIVES

503-106 Chemistry of Hazardous Materials 2 2
503-120 Equipment and Apparatus 2 2-0
503-125 Fire Suppression 3 3-0

Second Quarter

518-312 Short Order Cookery* 1 0-4
518-370 Employment Orientation 1 2-0
518-361 Field Experience 1* 2 0-36
518-362 Field Experience 2* 6 42

*These courses are less than one semester in length.

Fire Recruit Academy

Less Than One-Year Diploma

This program offers 200 hours of fire service education culminating in certification as a state certified firefighter. It also includes 120 hours and certification as an emergency medical technician. Applications can only be obtained at the Fire Service Education Center.

<table>
<thead>
<tr>
<th>COURSE</th>
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<td>503-125</td>
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Food Service Aide

Less Than One-Year Diploma

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 will consist of classroom instruction while the second quarter will include 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.

<table>
<thead>
<tr>
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<tr>
<td>809-352</td>
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</table>

*These courses are less than one semester in length.

Food Service Production

One-Year Vocational Diploma

The Food Service Production Program helps students develop skills to pursue a career in a variety of commercial food service establishments such as restaurants, supper clubs, catering services, hotels, resorts, health-care facilities, schools, and fast-food operations.

The program is based on objectives selected for their relevancy to the education and training of men and women for positions as cooks, assistant cooks and short-order cooks. Successful students can assimilate information and instruction clearly, can learn and apply the principles and techniques involved in cooking and baking, and have an interest in food production.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week</th>
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<table>
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<th>Hrs per week</th>
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</tbody>
</table>

*These courses are less than one semester in length.
Horticulture
Associate Degree Program

These courses are a unique career-access unit at MATC, in cooperation with Gateway Technical Institute 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 Production Program at Gateway Technical Institute for completion of an associate degree. Additional general education courses in the program may be completed at MATC. Such courses include Communications Skills 1 and 2, Economics, Contemporary American Society, Psychology of Human Relations, Accounting and others. 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 as some students may wish to terminate their training with the courses offered at MATC.

<table>
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<tr>
<th>COURSES</th>
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<td>001-120 Landscaping Interior</td>
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<tr>
<td>001-134 Turf and Lawn Management</td>
<td>3</td>
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<tr>
<td>001-140 Introduction to Landscaping</td>
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<tr>
<td>001-143 Garden Plants</td>
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<tr>
<td>001-144 Floral Design 1/Commercial</td>
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<tr>
<td>001-145 Floral Design 2/Commercial</td>
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<td>001-143 Garden Plants</td>
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<tr>
<td>001-155 Garden Center Operations</td>
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Hospitality Management
Associate in Applied Science Degree

The hospitality industry is one of Wisconsin’s important employers, representing over seven percent of the state’s jobs in hotels, motels, restaurants and bars. The outlook for growth is optimistic based on the increasing popularity of eating and dining away from home, an anticipated greater emphasis on early retirement and leisure time for traveling, and the continuing demand for business and convention lodging. Although a variety of interesting jobs are available in the field, the expectation for greatest growth in jobs is at the management level. The two-year program in hospitality management provides the background for advancement in the field, especially for those interested in service to people away from home. The course of study includes management theory and practice, with application to hospitality issues, and successful work experience in the field.

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<tr>
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<td>104-102 Marketing Principles</td>
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<td>106-163 Microkeyboarding</td>
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<tr>
<td>109-128 Introduction to Hospitality Management</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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<tr>
<td>101-116 Hotel &amp; Restaurant Accounting</td>
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<td>104-104 Selling Principles</td>
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<td>109-131 Front Office Management</td>
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<td>109-177 Hotel/Restaurant Purchasing</td>
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<td>511-105 Sanitation</td>
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<td>109-125 Hospitality/Recreation Management</td>
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<td>109-129 Hospitality Sales Promotion</td>
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<td>109-133 Beverage Merchandising</td>
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| Second Semester                  |         |         |
| 109-136 Hotel and Restaurant Law  | 3       | 3-0     |
| 109-138 Lodging Environments     | 2       | 2-0     |
| 109-157 Hospitality Internship I | 3       | 1-8     |
| 809-195 Economics                | 3       | 3-0     |
| 809-197 Contemporary American Society | 3     | 3-0     |
| Electives                        | 3       | below   |
|                                  | 17      | 20+E    |

RECOMMENDED ELECTIVES

| 810-201 Fundamentals of Speech   | 3       | 3-0     |
| 802-211 Spanish 1                | 4       | 4-0     |
| 109-141 Hospitality Operation Seminar | 1      | 1-0     |
| 109-178 Meeting, Planning and Convention Services | 2  | 2-0 |
| 194-190 Property Management and Development I | 3      | 3-0     |

REQUIREMENTS FOR GRADUATION

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

Human Service Associate
Associate in Applied Science Degree

The Human Service Associate Program trains people to provide information, support, care and advocacy in a human service agency. Students learn to work with people of diverse racial, ethnic and cultural backgrounds. They acquire the skills needed to work with individuals, groups and communities. Human services includes work with alcohol and drug abusers, people with developmental and
other disabilities, older adults, adolescents, and people seeking services in community-based agencies.

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 interest that are essential for human service students include emotional stability and maturity, an appreciation of cultural diversity, and an interest in working with people.

Students choose nine credits of coursework and their field placement in one of four interest areas: gerontology, alcohol and other drug abuse, developmental and other disabilities, or generalist.

FIRST YEAR
First Semester
520-105 Introduction to Human Services 3 credits 3-0
520-106 Orientation to Human Services Populations 3 credits 3-0
520-117 Interviewing 3 credits 3-0
520-125 Issues in Alcohol and Other Drug Abuse 3 credits 3-0
801-151 Communication Skills 1 OR 3 credits 3-0
801-201 English Composition 1* OR 3 credits 3-0
809-199 Psychology of Human Relations OR 3 credits 3-0
809-231 Introduction to Psychology 3 credits 3-0

Second Semester
520-116 Group Work Skills 3 credits 3-0
520-120 Community Service Agencies 3 credits 3-0
520-130 Social Change Skills 3 credits 3-0
801-197 Technical Reporting 3 credits 3-0
809-197 Contemporary American Society** OR 3 credits 3-0
809-231 Introduction to Sociology OR 3 credits 3-0

Choose one according to specialty:
520-112 Introduction to Developmental Disabilities 3 credits 3-0
520-136 Counseling Alcoholics and Other Drug Abusers 3 credits 3-0
809-143 Family in America 3 credits 3-0
520-160 Introduction to Gerontology 3 credits 3-0

SECOND YEAR
First Semester
520-139 Human Services Agency Experience 1 4 credits 0-16
520-157 Human Service Counseling Skills 3 credits 3-0
520-188 Human Service Experience Conference 1 3 credits 3-0
809-177 Human Development OR 3-0
809-233 Developmental Psychology* 3 credits 3-0
Elective: base choice on specialty below 3 credits 25+E

Second Semester
520-140 Human Services Agency Experience 2 5 credits 0-20
520-189 Human Services Experience Conference 2 3 credits 3-0
809-195 Economics OR 3 credits 3-0
809-211 Macro-Economics* Elective: base choice on specialty below 3 credits 26+E

RECOMMENDED ELECTIVES

- Developmental Disabilities
  520-110 Assessment and Program Planning for Persons with Disabilities 3 credits 3-0
  520-112 Introduction to Developmental Disabilities 3 credits 3-0
  520-115 Teaching Strategies for Persons with Disabilities 3 credits 3-0

- Alcohol and Other Drug Abuse (AODA)
  520-136 Counseling Alcoholics and Other Drug Abusers 3 credits 3-0
  520-141 Introduction to Community Mental Health 3 credits 3-0
  520-150 AODA: Special Populations 3 credits 3-0

- Gerontology
  526-160 Introduction to Gerontology 3 credits 3-0
  526-162 Administration in Gerontology 3 credits 3-0
  526-164 Case Management and Program Development for the Elderly 3 credits 3-0

- Generalist
  514-110 Group Dynamics 2 credits 2-0
  514-135 Mental Health Practices 3 credits 3-0
  809-143 Family in America 3 credits 3-0
  809-202 Social Disorganization 3 credits 3-0
  809-205 Contemporary Society 3 credits 3-0
  809-206 Women in Society: Social Institutions and Social Change 3 credits 3-0
  809-207 Criminology 3 credits 3-0

REQUIREMENTS FOR GRADUATION

66 credits with a minimum 2.5 grade point average in all 520 courses and electives and a grade of a C or better in each core course. 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.

Industrial Maintenance
Two-Year Vocational Diploma

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 electro-mechanical and automated manufacturing computer-controlled machines as they relate to systems operations, applications, installation and modification.
Industrial Welding Technician  
Associate in Applied Science Degree  
The industrial welding curriculum is designed to provide the student with knowledge in the manual, semi-automatic and automatic welding processes in metal fabrication and construction industries. The curriculum provides the student 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.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
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<tbody>
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<td>Fundamentals of Arc</td>
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<tr>
<td>Shielded Metal Arc</td>
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<tr>
<td>Gas Welding Techniques</td>
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<tr>
<td>Technical Mathematics I</td>
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**RECOMMENDED ELECTIVES**
- Evaluation of Structural Design 3 2-2
- Metal Working Techniques 2 2-2
- Special Problems 2-4 0-3
- Basic Computer Math 2 2-1

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

<table>
<thead>
<tr>
<th>Requirement</th>
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<th>Hrs per week in class</th>
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<tr>
<td>Business Mathematics</td>
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<tr>
<td>Marketing Principles</td>
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</tbody>
</table>

Insurance Services  
Associate in Applied Science Degree  
The Insurance Services Program meets entry-level educational needs of most segments of the insurance industry, as customer service representatives (underwriter assistants/coordinators, risk raters/clerks); claims coordinators (property/casualty, commercial and personal lines); health claims (coordination of benefits, Medicare/Medicaid); and sales/marketing representatives (personal lines, commercial lines, property, casualty, life and health). Training blends general educational development and required insurance technical skills. The program is intended to umbrella entry-level qualifications found in life/health and property/casualty job-manpower requirements.
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.

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 by corporations as in-house interior designers.

**FIRST YEAR**

**First Semester**
- 304-100 Introduction to Interior Design 1 1-0
- 304-102 Fundamentals of Design 3 2-3
- 304-104 Basic Drafting 3 2-3
- 304-105 Interior Components 1 2 1-3
- 304-107 Interior Design Textiles 3 3-0
- 304-109 History of Architecture and Interiors 1 2 2-0
- 801-151 Communication Skills 1 3 3-0

**Second Semester**
- 304-112 Perspective Lab 1 0-2
- 304-124 Presentation Techniques 3 1-4
- 304-125 Space Planning 3 2-3
- 304-127 Interior Components 2 4 3-3
- 304-129 History of Architecture and Interiors 2 3 3-0
- 801-152 Communications Skills 2 3 3-0

**SECOND YEAR**

**First Semester**
- 304-132 Kitchen and Bath Design 2 1-3
- 304-133 Commercial Design 4 2-6
- 304-135 Lighting 2 1-3
- 304-150 Sales 3 3-0
- 809-199 Psychology of Human Relations 3 3-0
- Elective 3 below 17 22+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**
- 304-119 Visual Merchandising 3 2-2
- 304-152 Issues in Interior Design 1 1-0
- 614-136 Introduction to CAD 2 1.5-1.5

**REQUIREMENTS FOR GRADUATION**
68 credits are required for graduation.

---

**SECOND YEAR**

**First Semester**
- 304-143 Personal Insurance (INS22) 3 3-0
- 304-142 Commercial Insurance (INS23) 3 3-0
- 810-101 Speech 3 3-0
- 809-199 Psychology of Human Relations 3 3-0
- 104-104 Selling Principles 3 2-2
- Elective 2 below 17 16+E

**Second Semester**
- 104-128 Principles of Underwriting (AU 61) 3 3-0
- 104-160 Sales Management 3 3-0
- 102-160 Business Law 1 3 3-0
- 104-141 Insurance Adjusting 3 3-0
- 809-197 Contemporary American Society 3 3-0

**RECOMMENDED ELECTIVES**
- 104-103 Marketing Information Management 3 3-0
- 104-110 Supervision Principles 3 3-0
- 104-125 Promotion Principles 3 3-0
- 104-150 Employee Benefits 3 3-0
- 104-151 Commercial Liability 3 3-0
- 104-172 Career Planning & Development 3 3-0
- Elective 4 below 16 12+E

**REQUIREMENTS FOR GRADUATION**
One-half of the total 64-65 credits must be taken at MATC. Minimum grade point average 2.0.

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**Interior Design**

**Associate in Applied Arts Degrees**

The Interior Design Program prepares students for entry-level residential design and sales positions in retail stores and design studios, and commercial design positions in office dealerships and corporate facilities.

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.

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**Program Descriptions**
Laboratory Animal Technician
Two-Year Associate Degree

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 animal 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; and 2) high school and post-secondary transcripts; and 3) one year of high school algebra and biology. Applicants without algebra and biology can take these courses at MATC, however they must take them prior to enrollment in occupational courses.

One year of high school chemistry is strongly recommended. Applicants may take chemistry while they are enrolled in occupational courses. Other courses which may be helpful to program success are: accounting, agriculture, mathematics, keyboarding and computer courses.

Accepted applicants will take the ASSET test. Applicants who have successful post-secondary courses, or who have taken an equivalent test, such as the ACT, SAT or CQT, may be exempt from the ASSET test. Results will be used for placement purposes.

A personal interview with the division dean or program director may waive these requirements.

### FIRST YEAR

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lec-Lab</th>
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### SECOND YEAR

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<td>091-175 Infectious Diseases</td>
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<td>091-176 Animal Nursing Procedures</td>
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<td>091-178 Issues in Laboratory Animal Science</td>
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<td>801-197 Technical Reporting</td>
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<td>091-173 Facility Management Techniques</td>
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<td>091-177 Animal Anatomy and Physiology 2</td>
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<td>091-179 Laboratory Animal Science 2</td>
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<tr>
<td>091-180 Research Animal Surgical Nursing</td>
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**RECOMMENDED ELECTIVES**

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<th>Lec-Lab</th>
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<tbody>
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<td>091-121 Laboratory Techniques</td>
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<tr>
<td>103-130 Microcomputer Applications</td>
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<tr>
<td>804-201 Intermediate Algebra</td>
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<td>804-306 Pre-college Algebra*</td>
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<td>806-377 Pre-college Chemistry*</td>
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<td>806-111 Chemistry 1</td>
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<tr>
<td>806-112 Chemistry 2</td>
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*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

The legal transcriptionist must have a working knowledge of legal terminology, legal documents and procedures necessary in instituting and prosecuting a lawsuit, in addition to the usual skills and knowledge required of all office workers who do word processing. 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 45 wpm.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>First Semester</td>
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<tr>
<td>102-160 Business Law 1 OR</td>
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<tr>
<td>102-360 Business Law 1</td>
<td>(2)</td>
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<tr>
<td>103-330 Microcomputers</td>
<td>3</td>
<td>2-5</td>
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<tr>
<td>106-319 Legal Transcription 1</td>
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<td>2-5</td>
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<tr>
<td>106-328 Legal Office Procedures 1</td>
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<tr>
<td>106-349 Legal Document Processing 1</td>
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<td>2-5</td>
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<td>801-351 Communications 1</td>
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Legal Transcriptionist
One-Year Diploma

The legal transcriptionist must have a working knowledge of legal terminology, legal documents and procedures necessary in instituting and prosecuting a lawsuit, in addition to the usual skills and knowledge required of all office workers who do word processing. 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 45 wpm.
Second Semester

102-161 Business Law 2 OR 3 3.0
102-361 Business Law 2 (2) 3.0
103-357 Microcomputers 2 3 2.5-2.5
106-320 Legal Transcription 2 3 2.5-2.5
106-329 Legal Office Procedures 2 2 3.0
106-350 Legal Document Processing 2 3 2.5-2.5
106-310 Job Survey/Legal Transcription Internship 1 2.0
106-308 Proofreading/Editing 2 3.0
(16) 17 26

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

*Not a beginning typing course; keyboarding knowledge required.
1Offered semester 1 only.
2Offered semester 2 only.

Liberal Studies Degrees
These programs are designed for students who wish to gain a broad, general background and who either 1) intend to continue on to a four-year baccalaureate degree or 2) 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

MINIMUM REQUIREMENTS

<table>
<thead>
<tr>
<th>English and Speech</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three credits must be in English composition.</td>
<td>9</td>
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<table>
<thead>
<tr>
<th>History and Social Sciences</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes at least one course each from two areas of history, sociology, psychology, economics and government.</td>
<td>9</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics and Natural Science</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes at least one laboratory course each from biological and physical sciences. Includes at least college algebra.</td>
<td>20</td>
</tr>
</tbody>
</table>

Humanities

Includes art, music, film, drama, philosophy, foreign language and literature or composition beyond the English requirement.

Health/Wellness

1

Electives

16

Electives include any college credit transfer credits beyond minimum requirements and a maximum of 6 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.

Associate in Arts Degree

64 Credits

MINIMUM REQUIREMENTS

<table>
<thead>
<tr>
<th>English and Speech</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Three credits must be in English composition.</td>
<td>9</td>
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</table>

<table>
<thead>
<tr>
<th>History and Social Sciences</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes at least one course each from three areas of history, sociology, psychology, economics and government.</td>
<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>Mathematics and Natural Science</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes one laboratory course in science. Includes at least intermediate algebra.</td>
<td>7</td>
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</table>

<table>
<thead>
<tr>
<th>Humanities</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Includes at least one course each from three areas of history, sociology, psychology, economics and government.</td>
<td>16</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Health/Wellness</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Electives include any college credit transfer credits beyond minimum requirements and a maximum of 6 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.</td>
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<table>
<thead>
<tr>
<th>Elective</th>
<th>Credits</th>
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COLLEGE TRANSFER COURSES

<table>
<thead>
<tr>
<th>Credits</th>
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<td>In class</td>
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| 801 | ENGLISH |
| 801-201 | English Composition 1 |
| 801-202 | English Composition 2 |
| 801-203 | Advanced Composition |
| 801-204 | Introduction to Modern Literature 1 |
| 801-213 | Survey of British Literature 1 |
| 801-217 | American Literature 1 |
| 801-218 | Special Topics in American Literature |
| 801-219 | Survey of Western World Literature 1 |
| 801-220 | Survey of Western World Literature 2 |
| 801-222 | Introduction to Modern Literature 2 |
| 801-225 | Contemporary Literature |
| 801-241 | Creative Writing |
| 801-245 | News Writing and Reporting |
| 801-246 | Feature Writing |
| 801-250 | Women in Literature |
| 801-255 | Women in the Arts |

| 802 | FOREIGN LANGUAGE |
| 802-211 | Spanish 1 |
| 802-212 | Spanish 2 |
| 802-213 | Spanish 3 |
| 802-214 | Spanish 4 |
| 802-221 | French 1 |

PROGRAM DESCRIPTIONS
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<td>Weather and Climate</td>
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<tr>
<td>190-246</td>
<td>Survey of Biochemistry</td>
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<tr>
<td>190-247</td>
<td>Microbiology</td>
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<tr>
<td>190-248</td>
<td>General Microbiology</td>
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<td>190-249</td>
<td>Environmental Issues</td>
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<td>190-250</td>
<td>Physical Education</td>
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<td>190-251</td>
<td>Introduction to Triathlon</td>
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<td>190-252</td>
<td>Conditionning/Weight Training</td>
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<td>190-253</td>
<td>Conditionning/Basketball 2</td>
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<td>Advanced Weight Training</td>
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<td>190-255</td>
<td>Softball/Conditionning</td>
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<td>190-256</td>
<td>Water Aerobics</td>
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<td>Lifeguard Training</td>
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<td>190-258</td>
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<td>190-262</td>
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<td>Aerobic Dance</td>
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<td>Marriage and the Family</td>
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<td>Women in Society: Social Institutions and Social Change</td>
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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 micrometers, calipers, indicators and gauge blocks. The ASSET assessment test is required prior to registration.

FIRST YEAR

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| SECOND YEAR                                                                     |         |               |

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Second Semester

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<td>806-363 Science 1</td>
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**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.
# Marketing

**Associate in Applied Science Degree**

Marketing offers many career pursuits for qualified men and women with initiative and trained abilities. Marketing abounds with opportunities in the retail, wholesale, manufacturing and related marketing fields. Study involves a broad, dynamic and diversified area involving goods and services, with many opportunities for specialization and growth. In today’s economy, the consumer is the center of the business universe. Acceptance of this consumer concept is having broad implications in economic thinking. As this concept gains greater acceptance, Marketing is being identified as the most important function in business, and is becoming more critical in the survival of nonprofit institutions.

<table>
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<th>Hrs per week in class</th>
<th>Credits</th>
<th>Lab-Lab</th>
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<td>104-129 Consumer Behavior</td>
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**Requirements for Graduation**

One-half the total 65-66 credits must be taken at MATC. Minimum grade point average 2.0.

---

# Marketing-Fashion Merchandising Management

**Associate in Applied Science Degree**

Fashion merchandising presents many exciting career opportunities to imaginative men and women who have the ability and interest to create, develop and promote new fashion ideas and products. Merchandising organizations, such as department stores, retail chains and specialty stores need enthusiastic people with specialized education.

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 in these areas, enrich class studies and enable students to explore career opportunities. Second-year students receive supervised work experience both in the summer between the first and second year and the fourth semester.

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<thead>
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<th>Hrs per wk in Class</th>
<th>Credits</th>
<th>Lab-Lab</th>
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<td>104-135 Elements of Fashion</td>
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Mechanical Design Technician
Associate in Applied Science Degree

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 constantly rising demand for trained people in this field. The ASSET test is required for math and English placement.

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<th>Hrs per week in class</th>
<th>Lab-Lab</th>
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**RECOMMENDED ELECTIVES**
- 609-182 Manufacturing Case/Product Analysis 3 3-0
- 609-186 Product Development 3 2-4
- 609-100 Principles of Metallurgy 3 1-2
- 804-171 Basic Computer Mathematics 2 2-1

**REQUIREMENTS FOR GRADUATION**
70/72 credits with a GPA of 2.0 (C) or above. Average of 2.0 (C) or above for occupational specific courses.

Medical Assistant
One-Year Diploma

The Medical Assistant 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.

Aptitudes and interests that are helpful are a genuine interest in medicine and in helping people. A medical assistant is courteous, tactful, well-organized and able to work quickly and accurately under pressure, flexible and able to adjust to diverse personalities, as well as to follow directions and adhere to standards. Admission requirements: 1) high school graduation, HSED, or GED; and 2) assessment test.

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<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
<th>Lab-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>509-316 Clinical Assisting 1</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>509-355 Clinical Laboratory 1</td>
<td>3</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>509-360 Medical Terminology 1</td>
<td>2</td>
<td>4-0</td>
<td></td>
</tr>
<tr>
<td>509-303 Body Structure and Function</td>
<td>2</td>
<td>4-0</td>
<td></td>
</tr>
<tr>
<td>509-313 Practice Management 1</td>
<td>1</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>801-163 Microkeyboarding</td>
<td>2</td>
<td>1-5-1.S</td>
<td></td>
</tr>
<tr>
<td>801-351 Communications 1</td>
<td>2</td>
<td>3-0</td>
<td></td>
</tr>
<tr>
<td>509-371 Medical Office Emergencies/CPR</td>
<td>1</td>
<td>1-1</td>
<td></td>
</tr>
<tr>
<td>106-365 Medical Office Procedures</td>
<td>3</td>
<td>3-2</td>
<td></td>
</tr>
<tr>
<td>509-315 Practice Management 2</td>
<td>1</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>509-362 Clinical Assisting 2</td>
<td>3</td>
<td>2-3</td>
<td></td>
</tr>
<tr>
<td>509-361 Medical Terminology 2</td>
<td>1</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>509-356 Clinical Laboratory 2</td>
<td>3</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>801-352 Communications 2</td>
<td>2</td>
<td>3-0</td>
<td></td>
</tr>
<tr>
<td>509-323 Interpersonal Relations</td>
<td>1</td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>509-370 Externship</td>
<td>2</td>
<td>1.5</td>
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</tr>
</tbody>
</table>

| *40 hours per week, last four weeks. | |

**PROGRAM DESCRIPTIONS**
Medical Coding Specialist
Less Than One-Year Diploma

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 procedures 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: 1) high school graduate or GED with above average grades; 2) good health as evidenced by a medical examination and proper immunizations.

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Credit</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>509-360 Medical Terminology</td>
<td>2</td>
<td>3-6</td>
</tr>
<tr>
<td>509-303 Body Structure and Function</td>
<td>2</td>
<td>3-6</td>
</tr>
<tr>
<td>530-302 Introduction to Medical Records</td>
<td>1</td>
<td>2-6</td>
</tr>
<tr>
<td>530-301 Pathophysiology/Pharmacology</td>
<td>2</td>
<td>3-6</td>
</tr>
<tr>
<td>530-303 ICD-9-CM Coding</td>
<td>3</td>
<td>3-6</td>
</tr>
<tr>
<td>530-304 CPT Coding</td>
<td>2</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>20</strong></td>
</tr>
</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 509-360, 509-303 and 530-302. Courses 530-303 and 530-304 must be taken together.

---

Medical Laboratory Technician
Associate in Applied Science Degree

This program, approved by the National Accrediting Agency for Clinical Laboratory Science, prepares persons for work in clinical medical laboratories under the supervision of medical technologists. The course combines instruction in fundamental principles in selected phases of laboratory techniques as well as clinical experience in medical laboratories. The medical laboratory technician is trained to perform routine laboratory procedures in microbiology, blood banking, clinical chemistry, hematology, serology and urinalysis. The final semester of training is in hospitals in Madison or throughout the MATC District. The list of hospitals used for the practicum is available in the program director's office.

Aptitudes and interests that may be helpful include an interest in scientific, technical and mathematical work, the ability to work under pressure, to follow directions accurately and precisely and to tolerate close supervision.

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 or 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.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>513-100 Introduction to Medical Laboratory</td>
<td>3</td>
<td>1-6</td>
</tr>
<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>
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</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>
<td>3-2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

**Second Semester**

| 513-104 Hematology | 5 | 3-6 |
| 513-111 Clinical Microbiology | 5 | 3-6 |
| 801-152 Communication Skills 2 OR | 3 | 3-0 |
| 801-202 English Composition 2 OR | (3) | (3-0) |
| 806-106 Anatomy and Physiology | 4 | 3-2 |
| **Total** | **17** | **26** |

**Summer Session**

| 809-197 Contemporary American Society OR | 3 | 3-0 |
| 809-203 Introduction to Sociology OR | (3) | (3-0) |
| 809-199 Psychology of Human Relations OR | 3 | 3-0 |
| 809-231 Introduction to Psychology OR | (3) | (3-0) |
| **Total** | **6** | **6** |

**SECOND YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<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 OR</td>
<td>(3)</td>
<td>(3-0)</td>
</tr>
<tr>
<td>Elective OR</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>24-33</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>513-112 Seminar</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>513-113 Practicum (18 weeks)</td>
<td>10</td>
<td>0-40</td>
</tr>
<tr>
<td>Elective OR</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>41-44</strong></td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVE**

| 103-130 Microcomputer Applications | 2 | 2-8 |

**Note:** All courses beginning with 513 must be taken in sequential order.

*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.*
Medical Office Mid-Management
Associate in Applied Science Degree

Because there is a severe shortage of trained personnel to fill positions in the rapidly-growing health services sector, medical office specialists will find many rewarding career opportunities open to them. Students who enter this program should be able to concentrate on details, to understand and apply instructions and principles of a complex nature, and to perform effectively under all circumstances, as well as being friendly and understanding in dealings with patients and co-workers.

Graduates of this program will gain management skills, 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 agencies. These are learned in formal education programs combined with on-the-job experiences.

RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-123</td>
<td>Tax 1</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>101-127</td>
<td>Tax 2</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>102-110</td>
<td>Business Correspondence Report Writing</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>102-161</td>
<td>Business Law 2</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>102-162</td>
<td>Family Law</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>104-109</td>
<td>Principles of Insurance</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

REQUIREMENTS FOR GRADUATION

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

1Offered semester 1 only.
2Offered semester 2 only.
3Offered evenings only.

Medical Secretary
Associate in Applied Science Degree

The Medical Secretary Program prepares secretaries for employment in doctors' offices, clinics, hospitals, or wherever a knowledge of medical terminology and professional procedures and ethics is required. It also provides excellent preparation for secretarial positions in any business. The status of Certified Medical Assistant–Administrative can be acquired upon completion of the required job experience and written examinations.

Admission requirement: English composition, grade of C.

RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hrs per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-123</td>
<td>Tax 1</td>
<td>4</td>
<td>4-0</td>
</tr>
<tr>
<td>101-127</td>
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<td>3</td>
<td>3-0</td>
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<tr>
<td>102-110</td>
<td>Business Correspondence Report Writing</td>
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<td>2-0</td>
</tr>
<tr>
<td>102-161</td>
<td>Business Law 2</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>102-162</td>
<td>Family Law</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>104-109</td>
<td>Principles of Insurance</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

REQUIREMENTS FOR GRADUATION

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

1Offered semester 1 only.
2Offered semester 2 only.
3Offered evenings only.
Medical Transcriptionist

One-Year Diploma

Successful completion of this program qualifies students for entry-level employment as medical transcriptionists where machine transcription of medical material is required - hospitals, clinics, doctors' offices, nursing homes, specialty laboratories and insurance companies. A capable transcriptionist demonstrates proficient skills in grammar, proofreading, speed, accuracy, and a knowledge of medical terminology, anatomy, pathology and pharmacology. Admission requirement: typing, 45 wpm.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</tr>
</thead>
<tbody>
<tr>
<td>102-305</td>
<td>Applied Business Mathematics</td>
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<td>3-0</td>
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<tr>
<td>103-330</td>
<td>Microcomputers 1</td>
<td>3</td>
<td>2.5-2.5</td>
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<tr>
<td>106-367</td>
<td>Medical Transcription 1</td>
<td>3</td>
<td>2.5-2.5</td>
</tr>
<tr>
<td>509-360</td>
<td>Medical Terminology 1 OR</td>
<td>2</td>
<td>4-0</td>
</tr>
<tr>
<td>509-180</td>
<td>Medical Terminology 1 OR</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>510-303</td>
<td>Body Structure OR</td>
<td>3</td>
<td>4-0</td>
</tr>
<tr>
<td>510-304</td>
<td>Body Structure</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>801-351</td>
<td>Communications 1</td>
<td>2</td>
<td>3-0</td>
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<tr>
<td></td>
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<td>21-24</td>
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<tr>
<td>106-303</td>
<td>Filing Procedures</td>
<td>1</td>
<td>2-0</td>
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<tr>
<td>106-150</td>
<td>Medical Secretary Procedures OR</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>106-365</td>
<td>Medical Office Procedures</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>106-366</td>
<td>Medical Transcription Techniques and Procedures OR</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td>106-166</td>
<td>Medical Transcription Techniques and Procedures OR</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>106-368</td>
<td>Medical Transcription 2</td>
<td>3</td>
<td>2.5-2.5</td>
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<tr>
<td>106-369</td>
<td>Medical Transcriptionist Internship 2</td>
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<td>2-0</td>
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<tr>
<td>106-197</td>
<td>Medical Secretary Internship 2</td>
<td>3</td>
<td>2-0</td>
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<tr>
<td>509-361</td>
<td>Medical Terminology 2 OR</td>
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<td>4-0</td>
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<tr>
<td>509-181</td>
<td>Medical Terminology 2 OR</td>
<td>2</td>
<td>2-0</td>
</tr>
<tr>
<td>801-352</td>
<td>Communications 2</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 (18)</td>
<td>20-23</td>
</tr>
</tbody>
</table>

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

Motorcycle, Marine and Outdoor Power Products Technician

One-Year Diploma

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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>420-330</td>
<td>Metal Processes 1</td>
<td>2</td>
<td>3-1</td>
</tr>
<tr>
<td>461-322</td>
<td>Engine Diagnostics and Repair</td>
<td>10</td>
<td>8-12</td>
</tr>
<tr>
<td>461-350</td>
<td>Engine Shop Management</td>
<td>2</td>
<td>3-0</td>
</tr>
<tr>
<td>804-379</td>
<td>Mathematics 2</td>
<td>1</td>
<td>2-0</td>
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<td></td>
<td></td>
<td>15</td>
<td>29</td>
</tr>
<tr>
<td>420-131</td>
<td>Metal Processes 2</td>
<td>2</td>
<td>3-1</td>
</tr>
<tr>
<td>461-323</td>
<td>Electrical Systems and Power Trains</td>
<td>10</td>
<td>8-12</td>
</tr>
<tr>
<td>461-128</td>
<td>Small Engine Lab</td>
<td>2</td>
<td>0-4</td>
</tr>
<tr>
<td>801-356</td>
<td>Communications 1</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>809-356</td>
<td>Human Relations Survey</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td>32</td>
</tr>
</tbody>
</table>

REQUIREMENTS FOR GRADUATION

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

Nursing Assistant

120-hour Certificate of Completion

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.
Occupational Therapy
Associate in Applied Arts Degree

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.

Office Assistant
One-Year Diploma

Completion of the Office Assistant Program gives an understanding of 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.
Optometric Technician Program

**One-Year Diploma**

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**

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 recordkeeping, 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) good health as evidenced by a medical examination and proper immunizations; 2) high school graduation or equivalent; 3) one year of high school science and math; and 4) assessment test.

### Program Descriptions

**Second Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Lec</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-330</td>
<td>Related Accounting</td>
<td>2</td>
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<td></td>
</tr>
<tr>
<td>103-357</td>
<td>Microcomputers 2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>106-333</td>
<td>Keyboarding Applications 2 (Typing 2) OR 3</td>
<td>2.5-2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>106-335</td>
<td>Keyboarding Applications 3 (Typing 3) OR (3)</td>
<td>2.5-2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>106-138</td>
<td>Document Processing 4 (Typing 4)</td>
<td>(3)</td>
<td>(2.5-2.5)</td>
<td></td>
</tr>
<tr>
<td>106-334</td>
<td>Machine Transcription</td>
<td>2</td>
<td>1.5-1.5</td>
<td></td>
</tr>
<tr>
<td>106-337</td>
<td>Keyboarding Applications 2 (Typing 2) OR 3</td>
<td>2</td>
<td>1.5-1.5</td>
<td></td>
</tr>
<tr>
<td>106-376</td>
<td>Job Survey</td>
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<td>3.0</td>
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</tr>
<tr>
<td>106-308</td>
<td>Proofreading/Editing</td>
<td>2</td>
<td>3.0</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>25</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Requirements for Graduation**

Exit keyboarding speed of 50 words per minute. One-half of the total 30 credits must be completed at MATC. Minimum grade point average of 2.0. A minimum of two keyboarding courses (5 credits).

*A prerequisite for this course is completion of, or concurrent enrollment in, Keyboarding Applications 1.

*OR 106-131 Keyboarding 1 (3) (2.5-2.5)

*OR 106-133 Document Processing 2 (Typing 2) (3) (2.5-2.5)

*OR 106-137 Document Processing 3 (Typing 3) (3) (2.5-2.5)

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**Pharmacy Technician**

**First Semester**

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*Clinical experience lasts 6 weeks

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**Pharmacy Technician**

**Second Semester**

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*Clinical experience lasts 6 weeks

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**First Semester**

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Photography
Associate in Applied Arts Degree

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 previsualize subject matter, to describe visuals in written scripts, to engage in effective problem-solving, and to 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

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RECOMMENDED ELECTIVES

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Police Science
Associate in Applied Science Degree

The Police Science Program provides the student with an educational background that explores the social, economic and civic responsibilities which are necessary to basic police work. The preservation of law and order is an absolute essential in the healthy growth of any nation. The American community is undergoing rapid growth as well as rapid social and economic change, and this makes the law enforcement career an increasingly complex one.

Graduates of this program find job placement opportunities as uniformed officers or civilians employed in police departments on local, county, state or federal levels. They may find opportunities with railroads, department stores, airlines, private and public security agencies, insurance companies and other related private and public sector agencies and organizations as investigators or special police.

FIRST YEAR

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PROGRAM DESCRIPTIONS
Police Academy

Students who complete the Police Science Associate Degree or 60 college credits may apply for the 400-hour Basic Recruit Academy Program, which makes them eligible for Law Enforcement Standards Board Certification.

Practical Nursing

One-Year Diploma

The Practical Nursing Program prepares students as entry-level practitioners. The practical nurse, under the direction and 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.

The program has the approval of the Wisconsin State Board of Nursing. Classes 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 one time 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.

Printing

One-Year Diploma

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 basic math skills are required, and typing skill is desirable.

RECOMMENDED ELECTIVES (WITH APPROVAL OF CHAIRPERSON)

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<td>State and Local Government</td>
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809-202

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Summer Semester (6 weeks)

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REQUIREMENTS FOR GRADUATION

32 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

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.

FIRST YEAR
First Semester

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<td>3.5-3.5</td>
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<tr>
<td>204-192</td>
<td>Introduction to Printing and Publishing</td>
<td>1</td>
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<td>801-151</td>
<td>Communication Skills 1</td>
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<tr>
<td>809-197</td>
<td>Contemporary American Society</td>
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Second Semester

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<td>204-123</td>
<td>Copy Preparation Techniques 2</td>
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<td>Industrial Orientation</td>
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<td>Economics</td>
<td>3</td>
<td>3.0</td>
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<td>809-199</td>
<td>Psychology of Human Relations</td>
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SECOND YEAR
First Semester

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<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>203-110</td>
<td>Graphic Arts Photography 1</td>
<td>3</td>
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<tr>
<td>204-111</td>
<td>Press and Finishing Techniques 1</td>
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<td>204-124</td>
<td>Copy Preparation Techniques 3</td>
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<td>204-130</td>
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Second Semester

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<th>Course Title</th>
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<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>203-111</td>
<td>Graphic Arts Photography 2</td>
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<tr>
<td>204-112</td>
<td>Press and Finishing Techniques 2</td>
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RECOMMENDED ELECTIVES

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<td>Copy Preparation Techniques 4</td>
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<td>204-190</td>
<td>Production Procedures</td>
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REQUIREMENTS FOR GRADUATION

65 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

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 of the image (photographically and electronically); and storage and retrieval of 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, 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, CQT or other comparable test. A program-developed assessment test is highly recommended; it is used for student advising.

FIRST YEAR
First Semester

<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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<tbody>
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<td>Introduction to Radiologic Technology</td>
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<tr>
<td>526-102</td>
<td>Radiographic Anatomy</td>
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<td>526-103</td>
<td>Radiographic Physics</td>
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<td>526-111</td>
<td>Radiographic Procedures 1</td>
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<td>526-161</td>
<td>Practicum I</td>
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<tr>
<td>509-180</td>
<td>Medical Terminology</td>
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Second Semester

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<tr>
<td>526-112</td>
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<tr>
<td>526-131</td>
<td>Radiographic Techniques 1</td>
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<td>526-141</td>
<td>Radiologic Science</td>
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<td>526-162</td>
<td>Practicum 2</td>
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Summer Semester

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<td>526-132</td>
<td>Radiographic Techniques 2</td>
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SECOND YEAR
First Semester

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<th>Credits</th>
<th>Hrs per week in class</th>
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<tbody>
<tr>
<td>526-122</td>
<td>Applied Clinical 2</td>
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<tr>
<td>526-150</td>
<td>Special Procedures</td>
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<tr>
<td>801-151</td>
<td>Communication Skills 1 OR</td>
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<td>801-201</td>
<td>English Composition 1</td>
<td>3</td>
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<tr>
<td>804-171</td>
<td>Basic Computer Mathematics*</td>
<td>2</td>
<td>2.0</td>
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<tr>
<td>809-199</td>
<td>Psychology of Human Relations* OR</td>
<td>3</td>
<td>3.0</td>
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<tr>
<td>809-231</td>
<td>Introduction to Psychology*</td>
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Hrs per week in class Lec-Lab

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<td>27+6</td>
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<td>1-12</td>
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<td>3-0</td>
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</table>
Real Estate
Associate in Applied Science Degree

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.

RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>104-109 Principles of Insurance</td>
<td>3</td>
</tr>
<tr>
<td>194-187 Real Estate Appraisal 2</td>
<td>3</td>
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<tr>
<td>104-110 Supervision Principles</td>
<td>3</td>
</tr>
<tr>
<td>104-126 Promotion Principles</td>
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REQUIREMENTS FOR GRADUATION
One-half of the total 65-66 credits must be taken at MATC. Minimum grade point average 2.0.

Recreation Resource Operation
Associate in Applied Science Degree

The Recreation Resource Operation Associate Degree Program is designed to develop resource operation competencies in the technical, problem-solving, human relations and life skills that are needed for entry-level employment in public, private and commercial agencies. The program develops abilities to plan, maintain, develop, operate and protect natural and man-made resources, areas, facilities and equipment. Trained entry-level operators work as: center, pool or camp directors; hotel, motel, resort or cruise ship social directors; building and grounds supervisors; or park resource or naturalist assistants. Job opportunities also exist in campgrounds, sport centers, preserves, pro shops, ski areas and theme parks.

SUMMER SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>526-124 Applied Clinical 4</td>
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<tr>
<td>RECOMMENDED ELECTIVE</td>
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<tr>
<td>526-133 Radiographic Techniques</td>
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FIRST SEMESTER

<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>101-114 Applied Accounting 1</td>
<td>3</td>
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<td>194-186 Real Estate Appraisal 1</td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
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<td>104-125 Promotion Principles 1</td>
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SECOND SEMESTER

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>194-175 Real Estate Investment</td>
<td>3</td>
</tr>
<tr>
<td>104-172 Career Planning &amp; Development</td>
<td>3</td>
</tr>
<tr>
<td>194-188 Real Estate Planning &amp; Construction</td>
<td>3</td>
</tr>
<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
</tr>
<tr>
<td>106-163 Microkeyboarding OR</td>
<td>2</td>
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<tr>
<td>103-135 WordPerfect</td>
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Elective

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>194-175 Real Estate Investment</td>
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<tr>
<td>104-172 Career Planning &amp; Development</td>
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<tr>
<td>194-188 Real Estate Planning &amp; Construction</td>
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<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
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<tr>
<td>106-163 Microkeyboarding OR</td>
<td>2</td>
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<tr>
<td>103-135 WordPerfect</td>
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Elective

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>101-114 Applied Accounting 1</td>
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<tr>
<td>194-186 Real Estate Appraisal 1</td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
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<tr>
<td>104-125 Promotion Principles 1</td>
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<td>Elective</td>
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Elective
SECOND YEAR
First Semester
809-197  Contemporary American Society  3  3-0
109-150  Management of Leisure Facilities  3  2-2
104-102  Marketing Principles  2  3-0
109-155  Oper. and Maint. of Leisure Resources  3  3-0
102-102  Business Mathematics  3  3-0
103-155  WordPerfect OR  1  1-2
106-163  Microkeyboarding  (2)  (1-2)
16  19

Second Semester
809-195  Economics  3  3-0
106-190  Recreation Seminar  1  1-0
109-110  Professional Issues in Recreation  2  2-0
109-170  Interpreting the Leisure Environment  3  2-2
102-160  Business Law  1  3-0
Elective  3
15  13+E

REQUIREMENTS FOR GRADUATION
One-half the total 65-66 credits must be taken at MATC. Minimum grade point average 2.0.

Respiratory Care Practitioner
Associate in Applied Science Degree

The Respiratory Care Practitioner Program is fully accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association 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, 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 practice independently in assessing and evaluating patients and making recommendations regarding their care. The graduate must be prepared to work in a highly technical environment under pressure to perform life-preserving procedures at times.

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.

### First Year

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>810-101</td>
<td>Introduction to Respiratory Care</td>
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<td>515-150</td>
<td>Communication Skills 1 OR</td>
<td>3</td>
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<tr>
<td>801-200</td>
<td>English Composition 1</td>
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<td>806-105</td>
<td>General Anatomy and Physiology OR</td>
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<tr>
<td>806-207</td>
<td>Anatomy and Physiology 1</td>
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<tr>
<td>806-155</td>
<td>Technical Science</td>
<td>2</td>
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<tr>
<td>806-201</td>
<td>General Chemistry</td>
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### Second Year

<table>
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<th>Course Title</th>
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<tbody>
<tr>
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<td>Respiratory Care Fundamentals</td>
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<tr>
<td>515-115</td>
<td>Pulmonary Physiology</td>
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<tr>
<td>806-208</td>
<td>Anatomy and Physiology 2 OR</td>
<td>4</td>
</tr>
<tr>
<td>809-199</td>
<td>Psychology of Human Relations OR</td>
<td>3</td>
</tr>
<tr>
<td>806-231</td>
<td>Introduction to Psychology OR</td>
<td>(3)</td>
</tr>
<tr>
<td>810-101</td>
<td>Speech OR</td>
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<td>810-201</td>
<td>Fundamentals of Speech OR</td>
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<td>Public Speaking</td>
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### Summer Session

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<td>Developmental Psychology OR</td>
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<td>809-235</td>
<td>Psychology of Personal Adjustment OR</td>
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<td>809-237</td>
<td>Abnormal Psychology OR</td>
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<td>809-236</td>
<td>Applied Psychology</td>
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<tr>
<td>806-273</td>
<td>Microbiology</td>
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### SECOND YEAR

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<tbody>
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<td>Respiratory Care Procedures 1</td>
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<td>515-125</td>
<td>Respiratory Therapy Clinical Practice</td>
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<td>515-130</td>
<td>Pathophysiology</td>
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<td>515-131</td>
<td>Pharmacology</td>
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### Program Descriptions
Second Semester
- 515-122 Respiratory Care Procedures 2 5 4-2
- 515-126 Respiratory Care Clinical Practice 2 5 19
- 809-197 Contemporary American Society* OR 3 3-0
- 809-203 Introduction to Sociology 3 (3-0)
- Elective 3
- 16 28+E

Summer Session
- 515-127 Respiratory Care Clinical Practice 3 2 0-16

*Courses which may be taken prior to entering the program. May also be taken at the college transfer level.

Small Business Operations
One-Year Diploma
This program is a concentrated one-year curriculum developed for individuals seeking a career in small business. Emphasis is placed on preparation to meet minimum performance requirements.

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs Per Wk in Class</th>
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<tbody>
<tr>
<td>104-302 Fundamentals of Marketing</td>
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<tr>
<td>104-310 Fundamentals of Sales</td>
<td>3</td>
<td>2-2</td>
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<tr>
<td>102-305 Applied Business Mathematics</td>
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<td>801-351 Communications 1</td>
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<td>101-330 Related Accounting</td>
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<td>104-300 Small Bus. Development &amp; Planning</td>
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<td>104-312 Orientation Seminar</td>
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Second Semester

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<tr>
<td>104-318 Field Experience</td>
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<tr>
<td>104-342 Successful Small Business Techniques</td>
<td>2</td>
<td>2-2</td>
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<td>809-352 Human Relations</td>
<td>2</td>
<td>2-2</td>
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<td>104-320 Leadership Techniques</td>
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<td>3-2</td>
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<tr>
<td>104-317 Operations Management</td>
<td>3</td>
<td>3-2</td>
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<tr>
<td>103-330 Microcomputers I OR</td>
<td>3</td>
<td>1-2</td>
</tr>
<tr>
<td>106-163 Microkeyboarding</td>
<td>(2)</td>
<td>(1-2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13-14 30</td>
</tr>
</tbody>
</table>

REQUIREMENT FOR GRADUATION
Minimum grade point average 2.0.

Supervisory Management
Associate in Applied Science Degree
The need for qualified trained supervisors will continue to grow throughout the decade of the 90s. 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</th>
<th>Credits</th>
<th>Hrs Per Wk in Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>196-100 Principles of Supervision</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-116 Managing Human Resources</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-135 Time Management</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>196-148 Stress Management</td>
<td>1</td>
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<tr>
<td>196-145 Assertive Managing</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>196-151 Training Techniques</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>801-151 Communication Skills</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td></td>
<td></td>
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Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs Per Wk in Class</th>
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</thead>
<tbody>
<tr>
<td>196-138 Management of Conflict and Change</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>196-132 Making Meetings Work</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>196-115 Improved Productivity Through Process Control</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-141 Effective Listening</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>196-119 Labor/Management Relations</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-154 Problem Solving and Decision Making</td>
<td>2</td>
<td>2-0</td>
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Third Year

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<th>Course</th>
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<tbody>
<tr>
<td>196-110 Organizational Leadership</td>
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<tr>
<td>196-113 Personnel Practices</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-122 OSHA and Hazardous Substances</td>
<td>3</td>
<td>1-0</td>
</tr>
<tr>
<td>196-123 Morale and Workplace Ethics</td>
<td>1</td>
<td>1-0</td>
</tr>
<tr>
<td>102-102 Business Mathematics</td>
<td>3</td>
<td>3-0</td>
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Fourth Year

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>103-130 Microcomputer Applications</td>
<td>2</td>
<td>2-2</td>
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<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>
</tr>
<tr>
<td>101-114 Applied Accounting</td>
<td>3</td>
<td>3-0</td>
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Fifth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs Per Wk in Class</th>
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</thead>
<tbody>
<tr>
<td>196-105 Occupational Trends and Issues</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>102-100 Business Law</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-197 Contemporary American Society</td>
<td>3</td>
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<tr>
<td></td>
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<td>12 12</td>
</tr>
</tbody>
</table>

Electives

Requirements for Graduation
One-half of the total 64 credits must be taken at MATC. Minimum grade point average 2.0.
Surgical Technician

One-Year Diploma

The Surgical Technician Program is accredited by the Committee on Allied Health, Education and Accreditation. The program prepares students to function as members of a surgical team. Emphasis is placed on specific functions in the operating room and other areas 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 1,000 hours are spent in theory, laboratory and clinical practice. Students are also required to be certified in CPR.

Personal aptitudes that may be helpful include an ability to learn and apply technical knowledge, an ability to work under close supervision and to follow prescribed procedures carefully with the realization that errors may have serious consequences. Admission requirements: 1) high school graduation, HSED or GED; 2) assessment test of basic math, reading comprehension and writing skills.

Taxidermy

Less Than One-Year Diploma

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 in self-employment or as employees in other professional shops.

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>095-301 Basic Taxidermy</td>
<td>1</td>
<td>*</td>
</tr>
<tr>
<td>095-302 Taxidermy-Fish</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>095-304 Taxidermy-Upland Birds</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>095-306 Taxidermy-Small Mammals</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>095-308 Taxidermy-Gune Heads</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>095-310 Taxidermy-Large Mammals and Rug Making</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>095-312 Fish Painting-Novelties</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>095-314 Taxidermy-Waterfowl/Ducks</td>
<td>2</td>
<td>15</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 9 lab hours per week.

Tourist Recreation

Associate in Applied Science Degree

The Tourist Recreation Associate Degree Program is designed to develop competencies in technical, problem-solving, human relations and life skills that are needed for entry-level employment in commercial recreation and tourism. The instruction develops the ability to plan, organize, instruct, inform and evaluate activities in areas, facilities and equipment for tourist recreational participation. The program develops trained entry-level employees to work as travel directors or consultants, tourism marketers, car rental or airline reservationists, and travel agents.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
</tr>
<tr>
<td>809-151 Communication Skills 1</td>
</tr>
<tr>
<td>809-199 Psychology of Human Relations</td>
</tr>
<tr>
<td>104-110 Supervision Principles</td>
</tr>
<tr>
<td>109-101 Intro. to Leisure Services</td>
</tr>
<tr>
<td>109-103 Recreation and Leisure in Modern Society</td>
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<tr>
<td><strong>Total</strong></td>
</tr>
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</table>

Program Descriptions
Admissions requirements include: 1) high school graduation or equivalency; and 2) high school and post-secondary transcripts; and 3) one year of high school algebra and biology. Applicants without algebra and biology can take these courses at MATC, however they must take them prior to enrollment in occupational courses.

One year of high school chemistry is strongly recommended. Applicants may take chemistry while they are enrolled in occupational courses. Other courses which may be helpful to program success are: accounting, agriculture, mathematics, keyboarding and computer courses.

Accepted applicants will take the ASSET test. Applicants who have successful post-secondary courses, or who have taken an equivalent test such as the ACT, SAT or CQT, may be exempt from the ASSET test. Results will be used for placement purposes.

A personal interview with the division dean or program director may waive these requirements.

Veterinary Technician
Associate in Applied Science Degree

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, performing radiographic procedures, client education and client communication.
### Visual Communications

**Associate in Applied Arts Degree**

The two-year program in visual communications trains students for the production of visual presentations in the form of computer multimedia, video, slide, multi-image, and overhead transparency. Students acquire a working knowledge of specialized graphic techniques and formats for these various media, as well as an operational knowledge of the equipment used for presentations.

Graduates can expect to find employment as media technicians in schools, libraries, hospitals and industry. They may be required to set up, operate and perform basic maintenance of audiovisual equipment. Students interested in this field should have a strong interest in art and projected media along with an aptitude for problem solving, and high aesthetic judgment.

#### FIRST YEAR

<table>
<thead>
<tr>
<th>Credits</th>
<th>Hrs per week in class</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>201-105 Drawing Fundamentals</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>201-139 Design and Color 1</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>203-170 Photography 1</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>204-103 Typography</td>
<td>2</td>
<td>3-3</td>
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<tr>
<td>206-105 Communication Problems 1</td>
<td>3</td>
<td>3-3</td>
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<tr>
<td>206-117 Audiovisual Techniques 1</td>
<td>3</td>
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<tr>
<td>801-151 Communication Skills 1</td>
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#### Second Semester

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<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
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</thead>
<tbody>
<tr>
<td>201-140 Design and Color 2</td>
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<tr>
<td>201-181 Computer Graphics 1</td>
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<tr>
<td>203-171 Photography 2</td>
<td>2</td>
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<tr>
<td>206-106 Communication Problems 2</td>
<td>3</td>
<td>3-3</td>
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<tr>
<td>206-120 Production, Planning and Control</td>
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<td>3-3</td>
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<tr>
<td>206-131 Sound Production Techniques</td>
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<tr>
<td>801-152 Communication Skills 2</td>
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#### SECOND YEAR

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<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>206-110 Display, Design and Production</td>
<td>3</td>
<td>3-3</td>
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<tr>
<td>206-125 Instructional Media Systems</td>
<td>3</td>
<td>3-3</td>
</tr>
<tr>
<td>206-135 Multimedia Presentations</td>
<td>3</td>
<td>3-3</td>
</tr>
<tr>
<td>206-130 Video Production 1</td>
<td>3</td>
<td>3-3</td>
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<tr>
<td>804-195 Economics</td>
<td>3</td>
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<tr>
<td>809-199 Psychology of Human Relations</td>
<td>3</td>
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<tr>
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#### Second Semester

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>206-186 Video Production 2</td>
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<tr>
<td>206-180 Advanced Media Problems</td>
<td>3</td>
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<td>206-140 Portfolio Preparation</td>
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<td>801-125 Government: Process and Practices</td>
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<td>Electives</td>
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<td><strong>Total</strong></td>
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#### RECOMMENDED ELECTIVES

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>201-113 Cartooning</td>
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<tr>
<td>201-125 Publication Design</td>
<td>2</td>
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<tr>
<td>201-159 Airbrush Techniques</td>
<td>3</td>
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<tr>
<td>201-182 Computer Graphics 2</td>
<td>3</td>
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<tr>
<td>206-104 Visual Communications Internship</td>
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</tbody>
</table>

#### Welding

**One-Year Diploma**

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 and metal fabrication, metallurgy, and manipulative welding skills for potential qualification (certification) in oxy-fuel, SMAW (stick electrode), gas metal arc, flux cored arc, and gas tungsten arc (TIG) 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.

<table>
<thead>
<tr>
<th>Credits</th>
<th>Hrs per week in class</th>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>442-312 Oxy-Fuel Processes: Welding</td>
<td>3</td>
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<tr>
<td>442-314 Arc Welding (SMAW) Basic Theory Flat</td>
<td>3</td>
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<tr>
<td>442-316 Arc Welding (SMAW) Horizontal</td>
<td>3</td>
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<tr>
<td>442-318 Gas Tungsten-Arc Welding Processes</td>
<td>3</td>
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<tr>
<td>421-393 Drawing Interpretation—Welding</td>
<td>3</td>
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<tr>
<td>804-379 Mathematics 2</td>
<td>1</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>32</strong></td>
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</table>
Wood Technics

One-Year Diploma

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 wood working 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.

WOOD TECHNICS/CABINET MAKING*

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
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</thead>
<tbody>
<tr>
<td>410-330 Introduction to Cabinet Making</td>
<td>10</td>
<td>4-16</td>
</tr>
<tr>
<td>410-336 Machine Maintenance</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>410-385 Drawing and Estimating</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>804-379 Mathematics 2</td>
<td>1</td>
<td>2-0</td>
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<tr>
<td>801-356 Communications 1</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>32</strong></td>
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</tbody>
</table>

Second Semester (Spring)

| 410-331 Cabinet and Furniture Making | 10 | 4-16 |
| 410-340 Plastic Laminates | 2 | 2-2 |
| 410-386 Cabinet Drawing | 2 | 2-2 |
| 806-363 Science 1 | 2 | 2-2 |
| **Total** | **16** | **28** |

WOOD TECHNICS/CONSTRUCTION**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Hrs per week in class</th>
</tr>
</thead>
<tbody>
<tr>
<td>410-333 Introduction to Construction</td>
<td>10</td>
<td>4-16</td>
</tr>
<tr>
<td>410-336 Machine Maintenance</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>410-385 Drawing and Estimating</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>804-379 Mathematics 2</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td>801-356 Communications 1</td>
<td>1</td>
<td>2-0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

*Course sequence begins in fall.

**Course sequence begins in spring.
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: 001-152
The first digit - 8 - identifies the department as General Education. The second and third digits - 01 - identify the area of instruction as English. The fourth digit-1-identifies the type of program as Technical Associate Degree. The fifth and sixth digits - 52 - identify the particular course as Communication Skills.

Example: 106-303
The first digit - 1 - identifies the department as Business. The second and third digits - 06 - identify the area of instruction as Office Technology. The fourth digit-3-identifies the type of program as Vocational Diploma. The fifth and sixth digits - 03 - identify the particular course as Records Management.

001 Horticulture

001-108 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; i.e., 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, herbs 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 selection of 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 determination 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.

007-101 Hazardous Materials 2 credits
Alerts students to safe procedures and potential hazards associated with handling chemicals, laboratory animals, cell cultures, viruses, bacteria, and other organisms, including those modified by genetic engineering. Also covers procedures for decontamination and disposal of hazardous materials in both normal and accidental situations. Students become aware of the regulations and the agencies regulating the material.

007-102 Radiotopes 1 credit
Introduction to the practical applications and use of radiotopes in the biotechnology laboratory. Students learn how to handle, monitor, detect and quantify isotopically labeled materials.

007-103 Instrumentation 3 credits
Introduction to basic laboratory procedures and use of instrumentation. Students also learn to perform simple maintenance and trouble shooting on instruments such as pH meters, micropipettes, power supplies, spectrophotometers, and centrifuges.

007-104 Bioseparation Techniques 2 credits
Introduction to chromatographic techniques used to isolate a separate molecules in biotechnology industries. Techniques included are: thin layer and paper chromatography, liquid chromatography, high performance liquid chromatography and gas chromatography. Completion of 007-103, Instrumentation; 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 process, and growth of industrial important microorganisms. Emphasizes the use of industrial fermentation equipment to obtain various types of products.

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 included. Prerequisites: two-semester sequence of chemistry - 806-111 and 806-112, Chemistry 1 and 2; or equivalent; and one semester of general biology - 806-103, General Cell Biology; or equivalent.

007-122 Bioseparations Module I: Proteins 3 credits
Covers aspects of protein purification, including principles and methods for disintegrating cells and making cell extracts, separating proteins by selective precipitation, applying various purification techniques such as chromatography, electrophoresis and centrifugation and for maintaining and assaying enzyme activity. Upon completion of the course, the student should know how to purify proteins form various sources.

007-123 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 tissues, another culture to obtain haploid plants, 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.

007-124 Cloning Techniques 3 credits
Covers techniques used to clone organisms and looks at the commercial applications of gene products from cloned cell lines. Topics include gene mapping, diagnostic methods and DNA fingerprinting. This course is a continuation of techniques and applications initiated in 007-125, Bioseparations Module 2: Nucleic Acids (prerequisite for 007-124). Laboratory projects include Southern blotting, biotinylated probes, genomic library construction and polymerase chain reaction techniques.

007-125 Bioseparations Module 2: Nucleic Acids 3 credits
Covers principles and techniques for isolating nucleic acids from various sources and basic techniques for recombinant DNA. Lectures provide the conceptual framework for understanding the structures and functions of these nucleic acid molecules in living systems. Laboratory exercises include purification of nucleic acids from cells by differential centrifugation, chromatography, and agarose electrophoresis.

007-126 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 is required for enrollment.

007-129 Research Techniques 1
007-130 Research Techniques 2 2/3 credits
Introduction to research 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 one area to focus on during the second part of the semester. Students work in small teams to develop and execute their own research projects. Students are responsible for all aspects of their research, including data collection, data analysis, and writing up results.

007-174 General and Applied Microbiology 5 credits
This course covers 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
070-175 Power Transmission 3 credits
Provides a discussion of the operation, power flow, diagnostics, 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 trouble shooting 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 trouble shooting of seeding, planting and tillage machines are covered.

070-179 Tractor Performance 1 credit
The proper distribution of pullout of agricultural tractors, and techniques and procedures for determining percentage of slippage are demonstrated. Dynamometer operation, engine test procedures and safe operation are demonstrated. Engine performance, test equipment procedures, results and corrections are covered.

070-181 Combines 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, combine conditioners and other machines. Service and adjustment activities include combine cylinder bars, forage harvester knives, blowers paddles, baler blotters, corn head's grain platforms, belt splicing, chains, pulleys, sprockets, bearings, 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 trouble shooting procedures in solving hydraulic problems found with hydraulic systems. Problems encountered include pump failure, solenoid valves, 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 is 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.
current circuits. Ohm's law, and half-wave, full-wave and bridge rectifier circuits are studied. The effects of digital input signals are also examined in relation to agricultural machines.

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 Occupation Experience (Summer Session) 2 credits

Students receive on-the-job experience in tractor engine repair, air conditioning, electrical and hydraulic system trouble shooting. 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, sales department and the company organization structure are studied. Included are new machine delivery procedures, service reports, repair orders, warranty policies, 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-cylinder, 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 the 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 included 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 36 hours of group and 12 hours of individual on-farm instruction.

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 and 12 hours of individual on-farm instruction are provided.

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 nutrition, 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 and 12 hours of individual on-farm instruction are provided.

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 and 12 hours of individual on-farm instruction are offered.

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 credit, farm business arrangements, farm estate planning and farm income taxes. Instruction is provided on the use of computers and/or computer records. Production and financial decisions are based on each student's farm business analysis. Thirty-six hours of group and 12 hours of individual on-farm instruction are provided.

090-387 Farm Business Management--Update 2 credits

Agriculture is a high-tech business today, not only because of new machinery, equipment, breeding techniques, selective pesticide plant breeding and feeding practices, but also because of the increasing use of business skills, computers and marketing methods. Local, state and federal governments are imposing new rules and regulations, and farm price support bills change yearly. All require the farmer to make decisions affecting the farm operation. Because of changing production technology and farm management decisions, established farmers need to receive up-to-date instruction and information on current practices for farm records and analysis, tools, crop management and livestock nutrition and management. The specific objectives of this course are modified on a yearly basis to meet the needs of new farmers.

090 Farm Business Production and Management (Sheep Production)

090-381 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. It 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 farm business records, and interprets and analyzes the records to assist in making sound farm business management decisions. Each student's entire sheep 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 offered in this course. Course completion is required prior to enrollment in any other program course.

090-382 Soils 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 and 12 hours of individual on-farm instruction are offered.

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 farming 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 and 12 hours of individual on-farm instruction are offered.

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 base feed 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 and 12 hours of individual on-farm instruction are offered.

090-385 Livestock Management-Sheep Production 3 credits Offers instruction in various phases of selection, breeding, flock health, raising replacement stock, and marketing sheep and sheep products. 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 and 12 hours of individual on-farm instruction.

090-386 Farm Records and Business Analysis-Sheep Production 3 credits Practical use of a record system in farm management and financial analysis. 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 and 12 hours of individual on-farm instruction are offered.

090-387 Sheep Production-Update 2 credits Sheep production is a high-tech business today, not only because of new machinery, equipment, breeding techniques, selective pesticide plant 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 support bills 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.

091 Veterinary 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 Zoonosis 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 rabies, a field trip to the Department of Hygiene is scheduled. A lecture/demonstration informs students about the specific problems of rabies in Wisconsin, the fluorescent-antibody method for diagnosis and proper sample handling and shipment of suspected rabies 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.

091-120 Laboratory Techniques I 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.

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 scrological 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 postmortem, serology, clinical chemistry, and clinical microbiological functions of this laboratory. Prerequisites: 091-120, Laboratory Techniques 1; and 091-116, Introduction to Microbiology; and completion of or concurrent enrollment in 100-110, Technical Chemistry; or equivalent.

091-123 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
091-125 Veterinary Office Management 3 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 telephonic 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: completion of or concurrent enrollment in 091-158, Internship, 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 antisepsis in veterinary medicine; nomenclature 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: completion of, or concurrent enrollment in, 091-158, Internship; 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. Students should have completed 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 a technician might be expected to perform in a practice. Emphasizes radiographic techniques and medical nursing procedures. Prerequisites: 091-126, Veterinary Operating Room Techniques.

091-155 Hospital Supply and Medicants 3 credits
Entails a study of drugs and other substances of veterinary medicat use. Emphasis is on the preparation of the surgical site, operating room conduct, assisting the surgeon, and dental prophylaxis. Also includes the use of disinfectants and antisepsis in veterinary medicine; nomenclature 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: completion of, or concurrent enrollment in, 091-158, Internship.

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 which 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 and appropriate usage, and 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 anatomical 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. Students are introduced to the types of employment available in veterinary medicine. Tips are given to assist the student in job seeking, resume writing, and interviewing for both internship and job placement after graduation. Internship requirements are discussed, and help is given to prepare students for placement with veterinarians.

091-171 Animal Care and Management 1 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 2 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. Disease and body functions as related to nutrition are included, 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 Laboratory Animal Technician
091-115 Zoonosis 1 credit
Covers selected diseases which are transmissible to man from domestic animals, birds, wild animals and rodents. Also includes vectors, fomites, food and feed. New diseases are discussed as well as recent outbreaks of transmissible diseases.

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.
091-120 Introduction to Laboratory Animal Science 2 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 covered in depth.

091-121 Animal Care and Management 1 3 credits
Focuses on animal husbandry and technology for small companion animals. Includes procedures for handling, restraint, nursing, and disease care.

091-122 Aniimal Care and Management 2 3 credits
Covers basic husbandry, nutrition, management, and animal handling in veterinary practice.

091-123 Introduction to Laboratory Animal Science 2 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 covered in depth.

091-124 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.

091-125 Issues in Laboratory Animal Science 3 credits
Considers ethical, legal, and social issues related to laboratory animal research. Emphasizes the role of the animal caretaker in the research process.

091-126 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 which 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.

091-127 Veterinary Medical Terminology/ Occupational Preparation 2 credits
A knowledge of standard terminology is prerequisite to understand- ing and meaningful communication in any field of specialization, and especially so in veterinary medicine. Teaches acceptable veterinary medical terminology for common clinically recognized diseases, operations, systems and procedures. Emphasizes word recognition, meaning and appropriate usage, and spelling and pronunciation. Understanding word structure and word parts is a helpful tool for analyzing, learning and using a proper medical vocabulary. Taught in units by body system and anatomical structure. Common medical signs, abbreviations and colloquial vocabulary are also taught. The occupational preparation component acquaints laboratory animal technician students with the college and their career field. Information is presented to help individuals succeed in both. Students are introduced to the types of employment available in veterinary medicine. Tips are given to assist the student in job seeking, resume writing, and interviewing for both internship and job placement after graduation. Internship requirements are discussed, and help is given to prepare students for placement with veterinarians.

091-128 Laboratory Animal Science 2 3 credits
The study of animal breeding systems and techniques, the isolators and selective breeding systems, 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.

091-129 Research Animal Surgical Nursing 3 credits
The study and practical application of sterilization techniques, surgical site preparation, operating room conduct, surgery assistance, and surgery performance. Surgical procedures utilize laboratory animals and are under the direction of an instructor. Includes use of disinfectants and antiseptics, nomenclature and basic uses of surgical instruments, preparation of packs, gowns, gloves, and the classification and physical properties of anesthetics used in surgery.

091-130 Taxidermy 1 credit
Introductions to taxidermy: laws, licenses, tanning, supplies, use of tools, advertising, bookkeeping, tax laws, collection and care of specimens, specimen measurement, workshop planning and preparation, and hazards and safety.

COURSES
095-302 Taxidermy-Fish
Includes the entire process of fish mounting. Three techniques of making
fish bodies and methods of mounting and preparing fish for painting are
demonstrated. Students are required to mount a minimum of four game
fish, three panfish and one Lake Michigan trout or salmon.

095-304 Taxidermy-Upland Birds
Presents proper procedures and techniques needed to mount upland
birds. Students are required to complete four upland bird mounts, including
two pheasants. The other two are students' choices of specimens
such as grouse and quail.

095-306 Taxidermy-Small Mammals
Presents proper mounting techniques and two methods of mounting
small mammals. Students are required to mount two small mammals,
such as squirrels, mink, muskrats and opossum.

095-308 Taxidermy-Game Heads
Presents proper procedures for caping, fleshing, tanning, mounting and
finishing techniques. Students are required to complete three game head
mounts, such as white-tailed deer, mule deer, antelope, bear, coyote and
fox.

095-310 Taxidermy-Large Mammals
and Rug-Making
Presents techniques needed for mounting large mammals, such as fox,
raccoon, coyote and bear. Students learn rug-making techniques. Pupils
are required to complete two mounts.

095-312 Taxidermy-Fish Painting and Novelties
Presents two systems of painting - oil-based paints and Lifetone lacquer-
based paints. All fish are air-brushed in high-tech spray painting booths.
Air brush techniques and maintenance are also covered.

095-314 Taxidermy-Waterfowl/Ducks
Presents proper procedures and techniques for mounting waterfowl.
Students are required to complete four mounts - three of various duck
species and one goose. Painting of bills and feet are also covered.

101 Accounting

101-111 Accounting 1-Principles
4 credits
Introduction to the field of accounting. The accounting cycle of journal-
izing 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.

101-113 Accounting 2-Principles
4 credits
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 terminolo-
y, 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
Procedures for accounting for partnerships and corporations. Additional
topics include statement of cash flows, departmental accounting, manu-
f acturing accounting, budget preparation, analysis of financial state-
ments, introduction to cost accounting and cost-volume-profit analysis.
Prerequisite: 101-114, Applied Accounting 1.

101-116 Hotel and Restaurant Accounting
3 credits
A study in the design and use of specialized accounting and financial
control systems in management decision-making for hotels and restaur-
ants.

101-118 Management Accounting
4 credits
Emphasizes the managerial use of accounting reports, the problem-solv-
ing 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 pronounce-
ments in accounting practice, the preparation and interpretation of finan-
cial statements, and intensive study of the valuation and presentation of
the various accounts: cash, receivables, inventories, operational assets,
and intangible assets. Prerequisite: Grade of C or better in 101-113,
Accounting 2-Principles.

101-122 Accounting 4-Intermediate
4 credits
Emphasizes analysis of financial statements. Generally accepted
accounting principles are applied in the preparation, analysis and inter-
pretation 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. Prerequisite: 101-111, Accounting 1-Principles.

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-profit-volume 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.

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 com-
pleted. 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 gov-
ernmental 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, and 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.

101-137 Computerized Accounting Applications 3 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: 101-113, Accounting 2-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.

101-335 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.

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 includes developing 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.

102-105 Math 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.

102-112 Business Report Writing 1 credit
Provides instruction in the writing of business reports. The written report involves an historical analysis of the trends within the company, the industry and the economy. Students use financial analysis accounting in developing their reports.

102-113 Business Communications 1 credit
Both written and verbal communications are studied. Dictating equipment, telephone techniques, job applications and various types of letters used to communicate in the business office are studied.

102-114 Business Communications 3 credits
Both written and verbal communications are studied. Applications pertaining to business communications and procedures are stressed.

102-116 Health Care Principles 2 credits
Stresses the evolution of health care as we know it in the United States and reviews its historical background. Emphasizes major health problems today, the care necessary for these problems, and the study of aging and care of the elderly, including long-term care.

102-117 Money and Banking 3 credits
This introductory course studies money, the banking system and the role of the Federal Reserve as central bank. Considers the implementations of monetary and fiscal policy through a central bank. Introduces the foundations of Monetarism 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
Acquaints students with the basic elements of financial management in hospitals and nursing homes. 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 2 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.

102-126 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, working capital leverage, investing and financing 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; and 101-113, Accounting 2-Principles.

102-128 Financial Institutions 3 credits
This introductory-level course 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. Prerequisite: Prior background or coursework in both accounting and 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, computer-based investment management.

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,ений, election procedures, action in boards and committees, and bylaws. Demonstration meetings are conducted.

102-160 Business Law 1 3 credits
This survey course covers legal principles used in the business world. Contracts, sales, bailments, agency, employment, property law, torts, criminal law, marital property and bankruptcy are emphasized. The course is taught on a level suitable for an associate degree student. Federal, state and case law serve as the basis of study.

102-161 Business Law 2 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 1.

102-189 Medical Office Internship 5 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.

103 Business Machines

103-130 Microcomputer Applications 2 credits
Gives students fundamental knowledge, concepts and skills in the operation of a microcomputer. Teaches the disk operating system, and an electronic spreadsheet that includes graph creation, data base management, and word processing. Prerequisite: keyboarding speed of 30 wpm.

103-131 Lotus 1 credit
Gives students fundamental knowledge, concepts and skills in the operation of a microcomputer. Teaches the electronic spreadsheet, database management, using Lotus 1-2-3 and the disk operating system (DOS). Prerequisite: keyboarding speed of 30 wpm.

103-132 Lotus-Intermediate 1 credit
Provides advanced knowledge in the operation of the microcomputer using Lotus 1-2-3. Students work on spreadsheet analysis, graphics and database management, @ functions, macros, data tables, and transferring data. Prerequisites: keyboarding speed of 30 wpm and previous experience with Lotus.

103-135 'WordPerfect-Beginning 1 credit
Covers basic features and operations of WordPerfect. Includes practical applications to create/edit, save/restore, delete/restore, format and print simple documents; use spellers and thesauruses; move/copy and search/replace text; and work with multiple-page documents. Prerequisites: keyboarding speed of 30 wpm.

103-136 WordPerfect-Intermediate 1 credit
Builds on fundamentals developed in WordPerfect-Beginning and provides working knowledge of the intermediate and some advanced capabilities of WordPerfect. Application exercises and activities cover: sort, newspaper-style and parallel columns, mathematical operations and formulas, table feature, disk maintenance, merge, macros, fonts and special symbols, document style sheets, methods for printing envelopes and labels, and some desktop capabilities. Prerequisites: keyboarding (typing) speed of 30 wpm, and 103-135, WordPerfect-Beginning, or previous WordPerfect experience.
103-140 Desktop Publishing 1 credit
Gives students fundamental knowledge, concepts and skills in the operation of a microcomputer using the desktop publishing software PageMaker. Prerequisite: keyboarding speed of 30 wpm, DOS and word processing knowledge.

103-144 dBase 1 credit
Gives students fundamental knowledge, concepts and skills in the operation of a microcomputer and its disk operating system (DOS) using dBase III+ software. Prerequisite: keyboarding speed of 30 wpm.

103-161 Machine Calculation 1 credit
Stresses fundamental touch operation of electronic calculators, as well as business applications. Special emphasis is given to business problems pertinent to the student's field of training.

103-305 Data Entry I 3 credits
Students learn to use on-line terminals running under KEYFAST software to enter, verify and scan data. Data entry concepts and techniques are stressed as the student develops speed and efficiency in using the equipment by keying from a variety of source documents likely to be encountered on the job. Upon completion, students are expected to be keying between 7,000 to 9,000 net keystrokes per hour. Prerequisite: keyboarding (touch typing) speed of 35 wpm.

103-306 Data Entry II 3 credits
Students review the techniques for use of on-line terminals running under KEYFAST software to enter, verify and scan (correct) data. Data entry concepts and techniques are stressed as the student develops speed and efficiency by keying from a variety of source documents likely to be encountered on the job. Upon completion, students are expected to be keying 9,000 to 12,000 net keystrokes per hour. Also includes instruction in format creation/maintenance using techniques which allow for optimum data entry and verification efficiency. Prerequisite: successful completion (minimum C grade) of 103-305, Data Entry I, or data entry work experience (minimum speed of 7,500 NKM).

103-330 Microcomputers I 3 credits
Gives students fundamental knowledge, concepts and skills used in word processing (WordPerfect 5.1) and spreadsheet (Lotus 1-2-3) software.

103-331 Machine Calculation 3 credits
Stresses fundamental operations and business applications on electronic calculators. A high degree of proficiency is expected upon completion.

103-332 Machine Calculation-Mathematics 3 credits
Teaches fundamental operations and business applications of electronic printing/display calculators. Business applications include percentages, invoices and discounts, interest and bank discount, payroll, mark-up, etc. A high degree of proficiency is expected upon completion of this course.

103-355 Machine Calculation 1 credit
Instruction is given on electronic calculators and adding machines for students enrolled in one-year programs.

103-357 Microcomputers II 3 credits
Gives students fundamental knowledge, concepts and skills used in database (dBase III+) software. Also teaches intermediate and advanced features of word processing (WordPerfect 5.1) software. Prerequisite: 103-330, Microcomputers I.

104 Marketing

104-100 Sales 3 credits
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, self-image concepts, and body communication.

104-101 Career Orientation 1 credit
This required course for all new marketing students, provides an opportunity to assess present skills, knowledge, attitudes, and personal qualities, and to develop improvement goals based upon analysis of the assessment. Also introduces the wide variety of marketing careers available upon graduation, and provides sources to utilize the activities necessary to develop a more systematic and effective approach to life and career planning. Upon completion, you should be more certain of your life and career goals, and more aware of those kinds of activities necessary to pursue while attending MATC in order to become successfully employed, or to advance in your chosen marketing area.

104-102 Marketing Principles 3 credits
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 included in the marketing mix are market segmentation, market research, consumer behavior, product design and planning, pricing policies and strategies, distribution, advertising, sales promotion, and selling. This basic course gives a perspective of marketing as it relates to contemporary living and society's changing needs.

104-103 Marketing Information Management 3 credits
Marketing information management refers to systematically gathering, analyzing and distributing information to facilitate marketing decisions. Topics include the need for and uses of marketing information, the systems of marketing information management, using the scientific method in problem solving, forecasting, conducting primary and secondary research, analyzing and reporting research, using appropriate technology, and managing the marketing information process.

104-104 Selling Principles 3 credits
Provides the student with an introduction to the basic principles, concepts, and theories of non-retail selling and their application to an actual sales presentation. Special attention is given to personality development, self-image concepts, and body communication.

104-106 Small Business Management 2 credits
Explores the opportunity for self employment. The 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 when evaluating the purchase of a small business as well as those factors necessary if starting a business from scratch. Legal forms of business, accounting, marketing research and financing are also considered.

104-109 Principles of Insurance (INS 21) 3 credits
Covers risk and hazard laws or probability, insurable hazard situations, subrogation, insurable interest, co-insurance, proximate cause, negligence, deductibles and valued policies.

104-110 Supervision Principles 3 credits
Introduces 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/worker relationship.

104-111 Marketing Club Operations 1 credit
Provides practical experience in organizing and operating professional business clubs. The functions and activities center around development in four major areas: leadership, civic consciousness, social responsibility and vocational understanding.

104-116 Management Of Professional Organizations 1 credit
Most people participate in professional organizations or clubs at some time in their lives. This is particularly true with people who are in some way connected with the field of marketing. Membership in an organization usually provides important business contacts as well as providing an opportunity to share ideas and grow professionally. This course gives students the tools they need to manage any organization or club. It also gives students an opportunity to apply what they have learned in an actual professional organization environment.
104-117 Store Management 3 credits

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 in: 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 operating the Cracker Barrel. Training in all aspects of store operation, with special emphasis on selling, merchandising, pricing, loss prevention, and visual presentation. Students are required to attend at least one trade show during the semester to help select merchandise for the store.

104-119 Visual Merchandising 3 credits

The principles and elements of design are incorporated into interior and exterior displays. Coordination of the total sales promotion effort is emphasized. Students are required to build many types of displays.

104-123 Merchandising Principles 3 credits

Students analyze the buying function and the differences of buyers' responsibilities in various types of merchandising organizations. The principles, procedures, and techniques practiced by merchandisers of fashion goods in determining what assortments to buy and which resources to select are studied. Students may have the opportunity to interview a buyer, visit a market, participate in a trade show in a local business, compile a resource folder of relevant tools for buyers, and complete a computer simulation.

104-124 Retail Management 3 credits

Includes foundations of retailing, store development, merchandising, retail personnel, customer service, and retail control. Students explore the functions of retailing in distribution channels that deal directly with the ultimate consumer.

104-125 Promotion Principles 1 3 credits

Introduces the major elements in the promotional mix, including advertising, sales promotion, and public relations. Major emphasis is on examining the characteristics, strengths and weaknesses of major media alternatives including radio, television, newspapers, magazines, outdoor, and direct response, and the steps involved in developing an effective media plan. Students also examine the planning, research and strategy involved in creating advertisements for each of the major media.

104-126 Promotion Principles 2 3 credits

Emphasizes developing the skills and knowledge to effectively utilize sales promotion and public relations tools. Students then have an 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.

104-128 Principles of Underwriting (AU 61) 3 credits

Covers a broad understanding of the underwriting function in insurance: decision-making, coverage analysis, reinsurance, pricing analysis, underwriting information/financial analysis, communications and the changing environment.

104-129 Consumer Behavior 2 credits

This course assumes a basic knowledge of marketing. Emphasizes building a foundation for marketing strategy to enable the marketer to compete effectively. Content is relevant to all business activities including management, accounting, finance and merchandising. Knowledge of consumer behavior benefits the consumer and promotes greater understanding of tasks and performance. The approach covers three major categories: consumer strategy relating to goods and services; variables associated with the individual; and environment, consisting of family, social, business, economic and cultural influences.

104-133 Principles Of Fashion Marketing 4 credits

Students study the types of business enterprises, activities, operations, interrelationships and practices in the fashion industry. Concentration is on the development and trends of the major sectors in the marketing of fashion products: primary, secondary, and retail. 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.

104-134 Fashion Stylist/Modeling 3 credits

Fashion stylists work with photographers to create the images we see in print, in videos or television, or on the runway of a fashion show. Career opportunities and responsibilities of a photo stylist, free lance 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 portfolios.

104-135 Elements of Fashion 3 credits

Students work with elements and principles of design as they relate to fashion promotion and products. Forecasting, creativity, and a grasp of influences and sources of design are major components of the course.

104-137 Marketing Math 3 credits

Reviews basic math functions and demonstrates the most common practical applications of mathematics in the retailing, wholesaling, insurance and real estate industries. In addition, several topics covered would be very helpful to anyone entering the small business arena including checkbook reconciliation, payroll, business loans, depreciation, taxes, inventory and financial statements.

104-138 Internship II 3 credits

Part-time work experience and weekly seminars are held throughout the semester to discuss student progress and current trends in retail. Job search skills are also a key part of this course.

104-140 Personal Investment Planning (HS 323) 3 credits

Focuses upon various aspects of financial planning in society: managing personal finances, using insurance to protect your resources, investing your money and controlling your financial future.

104-141 Insurance Adjusting 3 credits

Introductory course in insurance claims adjusting. The focus is on the importance of human relations skills in the claims adjustment function. Students also gain familiarity with the various laws that apply to settlement of insurance claims.

104-142 Commercial Insurance (INS 23) 3 credits

Emphasizes understanding coverages, policy provisions and concepts peculiar to common casualty, surety and multiple-line contracts.

Contracts studied include the Standard Family and Special Automobile, Employers' Liability and Workers' Compensation, Owners', Lessor's and Tenants' Liability, Comprehensive General Liability, Comprehensive Personal Liability, and Life and Health coverages, and the liability insurance aspects of modern multiple-line contracts.

104-143 Personal Insurance (INS 22) 3 credits

Emphasizes understanding coverages, policy provisions and concepts common to property insurance. Studies include Standard Fire Policy, Extended Coverage Endorsement, Dwelling and Contents Form, Building and Contents Form, Crime Policies, Business Interruption Forms, Personal Articles Floater, Bailee's Customers Policy, and the property coverages provided by multiple-line contracts.

104-144 Underwriting Personal Lines (AU 62) 3 credits

Provides the opportunity to study the underwriting decision-making process in a detailed and challenging way as it applies to personal lines problems and situations through texts, case studies and actual rating. An in-depth analysis of underwriting factors and pricing of private passenger automobile, homeowner's and other personal lines is provided. In addition, students explore the computer, account underwriting and producer relationships.
104-150 Employee Benefits 3 credits
Introduces the basic concepts and alternatives of Group Benefits, Group Health, Group Life, and Group Disability. Students are introduced to governmental impact on these fringe benefits, product design, group insurance pricing, alternate funding methods, and other benefits—cafeteria, parking, etc.

104-151 Commercial Liability Underwriting (AU 63) 3 credits
Covers the application of the decision-making process to commercial liability risks. Case studies examine not only the major types of commercial liability insurance, but also such topics as the use of reinsurance and the handling of special accounts and large risks.

104-157 Internship I 3 credits
Full-time, supervised work experience during the summer is the key requirement of this course. Seminars are held, prior to this full-time employment, to discuss the challenges and opportunities available to the fashion merchandising student on the job.

104-160 Sales Management 3 credits
Examines philosophies, principles, policies, strategies, and tactics used in managing a sales force. Covers planning and budgeting for sales force activities, organizing a sales department, operating a sales force (which includes recruiting, selecting, training, compensating, supervising, and motivating salespeople), and analyzing and evaluating sales operations and individual salespersons productivity and effectiveness.

104-172 Career Planning and Development 3 credits
A highly individualized approach to career planning is undertaken through a systematic review and analysis of each student's previous work, academic and other life experiences. Each student identifies and assesses present knowledge, skills, attitudes, interests, and values, as these relate to career alternatives. Focus then turns to the investigation and use of sources of information regarding the marketing opportunities available in industries and specific companies that might best use each student's personal talents. Students also develop and sharpen job search knowledge and skills in the area of developing a personal contact list, selecting and using references, writing effective cover letters, preparing for and taking job interviews, developing a qualifications brief, using the services of an employment agency, succeeding and advancing in a career, and changing jobs.

104-175 Field Training Seminar 2 credits
Provides an opportunity for students to integrate their current work experience with their classroom lessons to enable them to better analyze classroom theory and improve their ability to succeed in and enjoy employment.

104-179 Marketing Techniques 3 credits
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 included in the marketing mix are market segmentation, market research, consumer behavior, product design and planning, pricing policies and strategies, distribution, advertising, sales promotion, and selling. Given 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.

104-183 Supervision 2 credits
Introduces the principles, methods, and techniques of supervision and their practical application to case problems. Special attention is given to problem-solving, small group decision-making, teamwork and the supervisor/worker relationship in, primarily, the retail environment.

104-185 Marketing Topics and Trends 3 credits
Examines the three marketing areas of credit management, customer service, and marketing issues and trends. Each area is addressed in a separate six-week period. Credit management includes types of consumer credit, regulations of consumer credit, basis of the credit decision, and collection practices. Customer service places some emphasis on telemarketing and direct marketing. Marketing issues and trends explores various contemporary issues and trends that are occurring in specific companies and organizations.

104-300 Small Business Development and Planning 3 credits
Introduces prospective small business owners to the principles involved in planning and operation. Attention is given to small business appraisal and opportunities. Emphasis is placed on factors that contribute to a successful small business operation.

104-302 Fundamentals of Marketing 3 credits
An introductory course that helps students understand the role and functions of producers, wholesalers and retailers. A survey approach is used to study consumer psychology, marketing research, advertising, pricing, government regulations and consumer organizations. Attention is paid to product planning.

104-310 Fundamentals of Sales 3 credits
Fundamentals of the sale and its practical application in the retail business world are emphasized. Greeting the customer, presenting the merchandise, handling objections, closing the sale, suggestion selling, and selling big-ticket merchandise are given special attention. Special emphasis is on case problems and an individual sales presentation.

104-312 Orientation Seminar 1 credit
For all students in the Small Business Operations Program. Students learn about the variety of career opportunities available in small business. Present skills, knowledge and abilities are assessed as they relate to the student's chosen field, and students are taught the most effective tools for securing the position they desire. Upon completion, students should have secured a job in retail or a closely-related field. This job should be continued through May of the next year and is used to meet the employment requirement for course 104-318 Field Experience.

104-317 Operations Management 3 credits
Small business management strategies are applied to policies and operations. Included are applications to budgeting, marketing potentials, forecasting and general business operations.

104-318 Field Experience 2 credits
Prior employment is necessary in an approved small business occupation. Projects, reports and discussions are coordinated with situations related to employment.

104-320 Leadership Techniques 3 credits
Applied applications of leadership and supervision techniques are studied using case problems. Problem solving, goal setting and teamwork emphasis is placed on personal inter-relationships.

104-342 Successful Small Business Techniques 2 credits
Gives students an opportunity to investigate the variety of career opportunities found within the retail store. Topics include store organization, personnel management, customer services, retail credit, shipping and receiving, finance and control, and merchandising. Emphasizes advertising and sales promotion.

106 Office Technology

106-102 Shorthand Workshop 2 credits
Students admitted to the Administrative Assistant-Secretarial Program, who have a solid foundation of shorthand theory from a year of high school instruction, enroll in this course during their first semester. The
workshop includes a review and refinement of shorthand theory, study of language arts fundamentals, pre-transcription work, speed development, and dictation transcription. The minimum end-of-semester speed requirement for three-minute dictation is 60 wpm.

106-102 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.

106-111 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, permanship, mastering brief forms and phrases, dictation skill-building, and pre-transcription skills (rapid reading, basic punctuation, grammar, 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 mailable-letter development. The minimum three-minute dictation speed for students entering the course from Shorthand Workshop is 60 wpm; students entering the course from Shorthand Workshop have a minimum speed of 70 wpm. Prerequisites: 106-111, Shorthand 1; or 106-102, Shorthand Workshop.

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 expert shorthand, dictation speed development, improved decision-making and increased transcription skills, and further refinement of mailable-letter production. The minimum three-minute dictation speed for students with no previous shorthand instruction prior to MATC enrollment is 80 wpm; students previously enrolled in Shorthand Workshop have a minimum speed of 90 wpm. Prerequisites: 106-111, Shorthand 1; or 106-102, Shorthand Workshop; and 106-113, Shorthand 2.

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/mailable-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; or 106-102, Shorthand Workshop; 106-113, Shorthand 2; and 106-115, Shorthand 3.

106-124 Advanced Shorthand Workshop 2 credits
An extended-day shorthand class which fulfills the requirement for 106-115, Shorthand 3. Credit for work experience may be given for the one-credit deficiency between the courses. Prerequisite: 106-113, Shorthand 2; or job experience.

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 videotaped depositions and computer-assisted transcription (CAT), operating a freelance reporting business, resume preparation, and reporting depositions, commission hearings, and business meetings.

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.

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 successfully type general business correspondence, tables, manuscripts or reports and office forms. At locations with computers, it is taught using WordPerfect word processing software. 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 develop speed and accuracy in typewriting and training in letter placement, tabulation, manuscripts, office forms and rough draft material. The range of typing speed is from 35 wpm to 55 wpm and up on a five-minute timing with a maximum of five errors. Prerequisite: 106-135, Typewriting 1.

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; advanced principles of tabulation, correspondence, manuscripts/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 its 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 its equivalent.

106-140 Shorthand 2 (Speed Development) 2 credits
Emphasizes the reinforcement of shorthand principles and the continued development of shorthand speed. Spelling, punctuation, letter placement and dictation transcription under timed conditions are emphasized. Final dictation speed is a minimum of 70 wpm for students entering the course from 106-111, Shorthand 1. Prerequisite: 106-111, Shorthand 1.
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.

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 transcription, 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 (minimum writing speed of 80 wpm).

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: 106-144, Court Reporting 2.

106-146 Court Reporting 4 3 credits
A culmination 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.

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). Writing technical material for fluent and accurate readback is stressed.

106-148 Legal/Technical Reporting 2 3 credits
Advanced skill development in writing and transcribing jury charge and literary materials and an introduction to 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.

106-150 Administrative Office Procedures 3 credits
Course topics include: the functions 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, 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 court reporting course uses a Vertical software system 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, reporter technology, and CAT vs. E.R.

106-154 Machine Shorthand 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. Opportunity is provided to utilize word processors and computers for transcript production.

106-155 Advanced Court Reporting Skillbuilding 1 credit
Advanced court reporting students receive dictation at speeds ranging from 200 words per minute to 225 words per minute, 2-voice testimony; and 200 words per minute, 4-voice testimony. Takes are based on 95 percent accuracy. Prerequisite: 106-146, Court Reporting 4.

106-158 Court Reporting Terminology 1 credit
Provides 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 real estate, civil actions, criminal law, probate, real property, contracts, domestic relations, commercial law, and bankruptcy.

106-163 Microkeyboarding 2 credits
Covers use of microcomputers to teach keyboarding (beginning type-writing). With the use of software, the keyboard is mastered, speed and accuracy are developed and letter, report, and table formats are introduced.

106-166 Medical Transcription Techniques and Procedures 3 credits
Course for secretarial students who plan to major in the medical area, seeking eventual employment in a private physician's office, clinic, or hospital. There continues to be a serious shortage of medical transcriptionists/typists resulting from the problems of training qualified medical transcriptionists/typists, the increase in the quantity of dictation due to longer reports and a larger number of diagnostic studies, and the demand by medical facilities for quality reports. The course emphasizes skilled proofreading, editing, formatting, and reference searching techniques needed by medical transcriptionists/typists to produce quality reports.

106-170 Medical Document Processing 1 3 credits
Contributes to the preparation of students for a beginning position as a medical secretary. Introduces medical transcription as it is used in the hospital setting. Course work reinforces medical terminology and acquaints students with the terminology and formats of a variety of medical reports. Students also continue to develop keyboarding speed and accuracy skills. Prerequisite: keyboarding skill.

106-171 Medical Document Processing 2 3 credits
An advanced course in which students study the vocabulary, disease process, and new developments specific to various medical specialties and transcribe typical reports and correspondence for those specialties. Emphasizes development of efficient and accurate transcription skills and expansion of medical vocabulary. Students also continue to develop keyboarding speed and accuracy skills. Prerequisite: 106-170, Medical Document Processing 1.

106-172 Applied Business Training 3 credits
Covers the fundamental principles and practices used in office management. Includes a study of and practical experience in the following: written and non-written communications, information processing, meetings and conferences, ergonomics, filing and record management, dictation procedures, office automation, telecommunications, reprographics, and distribution of information.

106-173 Medical Document Processing 3 3 credits
Introduces medical secretary students to terminology and principles of health insurance and procedures for coding for professional services and diagnoses. Case studies are used to apply proper abstracting, abbreviat-
106-174 Medical Document Processing 4 credits
Stresses medical-office production keyboarding including a medical-office simulation and transcription material dictated by doctors with 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; 106-173, Medical Document Processing 3.

106-180 Applied Word Processing 3 credits
Develops skills in operating word processing equipment. Students receive training in machine transcription, using medical materials, and on automated typewriters. Students also become familiar with the work flow and logging procedures used in a word processing center. Emphasizes building a firm foundation in medical transcription skills using automated equipment.

106-182 Information Processing Concepts 3 credits
Introduces computers and information processing to students desiring to learn about computers, how computers function, how computers are controlled, and how computers are applied to the solution of business and related problems in a modern society. Computer-related occupations are also discussed.

106-183 Information Processing Techniques 1 3 credits
Gives students fundamental knowledge, concepts and skills used in word processing (WordPerfect 5.1) and spreadsheet (Lotus 1-2-3) software. Also teaches intermediate and advanced features of word processing (WordPerfect 5.1) software. Prerequisite: 106-182, Information Processing Techniques 1.

106-184 Information Processing Techniques 2 3 credits
Gives students fundamental knowledge, concepts and skills used in database (dBase III+) software. Also teaches intermediate and advanced features of word processing (WordPerfect 5.1) software. 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 IP 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.

106-186 Information Processing Internship 2 credits
This structured course encompasses all areas required for successful job application and maintenance. It also provides a training program that allows students to observe and apply, in a practical manner, the theory, skills and techniques studied in the Administrative Assistant-Information Processing Program. During the final semester of study, the student works in an approved information processing position under the supervision and guidance of a supervisor and teacher-coordinator.

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, electronic mail, files management and calendaring applications. Prerequisite: 106-188, Information Processing Techniques 3.

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.

106-195 Career Development/Internship 3 credits
This capstone course guides administrative assistant-secretarial 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 work 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 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.

106-197 Medical Secretary Internship 2 credits
A structured course encompassing area required for successful job application and maintenance. It also provides a training program that allows students to observe and apply, in a practical manner, 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 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.

106-306 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 the following: 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.

106-313 Shorthand 2 3 credits
For students who have completed the theory of shorthand. Includes a review of theory and principles, extensive speed development, instruction in language skills and elementary dictation and transcription. Dictation speeds range from 60 to 100 wpm. Prerequisite: 106-305, Shorthand 1.

106-316 Stenography 3 credits
This advanced course increases shorthand vocabulary, develops speed, builds dictation and transcription skills, and provides further training in language skills. Dictation speeds range from 70 to 110 wpm. Prerequisite: 106-313, Shorthand 2; or equivalent experience.

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 those principles is provided. Students then transcribe simple legal documents and correspondence, which gradually increase in difficulty. Language skills are emphasized throughout.

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
formal and terminology are included. Prerequisite: 106-319, Legal Transcription 1.

106-328 Legal Transcriptionist 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 practice in secretarial decision-making and problem-solving. Some field trips may be included.

106-329 Legal Transcriptionist 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 Transcriptionist 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
Training in typing mailable letters from rough draft copy with correct punctuation, capitalization and spelling to be added by the typist. Drill is given on tabulating from rough draft copy. Practice is provided on various office production forms and typing manuscripts from rough draft and longhand copy. Prerequisite: 106-331, Keyboarding 1.

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
Stresses proofreading and producing mailable copy at office rates of speed. Projects include typing for various departments, such as: clerical, purchasing, sales, personnel, accounting, director of sales and director of office services. A portion of this course is devoted to transcribing from machines. Prerequisite: 106-333, Keyboarding Applications 2.

106-337 Keyboard Skill Building 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.

106-340 General Typewriting 2 credits
To accommodate the adult refresher student, this course stresses speed and accuracy and the development of typewriting skills. Letter-writing, tabulations and timed writings are included in the instruction. Students with less than one semester of previous instruction should consider registering for Typewriting 1.

106-349 Legal Document Processing 1
(Legal Typing 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.

106-350 Legal Document Processing 2
(Legal Typing 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 2 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, entering daily transactions, billing and collecting, banking procedures, preparing payroll, preparing some government forms, handling routine business correspondence, keeping an inventory of supplies, and an introduction to some of the features in an automated or electronic office situation.

106-366 Medical Transcription Techniques and Procedures 2 credits
For secretarial students who plan to major in medical areas, seeking eventual employment in a private physician's office, clinic, or hospital. There continues to be a serious shortage of medical transcriptionists/typists resulting from the problems of training qualified medical transcriptionists/typists, the increase in the quantity of dictation due to longer reports and a larger number of diagnostic studies, and the demand by medical facilities for quality reports. The course emphasizes the skilled proofreading, editing, formatting, and reference searching techniques needed by medical transcriptionists/typists to produce quality reports.

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, in a practical manner, 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 document preparation. One-third of the course grade is based on successful completion of a three-week 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.

106-381 Information Processing Operations 3 credits
Introductory and advanced levels of word processing techniques are taught. Students learn all basic and intermediate level competencies in inputting, editing, storing, filing, retrieving and printing. Prerequisite: keyboarding skills.

107 Computer Information Systems (CIS)

107-110 Computer Operations 2 3 credits
Continuation of 107-112. Computer Operations 1, expanded to a broader scope, and dealing 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 JCL and Utilities. Prerequisites: 107-121, Computer Operations I; and 107-113, Computer Concepts; or consent of instructor. Grade of C or better in all CIS courses is required.

107-122 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 JCL and Utilities. Prerequisites: 107-121, Computer Operations I; and 107-113, Computer Concepts; or consent of instructor. Grade of C or better in all CIS courses is required.

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 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 documentation, data layout, total design, data elements, and inter-record relationships. Processing modes include batch sequential, batch random access and interactive systems. The use of a CASE tool to enhance data design experience is integrated throughout the course. Prerequisite: grade of C or better in 107-121, Programming 1; and completion of, or concurrent enrollment in, 107-122, Programming 2 (for CIS-Programmers/Analysts majors); or 107-129, Programming 5 (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 ISP/IPDF. Prerequisite: grade of C or better in 107-122, Programming 2; or consent of instructor.

107-121 Programming 1 - COBOL 4 credits
Introduces fundamentals and techniques of the structured computer program 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-Programmers/Analysts majors. It requires extensive work outside of class. Prerequisites: successful completion of, or concurrent enrollment in, 107-113, Computer Concepts; and 107-133, Programming Tools and Techniques. It is recommended that the student either have proficiency on a typewriter or computer keyboard or be currently enrolled in 106-163, Typewriting. 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, subprocess programming, 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, Intro. to Interactive Software; or consent of instructor.

107-127 Programming 4 - Database with 4GL 4 credits
Features the concepts, facilities and application of mainframe Database Management Systems (DBMS) and a fourth generation programming language (currently ADABAS/DBMS and NATURAL) in a business environment. Studies DBMS components and requires the completion of several interactive programming projects. Prerequisite: grade of C or better in 107-125, Programming 3; or consent of instructor.

107-129 Programming 5 - RPG 4 credits
The practice and study of the RPO programming language. Required for the CIS--Operations degree. Prerequisites: 107-121, Programming 1; or consent of instructor. Grade of C or better in all CIS courses is required.

107-130 Systems Analysis and Design 2 3 credits
Introduction to the full cycle of systems analysis and design. Emphasizes developing interviewing skills, formal problem definition, performing a detailed systems investigation, analysis and design. Students gain experience in the creation of data flow diagrams, a project data dictionary, entity-relationship diagrams, file and data base design, data normalization and interactive system concepts. Problem solving skills, business client relations, project analysis and communication skills are woven throughout the course. The use of a CASE tool to enhance the design and analysis experience is integrated throughout the course. Prerequisites: grade of C or better in 107-117, Systems Analysis and Design 1; 107-122, Programming 2; and 107-140, Intro. to Interactive Software; or consent of instructor.

107-131 Programming 6 - Assembler for 3GL Programmers 3 credits
This elective course introduces the IBM mainframe assembler language instructions and concepts which underlie third generation languages such as COBOL. It provides a general background in the architecture of the mainframe environment, including machine language, base/displacement and relocatability, general and special purpose registers, main memory, organization and storage; implementation of sub-routine linkage; internal data movement, comparison and conversion algorithms; and a deeper understanding of common abends, such as OCF. The course serves as background for programmers working in the 3GL environment, as well as an introduction to eventual further training in tech support. Prerequisite: Programming 2 with a grade of C or better, or work experience with a 3GL such as COBOL, or consent of instructor.

107-133 Programming Tools and Techniques 3 credits
Introduces basic techniques for planning and designing computer program structures. Students are also introduced to the mainframe text editor, internal data representations, program hierarchy structure modeling, interpreting simple batch program output, recognition of simple system documents, use of language, identifying resource needs, identifying project priorities, interacting with team members, and developing stress management skills. Prerequisite: none. However, it is normally taken with 107-121, Programming 1 (but may be taken prior to 107-121, Programming 1 if desired).

107-135 Programming 8 - CICS 2 3 credits
This elective course presents advanced features of command-level CICS (Customer Information Control System) using COBOL. Features emphasized include browsing, alternate index processing, temporary storage,
transient data, message building, extended attributes, and terminal control. Prerequisite: grade of C or better in 107-125, Programming 3; or consent of instructor.

107-136 Programming 9 - SAS 3 credits
This elective course introduces the application of the Base SAS (Version 6) software to a business information systems environment. Covers data transferring, selection, subsetting, grouping, reorganizing and joining within DATA steps, while also emphasizing the more common reporting and summarizing PROCs. Management of SAS libraries and SAS system options is also included. Sample SAS programs are in the course library for modeling and active learning. The accomplishment of a number of programming assignments on the MAC system is required. Optional enhanced-learning materials are also available on such topics as customized reports from DATA steps, macros, Proc Tabulate, Proc SQL, Proc Format and Proc Report. Prerequisite: grade of C in 107-121, Programming 1; or in any programming course providing knowledge of hex notation, zoned decimal and packed decimal numerical representation, and control break logic. Prerequisite may be waived with consent of instructor for those with relevant work experience.

107-138 Computer Operations Internship 1 5 credits
This is the first of two on-the-job experiences — with instructor supervision — in computer installations in the Madison area. The emphasis is on operating midrange (mini) and mainframe (large) computer systems while observing and participating in the work flow into and out of the data center. The computer operations program is mainframe oriented, so student interns are not placed in information centers that use only microcomputers unless those microcomputers are part of an extensive LAN (local area network) or WAN (wide area network). The student intern spends about 20 hours per week at the place of internship. Prerequisites: 107-112, Computer Operations 1; 107-129, Programming 5; and 107-113, Computer Concepts; or consent of instructor. Grade of C or better in all CIS courses is required.

107-139 Computer Operations Internship 2 5 credits
This second internship course provides work experience in a large, complex data center that offers a broad spectrum of mainframe or large midrange processing modes. The student intern spends about 20 hours per week at the internship site. Prerequisites: 107-138, Computer Operations Internship 1; or consent of instructor. Grade of C or better in all CIS courses is required.

107-140 Intro. to Interactive Software 3 credits
Introduces software packages used on the IBM and IBM-compatible microcomputers. Student learn to use various software tools to solve data processing problems. The microcomputer operating system and database software are studied. Upon successful completion of this course, students are able to select and use the appropriate operating system commands needed to manage a microcomputer's resources, and define, analyze and implement data processing applications using database software. Prerequisites: Grade of C or better in 107-121, Programming 1; 107-113, Computer Concepts; and 107-133, Data Processing Techniques; or consent of instructor.

107-143 Information Systems Project Management 3 credits
Introduces concepts of managing computer information systems projects. Students develop written communications in support of project management and technical documentation. Planning methods, including estimating, cost-benefit analysis and graphical techniques such as CANT and PERT charts are utilized as a tool to manage CIS projects. An integral component is human resources management, including team development, user training, performance review and providing customer support. Prerequisites: grade of C or better in 107-125, Programming 3; and 107-130, Systems Analysis and Design 2; or consent of instructor.

107-170 CIS Programmer/Analyst Internship 3 credits
Opportunities for students to learn and practice programming and analysis techniques through activities and experiences in an Information Systems Department. Objectives commensurate with student's background and experience. Activities include designing and testing new programs, designing and modifying existing programs, systems analysis and design and sharing experiences with other interns. Prerequisites: grade of C or better in 107-125, Programming 3; 107-120, Operating Systems, Services and Facilities; 107-130, Systems Analysis and Design 2; and 107-175, Job Search Preparation; or consent of instructor.

107-175 Job Search Preparation 1 credit
Introduction to planning and organizing a job search in computer information systems. Activities include the development of a personalized job search plan and correspondence. Prerequisite: none.

107-180 Relational Database Coding 4 credits
Introduction to the creation of relational databases on a midrange computer system. Activities include: determining what business related data should be stored to support business information needs; designing the physical data flow from the logical data needs; performing the tasks to produce physical databases and logical files; and retrieving information from a relational database. Prerequisite: no previous computer information systems experience is required for this course.

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; and applying fact-finding techniques, and using 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 survey, study, definition and selection phases of the Systems Development Life Cycle; documenting the CIS project development with a CASE tool; and applying fact-finding techniques, and using 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, data 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 107-185, Interactive Computer Applications; or 107-180, Relational Database Coding; or consent of instructor.

107-191 Interactive Programming I 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 according to specifications and standards. Prerequisite: grade of C or better in 107-180, Batch Programming; and 107-195, Control Language Programming; or consent of instructor.

107-192 Interactive Programming II 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 107-185, Interactive Programming I; 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 107-185, Interactive Computer Applications; or 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. Includes: identifying network hardware and software options; connecting a network to a midrange computer system; and demonstrating the functionality of a computer network. Prerequisite: grade of C or better in 107-185, Control Language Programming; or consent of instructor.

109 Hospitality Management, Recreation Resource Operation, Tourist Recreation

109-101 Introduction to Leisure Services 3 credits
Covers the structure, purposes, functions and interrelationships of private, public, semi-private and commercial recreational agencies. Trends and career opportunities in tourist recreation and resource operation are also included.

109-103 Recreation and Leisure in Modern Society 3 credits
History, development, nature, significance and relationship of leisure and recreation in today's world. A study of the psychology of recreation demand and supply. Characteristics of group leisure are also examined.

109-106 Programming and Public Relations 3 credits
Emphasizes planning, organizing, conducting and evaluating recreation programs. Support systems and public relations in private, public and commercial agencies are also examined.

109-107 Recreation Safety 2 credits
Combines both the didactic and practical content of the American Red Cross' standard first aid course and the American Heart Association's basic life support course. Also provides training in more advanced emergency care techniques for emergencies more likely to be encountered by recreation and tourism professionals. Upon successful completion, students 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).

109-110 Professional Issues in Recreation 2 credits
Exposes recreation and tourism students to problems in the social, economic, philosophical and technological dimensions of recreation service provision. Emphasizes analytical thinking and class participation.

109-120 Commercial Tourism Business 3 credits
Examines the historical development and growth of "profit-oriented" commercial recreation. An overview of the tourism and travel industries is followed by focusing on starting, marketing and managing a recreation enterprise. All students are required to create their own commercial recreation business plans. Trends in recreation and their implications for the future are also investigated.

109-124 Food Preparation Management 2 credits
A survey of basic food preparation principles and techniques for the student (non-chef) preparing for hotel or restaurant management. Students successfully completing the course should have an understanding of how to prepare basic menu items, using a variety of methods and equipment. In addition, students should know basic principles of plate presentation, with attention to timing and coordination for actual service. Instructional methods include demonstrations and team teaching.

109-125 Hospitality/Recreation Management 3 credits
An overview is presented of the development of management theory and practice. Such theories as scientific management, human relations management, Theory X and Theory Y, systems analysis and contemporary management are reviewed. The manager's role and functions are examined in relationship to organizational structure, employee relations, motivation, leadership, marketing and budgeting.

109-126 Introduction to Hospitality Management 3 credits
An introduction to management and the hospitality industry, this course serves as a foundation for the more specialized courses that follow. The first part surveys the industry, nationally and locally, and examines closely the two major components-hotels and restaurants. The second part provides an overview of the work hospitality managers do.

109-129 Hospitality Sales Promotion 3 credits
Places special emphasis on the organization and function of hotel sales departments and the need for sales planning through analysis of the product, competitors, and the market. Marketing tools and techniques discussed, focus on securing room, food and beverage, and group business. Special treatment is also given to various promotional techniques and concepts as they pertain to the food and lodging industries, including advertising, consumer demand and merchandising. Prerequisite: 104-102, Marketing Principles.

109-130 Tourism Marketing 3 credits
Discusses practical application of basic marketing principles in the tourism industry. Students learn target marketing, travel product positioning, creative marketing strategies, identifying traveler needs and personal selling.

109-131 Front Office Management 3 credits
Emphasizes the management and public relations responsibilities of the front office staff. Instruction includes the principles of management as well as routine procedures and front office accounting techniques and an introduction to the changing technology in today's lodging operations as well as systematic interpersonal communication skills development.
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. This is for those who desire to develop a basic knowledge of beers, wines, and spirits. Students learn how to build and mix several different cocktails.

109-133 Beverage Merchandising 2 credits
Introduction to management and professional and responsible service and sales of beverages in bars, taverns, restaurants and lounges. Develops an understanding of the means for effective and professional sales and responsible product knowledge of beers, wines and spirits; production techniques; sales forecasting, bar accounting, and effective pricing and cost control procedures. Prerequisites: student must be 21 years of age, or consent of instructor.

109-134 Hotel/Restaurant Cost Control 3 credits
Realistically prepares students to identify, apply and interpret the concepts and techniques of cost control in the hospitality industry. Upon successful completion, students are able to identify current relevant factors influencing the cost of operating a hospitality business; select and apply specific methods, procedures and systems to control costs; analyze these applications using theories and concepts discussed in class; and be able to forecast/prepare budgets, prepare income statements and complete a break-even analysis. Prerequisite: 102-102, Business Math; or consent of instructor.

109-135 Recreation Activities 3 credits
Developmental activities are planned, implemented and evaluated. Activity areas include music, dramatics, games, dance, outdoor recreation, literature, travel, hobbies, voluntary activities, social and special events. Active participation and leadership are required.

109-136 Hotel and 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. Current court decisions in the hospitality area are examined. Instruction includes status and responsibilities; accommodations and discrimination; theories of liability; torts; negligence; liability for condition of premises; liability of leased premises; product liability; liability for guest's property; labor law; liens; and evictions.

109-138 Lodging Environment 2 credits
Focuses on efficient design and upkeep of lodging properties by the housekeeping, maintenance, and engineering departments. Lodging environments are designed with one thing in mind: to attract certain types of guests—or markets. Each market has different needs and expectations in regard to aesthetics, amenities, and prices. Management functions performed by these departments are examined throughout the course.

109-141 Hospitality Operations Seminar 1 credit
The Hospitality Management Association is open to all MATC students, especially those involved in the hospitality management, tourism and recreation resource programs. The organization's purpose includes developing industry awareness. Funds raised by HMA are used by students to attend professional seminars held by organizations such as the Wisconsin Innkeepers, Wisconsin Department of Development, and the Wisconsin Restaurant Association.

109-150 Management of Leisure Facilities 3 credits
Consideration is given to the practical aspects of accounting/budgeting, work scheduling, and personnel staffing/management, as well as general planning and control of a leisure facility. Emphasis is on the application of management theory learned in previous classes.

109-155 Operation/Maintenance of Leisure Facilities 3 credits
Introduction to land/site development, building and structure maintenance, turf and grounds management. Equipment acquisition and care, staff scheduling and work scheduling are also covered.

109-157 Hospitality Internship 1 3 credits
Each student completing the degree program must include on-the-job experience in the hospitality industry component of choice. Requirements include 15 hours per week of work in the field, a learning contract designed to maximize professional growth, seminar participation and leadership, and quarterly analytical papers. Enrollment is limited to students who have successfully completed two semesters in the Hospitality Management Program.

109-160 Special and Social Recreation 3 credits
An overview of various special populations, and an understanding of their needs, especially as it relates to recreational pursuits. The special populations studied are: mentally retarded, mentally ill, alcoholic and drug dependent, the physically disabled, the visually impaired, economically deprived, racial minorities, the aging, and problems associated with youth.

109-164 Travel Reservations 2 3 credits
Gives students a working knowledge of a simulated and live airline reservation computer system. Introduces students to the basic PNR (Passenger Name Record), construction and modification; the reading and utilization of fare displays; the basics of pricing and ticketing; and the analysis of the material in the DRS (Data Retrieval System). Prerequisite: 109-120, Commercial Tourism Business; 109-166, Travel Agency Training; 109-167, World Travel Geography.

109-165 Travel Agency Services 3 credits
Provides sophisticated information about major segments of the travel industry - cruise, 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 students to 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 actual production of airline and associated service tickets. The study of air services begins with the introduction of the Official Airline Guide, which features distance, minimum connect time, flight itineraries and schedules. It continues with the explanation of airline reservation procedures and an emphasis on the production of actual tickets by hand. This course is critical to the understanding of ticketing procedures, and is a prerequisite to the student of on-line computer reservation systems introduced in the Travel Reservations, 109-164.

109-167 World Travel Geography 3 credits
Geography is the study of our world. To learn more about this important subject, students study the seven continents, the world of water, till of the earth and change of seasons and times; study maps of the world; find out how many people live in a country and what its resources and attractions are; explore each country as a potential destination; learn about the three aspects of geography - locational, cultural, and physical. Locational geography seeks the answer to two questions: where is it and how do you get there? Cultural geography studies the division of the world into racial groups and contrasting societies, each with a culture that expresses itself in every facet of daily life. Physical geography investigates the weather and the best times to visit. The study of climate and the description of the terrain are also part of physical geography.

109-168 Travel Center Operation 3 credits
Introduction to the actual operation of a travel agency. Students interview customers, organize their travel arrangements, collect the required monies and coordinate the MATC travel agency for actual reservations. Students are responsible for customer follow-through, including the receipt and delivery of their travel documents.
109·169 Group Travel/Planning 2 credits
Introduction to the operation of a group travel department. Students research a variety of destinations, plan detailed itineraries and negotiate 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.

109·170 Interpreting the Leisure Environment 3 credits
Focuses on methods the individual interpreter can use to relate the natural history, culture, and recreational values of an area to its visitors.

109·171 Special Event Planning 1 credit
A study of how to plan, implement and evaluate special events. Event financing, staffing, marketing and coordinating are also explored.

109·175 Recreation Internship 2 credits
The internship class is directly related to 150 hours of experience in the fields of recreation and tourism. The student chooses as a desired job area. Examines students' practical experience and hypothetical case studies from the viewpoint of decision-making and problem-solving. Prepares students to maximize the learning opportunities of the field experience.

109·176 Group Exercise/Aerobics Leadership 1 credit
For students interested in directing their career in the fitness industry, this 18-hour course consists of a variety of teaching methods including lectures, demonstrations, hands-on skill activities, and special assignments. This is only one way an individual may obtain an entry-level position within this industry. Group-exercise instructors require individuals who demonstrate good leadership skills and the ability to motivate others. This is an elective course under the two-year recreation program.

109·177 Hotel and Restaurant Purchasing 2 credits
Focuses on techniques available to manage the purchasing function more effectively in a hospitality operation. Primary concern is the purchase of food and alcoholic beverages because they are, apart from labor, representative of the major purchase costs that hospitality operations have. Also looks at other cost centers, such as equipment, services, and supplies. Purchasing includes knowing what products are needed, understanding distribution systems and the intermediaries who can provide needed products, being familiar with which suppliers can provide the high-quality products required at the most favorable prices, negotiating with suppliers and receiving appropriate services from them, placing orders, receiving products, controlling inventory and production, and paying for products received.

109·178 Meeting, Planning and Convention Services 2 credits
Provides an overview of the Convention, Exposition, and Meeting Industry. Highlights the impact and importance of CEMI to the hospitality industry. Students interested in hospitality marketing are informed what to expect and how to serve the CEMI market segment.

109·190 Recreation Seminar 1 credit
Designed to assist graduating students with job placement. Requires self-evaluation of job related skills, interests, attributes and achievements. Reviews how to target job possibilities, write resumes and practice interviewing. The concept of job networking is also introduced.

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. Subjects covered include tax laws (current and past), creative financing, ownership forms, limited partnerships, management practices, practical contractual language, the real estate exchange, in addition to several case studies. A real life course project is required wherein the student goes through the steps of acquiring an existing property and analyzing how it should turn out.

194·182 Real Estate Law 4 credits
Acquaints students with the Wisconsin Real Estate Law Manual and prepares them for the Wisconsin Real Estate Broker's Examination. Covers topics such as the law of agency, legal descriptions, legal 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. The course fulfills the educational requirements for the real estate sales license in Wisconsin.

194·184 Real Estate Finance 3 credits
An in-depth study of the various aspects of real estate finance with an emphasis on the type of instruments used, sources of funds, procedures involved, and the role of the federal government. Includes numerous activities outside the classroom designed to demonstrate lending policies, problems and rules involved in financing and real property, including residential, multi-family, commercial, and special purpose properties.

194·185 Real Estate Marketing 2 credits
Focuses on the subject matter provides an ideal blend of theory and practice, permitting the study of sales planning, market analysis, management of sales and service personnel, including selection, training and supervision. Case histories and problem solving techniques are utilized. Fulfills the educational requirement for the real estate broker's license in Wisconsin.

194·186 Real Estate Appraisal I 4 credits
Presents the rudiments of residential appraising with an emphasis on the single-family home.

194·187 Real Estate Appraisal II 3 credits
Continuation of 194·186. Real Estate Appraisal I. Explains the fundamentals and techniques of narrative report-writing with emphasis on market, cost and income approaches, and the many related problems.

194·188 Real Estate Planning and Construction 3 credits
Explores the steps needed to ensure the sound development of new residential properties. Also helps the homeowner and real estate agent to recognize and evaluate the construction details of residential properties.

194·190 Property Management and Development I 3 credits
Prepares students to enter the property management industry or manage their own property. Covers the rental, maintenance, bookkeeping, and communication (analysis of economic trends affecting real estate), functions of property management and also takes a detailed look at commercial, low income and condominium properties. In addition, guest speakers are invited to speak about building codes, landlord-tenant laws and a variety of related topics. A semester project which analyzes an existing building's management policy is a required part of the course.

194·191 Property Management and Development II 3 credits
Specifically designed to prepare those students interested in working as resident managers for apartment buildings. It may lead to the ARM (Accredited Resident Manager) designation as offered through the Institute of Real Estate Management.

194·192 Contemporary Issues in Real Estate Law 3 credits
Explores the issues of the entry level by reviewing and updating students on approved forms, administrative rules and statutes related to real estate as well as in related case law. Also deals with recent changes in public policy and changes in our economy.

194·193 Contemporary Issues in Real Estate Appraisal 3 credits
An advanced course which updates the student on current trends in appraisal theory and practice as well as recent changes in public policy.
196 Supervisory Management

196-100 Principles of Supervision 3 credits
Introductory course which acquaints students with concepts and theories
of management in order to improve organizational and individual effec-
tiveness. Content is arranged to focus on the application of management
principles for the solution of job-related problems. The content is struc-
tured to apply to any type of organization. Explores the required knowl-
dge, skills and abilities of all supervisory positions.

196-105 Occupational Trends and Issues 3 credits
Provides an understanding of current trends affecting supervisors. Uses
a discussion forum to address the rapid changes that organizations will be
faceing presently and in the future. Extensive use of outside speakers.
ensures that students stay on the forefront of managerial issues. Topics
vary depending on new developments in the supervisory area.

196-110 Organizational Leadership 3 credits
Identifies effective leadership techniques, assesses individual strengths
and weaknesses, and builds specific leadership skills which focus on the
leader as a communicator, team builder, goal setter, teacher problem-
solver, and results achiever. These activities are conducted in an informal
atmosphere that stresses group interaction through the use of personal
and professional situations for practical applications of concepts.

196-113 Personnel Practices 3 credits
Provides improved understanding of all organizational members of the
human resource-personnel management function. Acquaints supervisors
with the techniques and concepts within the personnel area that enhances
organizational operating efficiency. Clear understanding and proper
administration of personnel policies and methods assists in assuring that
well-trained, well-motivated employees are available to meet organiza-
tional goals and objectives as well as an improved quality of work life
and improved employee satisfaction.

196-115 Improved Productivity Through Process Control 3 credits
Gives students an understanding of the importance, cost and selection of
methods for the implementation of programs to improve the quality of
products, services, productivity and profitability. Designed around three
topic areas – quality attitudes, worker participation in quality mainte-
nance and the actual implementation of process control networks.

196-116 Managing Human Resources 3 credits
A detailed study of human behavior in the workplace and how this
behavior affects organizations. Explore such areas as morale, motivation,
job satisfaction, and productivity. Practical application is emphasized
through the use of role play, case study and group discussion.

196-119 Labor/Management Relations 3 credits
Provides supervisory understanding of the concepts, issues and trends
necessary to understand and effectively deal with labor unions.
Examines major pieces of legislation with explanation of present day
significance of laws and regulatory guidance existing within the labor/
management relations area. Integration of actual grievance cases by stu-
dents is encouraged, as well as a focus on current trends from actual
organizational settings.

196-122 OSHA and Hazardous Substances 1 credit
Acquaints students with an elementary understanding of the
Occupational Safety and Health Act, its coverage and purpose. Provides
an overview of OSHA Standards, record keeping requirements and other
regulatory provisions necessary to ensure safe work environments consis-
tent with the law.

196-123 Morale and Workplace Ethics 1 credit
Improves understanding of concepts and principles related to business
ethics and organizational morale issues. Focuses on the "who's" of deal-
ing with others versus the "how to's." In-class exercises demonstrate sit-
uations involving morale dilemmas, examine morality levels and clarify
personal values, all aimed at improved understanding for organizational
effectiveness.

196-132 Making Meetings Work 1 credit
Provides the necessary understanding to conduct a successful cost-effi-
cient meeting. Examines the required parts and looks at specific types of
meetings as well as providing insight into intergroup dynamics such as
handling problem participants in meetings. It is involvement oriented
with students learning through the conduct and observation of meetings
in the classroom.

196-135 Time Management 1 credit
Improvement of time management skills. Its orientation is toward
improving awareness of time expenditures and obtaining tools which
allow for more effective accomplishments within the available time.

196-138 Management of Conflict and Change 1 credit
Approaches conflict from a proactive management stance, in that it
should be identified, understood and managed for the well-being of the
organization. It examines conflict as it relates to the workplace and
explores conflict concepts such as sources, management and resolution,
and it also looks at managing change effectively to reduce conflict.

196-141 Effective Listening 1 credit
Provides management understanding of the communication process with
particular focus on listening. Examines this key process as related to
managerial communication effectiveness.

196-145 Assertive Managing 1 credit
Improves employee assertiveness skills. Improves communication open-
ness through participant recognition and reduction of counterproductive
aggressiveness or passiveness. Improves organizational performance by
removal of unproductive job-related behavior patterns.

196-148 Stress Management 1 credit
Improves a person's ability to recognize sources of stress and to suggest
methods of effectively dealing with stress. Stress, a hazard of many
occupations, dealing with successfully can improve relationships and per-
formance, both on and off the job.

196-151 Training Techniques 1 credit
Acquaints students with the principles and methods for effectively train-
ing employees in business organizations. Presented from the training
viewpoint of the adult learner and emphasizes on-the-job training.
Students are involved in practical training exercises, a part of which con-
sists of an opportunity to develop a training objective and receipt of
feedback through a training evaluation.

196-154 Problem Solving and Decision Making 2 credits
Sensitizes students to the area of decision making and problem solving
for use in their day-to-day lives. Includes the development of a better
understanding of what process takes place in making decisions, tech-
niques for better decision making habits and proven theories to improve
the effectiveness of decisions.

201 Commercial Art

201-102 Design Fundamentals 3 credits
Fundamentals of two-dimensional visual organization and problem solv-
ing strategies for advertising layout, publication design, typographic
and graphic design, and illustration. No prerequisites.

201-103 Drawing Fundamentals 3 credits
Introductory drawing class emphasizing sound craftsmanship and a study
of basic freehand drawing skills. Includes the study of perspective, pro-
portion, construction of solid forms and study of light and shade. No pre-
requisites.

201-106 Illustration 1 3 credits
Concentrates on creating reproducible line and continuous tone art in the
area of product, editorial and institutional illustration. All work is done
in black and white in a variety of media. Students are encouraged to
develop problem solving techniques in both technical and conceptual areas. Prerequisites: Drawing Fundamentals, Design Fundamentals.

201-109 Typography 1 3 credits
Fundamentals of typography: how to execute layout lettering and to specify type and copy cast. Emphasis is on the structure and form of type and how it is used in contemporary graphic design. No prerequisites.

201-111 Illustration 2 3 credits
Expands many of the black and white skills introduced in Illustration 1 through the introduction of conceptual problem solving and realistic illustration assignments. The use of color, development of a personal style and exposure to the history of illustration are also important components. Prerequisites: Drawing Fundamentals, Design Fundamentals, Color Media, Illustration 1.

201-112 Color Media 3 credits
Explores the properties, usage and relationships of color through various media. Prerequisites: 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. Prerequisites: Drawing Fundamentals.

201-121 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: Typography 1, Typography 2 and Design Fundamentals.

201-122 Graphic Design 2 3 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: Graphic Design 1 and Promotional Print & Prep 1.

201-124 Advanced Problems/illustration 2 credits
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. Prerequisite: Illustration 1.

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: Design and Color 1.

201-181 Computer Graphics 1 2 credits
An introductory course for desktop publishing. Students use the Macintosh II computer, the PostScript printer and the Laser 300 SPS printer. SuperPaint, Microsoft Word and PageMaker software packages are used to create illustrations, graphics, and page layouts.

201-182 Computer Graphics 2 3 credits
Students prepare original copy, graphics, photos and illustrations for a variety of page formats with the Macintosh II and Ixel computer. Emphasis will be on color output. Aldus Freehand V2.0 is used in addition to the software packages introduced in Computer Graphics 1. Writing and typing skills are advantages. Prerequisite: 201-181, Computer Graphics 1; or consent of instructor.

201-184 Electronic Page Layout 2 credits
Emphasizes design and preparation of multiple-page publications incorporating text and graphic images, using sophisticated page layout software (e.g., Quark Xpress) on the Macintosh II/Ixel computer. Output includes high-resolution imaging. Prerequisites: Computer Graphics 1, Typography 2 and Graphic Design 1.

203 Photography

203-105 Photographic Composition 2 credits
This survey course emphasizes composition as an important tool of the photographer. 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. Emphasis is on development of logos, corporate identity and page designs. Prerequisites: Studio Photography 2, 203-108.

203-110 Graphic Arts Photography 1 3 credits
Explores the properties, usage and relationships of color through various media. Prerequisites: Graphic Design 1 and Promotional Print & Prep 1.

203-111 Graphic Arts Photography 2 3 credits
Explores the properties, usage and relationships of color through various media. Prerequisites: Graphic Design 1 and Promotional Print & Prep 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 illustration using color and black and white photography. Prerequisites: Studio Photography 2, 203-108; or consent of instructor.

203-122 Commercial Photography 2 3 credits
Continuation of Commercial Photography 1, 203-121. Includes survey of business practice. Prerequisite: Commercial Photography 1, 203-121.

203-124 Portrait Photography 2 credits
Theory and principles of portrait photography. Studio and environmental portrait. Emphasis on lighting, posing and character analysis. Prerequisites: Studio Photography 2, 203-108; and Color Photography 1, 203-144; or consent of instructor.

203-141 Color Photography 1 3 credits
Introduction to additive, subtractive color theory. Use of color enlargers to color balance prints, filters, color film and paper processors, and basic color research methods. Prerequisites: Studio Photography 1, 203-107; or consent of instructor.
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: Color Photography 1, 203-141.

203-151 Electronic Imaging 3 credits
Explores basic computer skills, issues and skills unique to electronic image handling. Use of image enhancement software, operation of desktop film and print scanners as input devices, various forms of image output in photographic and graphic arts environments, electronic capture devices, and legal and ethical issues regarding electronic image handling and manipulation. Equipment and software utilized in the course include Apple Macintosh Quadra computers, Syquest removable cartridge drives, Nikon LS-3510 film scanner, Howtek Scanmaster 300-flushed scanner, Montage FR1 film recorder, the Kodak XL7700 thermal dye sublimation printer and Adobe Photoshop software. Hardware and software may be changed upgraded as the course progresses.

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 lifes in the studio, pose and light subjects for portraits, tone black-and-white prints, learn to choose and use filters for black-and-white and color photography, use electronic flash and available light for black-and-white and color photos. Prerequisite: Photography 1, 203-170.

203-173 Photojournalism 3 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 must consist of published photos or photo essays. Prerequisite: Studio Photography 1, 203-107; or Photography 1, 203-170; and 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 photographs in book form. Prerequisite: Studio Photography 2, 203-108; and consent of instructor.

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: Studio Photography 2, 203-108; Color Photography 2, 203-142; and Commercial Photography 1, 203-121.

203-186 Video Production 2 3 credits
A second semester advanced course in television production. Building on the EFP and ENG skills learned in Video Production 1. Utilizes the television studio to introduce skills in studio lighting, 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. 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 prepress 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. Requirement: Concurrent enrollment in Lithographic Preparation 1, 204-102.

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 preparatory 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 into 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 in: 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 applications in the press room. Prerequisite: Successful completion of 204-102 and 204-105, Lithographic Techniques 1 and 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倒霉; advanced press adjustments and operator-performed equipment maintenance; and advanced bindery and finishing techniques. Prerequisite: Successful completion of 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: Typography 1, Computer Graphics 1.

204-123 Copy Preparation Techniques 2 3 credits
Covers basic typesetting, pasteup and layout procedures. Some of the topics include: basic typesetting commands; basic editing, file management and pasteup procedures; and proofreader's marks. Prerequisite: 204-101, Copy Preparation Techniques 1.
204-329 Lithographic Preparation 2 3 credits
Continues to develop skills begun in Lithographic Preparation 1. Includes pre-press work in: use and exposure determination of photographic materials; advanced process camera operation; halftone procedures; signature imposition; film contacting procedures; spreads and chokes; single- and multi-color striping, including four-color process; platemaking; and step-and-repeat systems. Prerequisite: successful completion of 204-332, Lithographic Preparation 1.

204-332 Quality Control for Graphic Arts 2 credits
Familiarizes students with standards used in quality control processes throughout all production phases in the industry. Topics include: layout templates, focusing templates, layering effects, safelight check, processing standards, measuring systems and color bars.

204-371 Introduction to Lithographic Press 3 credits
Includes work in the press and bindery. Students receive basic instruction in: press orientation; pressroom safety; basic small press operations including set-up and clean-up procedures and single-color printing; and basic bindery and finishing operations.

206-106 Communication Problems 2 credits
The design of graphics for projected media is covered, including charts, graphs, flowcharts and maps. Along with traditional studio techniques, computer graphics are included to create communication graphics.

206-110 Display, Design and Production 3 credits
The preparation of plan drawings and three-dimensional models for display systems and exhibits are covered.

206-117 Audiovisual Techniques 1 3 credits
The preparation of software materials for overhead projection and 35mm projection, and the operation and light maintenance of the equipment.

206-118 Audiovisual Techniques 2 3 credits
The preparation of television graphics, acetate cell graphics, and a multi-image presentation synchronized with an audio recording. Prerequisite: 206-117, Audiovisual Techniques 1.

206-120 Production, Planning and Control 3 credits
Students develop a basic understanding of production teamwork, production controls, inventory controls, cost estimating and budgeting, storage and retrieval systems, and quality control, which is relevant to the communications industry. Prerequisite: 206-117, Audio Visual Techniques 1.
206-125 Instructional Media Systems 3 credits
Covers the educational applications of audiovisual production. Students are trained in the planning and preparation of instructional materials for offset, photocopies, print displays and projected media.

206-130 Video Production 1 3 credits
Surveys the principles of telecasting operations including camera techniques, lighting, sound, film, settings, scenery, floor directing, script art and on-camera performance. Lectures, reading, special assignments and projects provide an understanding of the television industry, its history, development and principles of operation.

206-131 Sound Production Techniques 2 credits
The techniques of soundtrack mixing for audiovisual sound-synched productions, including narration, location recording and music mix.

206-135 Multimedia Presentation 3 credits
Design and production of media using computer animation, including computer generated slide production and computer screen presentations.

206-137 Computer Animation 3 credits
Design and development of multimedia presentations on Macintosh computers. Instructional software includes Aldus Persuasion for creating overhead transparencies and slide images, and Macromind Director for animation and video presentations. Prerequisite: Computer Graphics 1.

206-140 Portfolio Preparation 2 credits
The student's portfolio of samples is the culmination of two years of study in visual communications. During job interviews, it is the key for showing prospective employers examples of the student's abilities. This class is an open laboratory giving each student time and opportunity to work on individual assignments designed to identify personal abilities and to prepare the completed portfolio under professional guidance.

206-180 Advanced Media Problems 3 credits
Focuses on one or more media (multi-image, video production, optical camera, computer presentation and animation) to provide the student with additional experience and projects beyond the introductory courses in these areas. Emphasis is placed on strengthening the portfolio.

303 Dietetic Technician

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. Introduces health care facilities and members of the health care team. The American Dietetic Association policies and procedures are covered.

303-110 Food Science-D.T. 4 credits
Covers the basic methods of food preparation, standards, principles and techniques. Students participate in learning sound food preparation methods and skills, preserving the nutritional values of food through the understanding of physical and chemical properties of food, storage of foods, and quality standards for the finished product. Additional areas studied include additives and other food constituents related to food quality and stability, and the study of microorganisms in relation to food preparation, food spoilage, food-borne illnesses and sanitation.

303-111 Basic Nutrition 1 3 credits
Covers nutrients, their sources, functions, digestion and how the body utilizes them. Students learn to assess nutritional needs and status.

303-112 Basic Nutrition 2 3 credits
Involves the study of nutrition and its relationship to the physiological, psychological and socio-economic states of individuals (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 3 credits
Focuses on in-service education programs, the development of nutrition education training materials and community nutrition. Emphasis is on individualizing education and the effectiveness of individual and group instruction. 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.

303-115 Food Service Management in Health Care Facilities 3 credits
Students receive additional background in food service management with emphasis on basic concepts, application techniques and management trends. Areas of study are institutional food purchasing and cost controls, standardization, time-motion procedures, sanitation and safety, equipment and employee relations.

303-119 Applied Clinical Care 3 credits
Provides an 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 2 credits
Students are affiliated in local health care facilities for 128 hours. They observe and assist the supervising dietician in the evaluation and treatment of clients, and apply and utilize interviewing and assessment skills. Medical terminology, medical record and simple counseling skills are practiced. Approximately 75 percent of the learning experiences concentrate on food service management, such as budget, inventory, sanitation, safety and standardizing recipes. Prerequisites: 303-105, Introduction to Dietetics and the Health Care Field; 303-110, Food Science-D.T.; 303-111, Basic Nutrition 1; and 303-122, Medical Terminology in Nutritional Care.

303-122 Medical Terminology in Nutritional Care 2 credits
Students develop their nutritional and medical vocabulary. The course uses a workbook/workshop classroom approach. The purpose is to aid in understanding the written and spoken words that pertain to the health field. The workbook facilitates the memorization, spelling and pronunciation of the terms.

303-123 Principles of Bio-Organic Chemistry 3 credits
A lecture-demonstration course consisting of a survey of general, organic and biological chemistry, designed to meet the needs of dietetic technicians. Students are exposed to the composition, physical properties and reactions of inorganic and organic substances. Emphasis is on human nutrition, physiology and the basic concepts of metabolism.

303-128 Food Systems Management 4 credits
A broad orientation to food service management and the basic principles of quantity food production and service. Includes lecture/discussion on purchasing, meal planning, storage, sanitation, safety, quantity recipes and employee relations. Prerequisite: 303-110, Food Science-D.T.

303-129 Employment Orientation and Research 2 credits
The purpose of this course is two-fold: first, to prepare students for employment; and second, to provide students enrolled in practicum with a weekly session for the discussion of their field experiences. Includes professional development, growth and responsibilities, ADA expectations, resume writing, job hunting and interviewing. The concept of continuing education is promoted. Students research, review and discuss current nutrition literature. 303-129 must be taken concurrently with 303-133. Prerequisites: 303-113, Nutrition Education 1; 303-130, Diet Therapy 1; and 303-132, Supervised Field Experience 2.

303-130 Diet Therapy 1 4 credits
Students develop knowledge concerning the principles and methods of diet as a therapeutic measure in various disease conditions, including obesity and weight control, diabetes mellitus, cardiovascular disease, and...
### Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>303-122</td>
<td>Perspective Lab</td>
<td>1</td>
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<tr>
<td></td>
<td>Develops skill in sketching and drafting interiors in one and two point perspective and isometrics. Prerequisites: Basic Drafting.</td>
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<tr>
<td>304-124</td>
<td>Presentation Techniques</td>
<td>3</td>
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<td></td>
<td>Develops skill and speed in drawing, rendering, and board preparation for interior design presentations. Students gain awareness of the various media available and actively participate in the application of pencil and marker techniques. Prerequisites: enrolled in Perspective Lab.</td>
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<tr>
<td>304-125</td>
<td>Space Planning</td>
<td>3</td>
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<td>Covers human factors, codes, regulations and standards, and barrier-free design as they relate to furniture arrangement and planning interior space. Projects take students 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: Fundamentals of Design, enrolled in Perspective Lab.</td>
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<tr>
<td>304-127</td>
<td>Interior Components 2</td>
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<td></td>
<td>Continues the study of the basic materials used in interior design: wall finishes, laminates and solid surface materials, window treatments, and floor coverings. The features and calculations of each product are covered. Prerequisite: Interior Components 1, Interior Design Textiles.</td>
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<tr>
<td>304-129</td>
<td>History of Architecture and Interiors 2</td>
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<td>Presents the art, architecture and furniture from the Rococo period through the 20th Century. Prerequisite: History of Architecture and Interiors 1.</td>
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<td>304-132</td>
<td>Kitchen and Bath Design</td>
<td>2</td>
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<td></td>
<td>Focuses on designing kitchens and baths, including the specification of cabinets, countertops, appliances, fixtures, materials and finishes. Prerequisites: Presentation Techniques, Space Planning, Interior Components 2.</td>
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<tr>
<td>304-133</td>
<td>Commercial Design</td>
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<td>Focuses on 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: Presentation Techniques, Interior Components 2, enrolled in Lighting.</td>
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<tr>
<td>304-135</td>
<td>Lighting</td>
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<td>Covers light sources, luminaries 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: Space Planning.</td>
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<tr>
<td>304-142</td>
<td>Professional Practice</td>
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<td>Covers essential interior design business practices and procedures including: business formations, fees, contracts, project management, business forms and record keeping. Prerequisites: Introduction to Interior Design, Commercial Design.</td>
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<tr>
<td>304-143</td>
<td>Advanced Interior Design</td>
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<td>Students demonstrate their accumulated skills through the resolution of a comprehensive residential design project, a researched design project, and the preparation and presentation of a portfolio. Prerequisites: Kitchen and Bath Design, Commercial Design.</td>
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<tr>
<td>304-145</td>
<td>Interior Design Internship</td>
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<td>Students work in an interior-design related business to gain practical knowledge of the interior design skills learned in the classroom. They meet once a week to discuss their work experiences and prepare for the job search. Prerequisite: consent of instructor.</td>
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### Course Descriptions

- **303-331 Diet Therapy 2**: Continuation of Diet Therapy 1. Less common diseases are reviewed. Emphasis is placed on the role of the dietetic technician as a member of a healthcare treatment team. Prerequisites: 303-130, Diet Therapy 1; and 303-132, Supervised Field Experience 2.

- **303-132 Supervised Field Experience 2**: Students are affiliated in local 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. Prerequisites: 303-105, Introduction to Dietetics and the Health Care Field; 303-111, Basic Nutrition 1; and 303-122, Medical Terminology in Nutritional Care.

- **303-133 Nutrition Practicum**: This field experience simulates an actual employment situation. Students are affiliated for 32 hours per week for nine weeks. Individualized field placement is coordinated by the dietetic faculty in a health care facility or community nutrition project. Students apply 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 be taken concurrently with 303-129, Employment Orientation and Research.

- **303-140 Nutrition for the Family**: 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**: Covers the human body, its structures and functions. The body is seen as an integrated unit with emphasis in cellular functions. Includes an overview of the musculoskeletal, nervous, digestive and circulatory systems. The relationship of each system to nutrition and nutritional care are stressed. Prerequisites: 303-122, Medical Terminology in Nutritional Care; and 303-123, Principles of Bio-Orgnic Chemistry.

- **304 Interior Design**
  - **304-140 Introduction to Interior Design**: Discusses the interior design profession, including the definition and history of interior design, the personal qualities and aptitudes of the interior designer, and professional organizations. The broad range of career opportunities and tasks performed by the interior designer is also explored.
  - **304-103 Fundamentals of Design**: Covers the principles and elements of design that form the conceptual basis from which to solve and evaluate design problems.
  - **304-104 Basic Drafting**: 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.
  - **304-105 Interior Components 1**: Basic elements and materials of interior design are studied: house plans and styles, decorating styles, furniture types and construction, upholstery and accessories.
  - **304-107 Interior Design Textiles**: Students study fibers, yarns, fabric construction and terminology, finishes, and performance criteria. The specification of textiles for interior design applications is emphasized.
  - **304-109 History of Architecture and Interiors 1**: The art, architecture and furniture from the Egyptian through the Baroque periods are studied.
307-100 Introduction to Early Childhood Care and Education 2 credits
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.

307-101 Child Growth and Development 1 3 credits
Physical, social, cognitive and emotional development during infancy and toddlerhood are studied, as well as prenatal development. Representative theories of child development are discussed (psychanalytic, cognitive, behavioral), and the relevance of theory to skillful practice is assessed.

307-102 Child Growth and Development 2 3 credits
Continuation of 307-101 Child Growth and Development 1. It focuses on development in all the domains from age 2 to 8 years.

307-103 Understanding and Guiding Children’s Behavior 1 3 credits
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.

307-104 Understanding and Guiding Children’s Behavior 2 3 credits
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.

307-105 Basic Care: Health, Safety and Nutrition 3 credits
Students learn to provide for the safety, health and well-being of young children. Focuses on nutrition, accident prevention and identification of illness. Techniques of good care-giving are emphasized throughout.

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 child care 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 the knowledge and skills acquired in Practicum 1 and related classwork 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 I 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 II 3 credits
This laboratory course is a continuation of 307-114, Activity Planning I. Students develop further skill in planning and implementing activities in child care settings.

307-116 Working with Staff and Parents 2 credits
Students study the basic principles of staff/staff and staff/parent relationships. Particular attention is devoted to establishing and maintaining effective communication and support.

307-117 Culture, Class and Gender in the Early Childhood Setting 2 credits
Covers issues relating to culture and social class as well as gender. Helps students increase their understanding of diversity and to increase self-awareness so that they may plan and implement bias-free early childhood programs.

307-118 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.

307-119 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 day care settings. Supportive methods of working with families of infants and toddlers are emphasized.

307-120 Administration: Group Centers and Family Day Care Homes 2 credits
Focuses on administration of family day care homes and group centers. Program start-up, budgeting, staff management, space/design and overall responsibilities are covered.

307-121 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 teacher 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 competencies 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.

**401 Heating and Air Conditioning**

**401-310 Heating and Air Conditioning**

3 credits

Covers basic environmental equipment maintenance. The applications of HVAC components, refrigeration controls, condensers, hydronics, boilers, heat exchangers, chippers, compressors, plumbing, pumps, measurement, blowers, and preventive maintenance/repair are presented. The use of measurement equipment, pressure and air volume flow is studied.

**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 RM-379, Mathematics 2.

**403-303 Construction Drawing 1**

5 credits

Thorough and comprehensive coverage of the basic skills and concepts of drafting as a tool of architecture. Classwork is directed toward a comprehension of graphics presentation and the development of a complete set of architectural working drawings. Lettering, line work, accuracy, symbols, and dimensioning are emphasized in developing drafting ability. Rendering, planning, layout and design are also approached. Structural integrity is discussed in relation to each student’s project. Prerequisite: 804-379, Mathematics 2.

**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 3D concepts is also covered. Prerequisite: Intro. to Computer Graphics 403-315.

**403-308 Codes and Regulations**

2 credits

Includes zoning requirements, residential and commercial building codes, sanitary regulations, and building permits, and inspection procedures. Contact documents and office practice are also discussed. Prerequisite: 804-379, Mathematics 2.

**403-315 Intro. 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 2D 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. Student are given the opportunity to work with building materials when possible.

**403-317 Building Construction 2**

2 credits

Topics include: electrical installation, water 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**

2 credits

Covers basic mechanical principles of residential heating, ventilation and air conditioning, 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, electric circuits and use of test equipment to troubleshoot problems in circuits such as lighting, windshield wipers, power windows, instrument and sound systems.

**404-318 Heating and Air Conditioning**

2 credits

Covers basic principles of heating and air conditioning. Detailed studies of heating systems, air conditioning systems, including vacuum and electrical controls, and automatic temperature control systems are carried out in the classroom and the lab. 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

Discusses 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 automobile 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, adjustment and overhaul of manual and power steering gear. 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 are studied. Engine lubricating, cooling and exhaust systems are studied and serviced. Students learn basic electrical theory used in diagnosis and repair of batteries, 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 in 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 interview techniques, letters of application, references and resumes. Also covers information on wages, benefits, mechanic certification and job retention.

404-374 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 repair work, job costing, budget preparation, insurance, and AG 132 Law. Students receive specific occupational information which enables them to effectively seek employment in the collision repair industry. Personal data sheet, job interview 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.

405 Auto Body and Paint Technician
405-330 Collision Repair/Refinishing 1 11 credits
Oxy-acetylene welding, brazing, and MIG welding as related to the auto body industry are studied. Students learn the proper use of the hammer and dolly, hydraulic porto power jacks and other metal straightening tools. The processes of metal finishing, plastic filling and body solder application are taught on fenders. The refinishing phase includes instruction in the proper use of the spray gun, refinishing panels and fenders, spot repairing of panels and fenders and blending and tinting of paint. Shop and paint safety practices are emphasized.

405-331 Collision Repair/Refinishing 2 11 credits
Further development of the welding, straightening and painting skills is achieved by performing these 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 paint 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, 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, Collision Repair/Refinishing 1; and 405-331, Collision Repair/Refinishing 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. Prerequisite: 405-332, Collision Repair/Advanced Refinishing.

405-334 Collision Damage Report Writing 2 credits
This is a 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, trouble-shooting 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, 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 tools 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
410 Wood Techinics
410-330 Introduction to Cabinet Making 10 credits
This course provides instruction in the following areas: 1. hand and portable power tools, operations; 2. machine woodworking operations, and 3. 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. Prerequisite: 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: 1. hand and portable power tools operations; 2. machine woodworking operation; 3. buying and grading lumber-plywood; interpretations of plans, specifications and building codes; 4. site preparation and layout of footings, foundation and framework; and 5. fundamentals of floor, wall, ceiling and roof framing.

410-336 Machine Maintenance 2 credits
Fundamentals of woodshop 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, edgebanding, 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: 410-330, Introduction to Cabinet Making; 410-333, Introduction to Construction; or consent of Instructor.

410-358 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, isometric, oblique and perspective drawings. Methods of estimating materials and construction costs, reading prints and interpretation of drawings are included.

410-366 Cabinet Drawing 2 credits
Introduces the areas of kitchen cabinet designing, planning, drawing and estimating costs. Units include: 1. kitchen layout and design, 2. kitchen planning using frameless, framed and 32mm systems, 3. estimating kitchen costs, and 4. computer-aided drafting of kitchen cabinets.

412 Diesel and Heavy Equipment Technician
412-311 Mobile Hydraulics 3 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 magnetism, 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 and 412-346.

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 countershaft designs. Also includes medium duty differentials such as General Motors, Ford and Dana Spier 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 Drive Lines 3 credits
Study and training experiences are presented to acquaint students with standard diagnosis, disassembly, inspection, reassembly and adjustment of drive shafts and clutches (both push and pull type designs). Typical equipment used in this instruction unit 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 Transmission 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.

412-366 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 track wheel alignment.

412-368 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.

412-369 Diesel Fuel Systems 2 2 credits
Rebuilding, diagnosis, calibration and tune-up of fuel systems used on engines above 250 HP are covered. Further study of unit injectors, nozzles, inline 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.

412-370 Diesel Engine Performance 2 credits
Enables students to assess engine performance using various diagnostic equipment. An intensive lab program helps students understand how to properly tune-up procedures for various engines. Dynamometers are explained and utilized during lab sessions, to simulate loaded conditions and help students understand the engine's proper function.

412-371 Diesel Electronic Fuel Systems 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.

412-372 Diesel Engine Fundamentals 2 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.

412-373 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.

412-374 Diesel Engine Component Repair 2 credits
Gives students skill and knowledge needed to repair diesel engine components. Components included are water pumps, blowers, lube pumps, turbochargers, fan hubs, oil coolers, filter housings, and other miscellaneous components that are used on diesel engines. Prerequisites: 412-386, Diesel Engine Repair Procedures.

412-375 Diesel Engine Overhaul 3 credits

414 Electronic Servicing
414-311 Electronic Shop Processes 1 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 person 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 oscilloscopes and measurements.

414-317 Industrial Electricity and Controls 3 credits
Practical AC/DC control topics are enhanced with the study of motors, transformers and various electric-mechanical devices. The programmable logic controller is introduced in the on/off mode. Prerequisites: 414-316, DC/AC Circ. for Maint.; or instructor consent.

414-318 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: 414-319, Semiconductor Dev.; or instructor consent.

414-319 Semiconductor Devices for Maintenance 3 credits
Semiconductor devices are tested and applied in simple configurations for both analog and switching applications. Components included are diodes, bipolar-transistors, power transistors and thyristors. Prerequisite: 414-317, Industrial Elec. 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, Semiconductor Dev.; 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 1; and 414-315, AC Systems Applications.

414-330 Fundamentals of Electronic Communications 3 credits
Basic electronic communications circuitry is studied. Topics include circuits found in receivers and transmitters. Prerequisite: 414-311, Electronic Shop Processes 1; and 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 1.

414-332 Electronic Transmission and Reception 3 credits
Video systems, basic principles of television transmission and reception, and basic troubleshooting and service procedures. Prerequisites: 414-311, Electronic Shop Processes 1; and 414-315, AC Systems Applications.

414-333 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 fabricating and the repair of metal objects. Prerequisite: 420-330, Metal Processes 1.

414-334 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 materials.

414-335 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.

414-336 Metal Processes for Maintenance 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.

414-380 Machine Tool I 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 tapering, angle turning, knurling, drilling, reaming, boring and the use and requirements of various workholding methods. Power Sawing: The basic power sawing operations and requirements as related to types of operations and different materials. Also includes blade selection, speeds and feeds, straight and contour sawing on internal and external surfaces, safety and troubleshooting. Drill Press 1: The principles of drills, drilling and drilling machines are covered. Emphasizes safety, workholding, speeds and feeds, hole location and quality, drill selection and drill maintenance. Special operations are also included.

414-381 Machine Tool 2 9 credits
Instructional units include: Engine Lathe 3: Continuation of engine lathe work emphasizing speed and accuracy, special tooling, attachments and workholding methods, including face plates. Engine Lathe 4: Principles of thread chasing (un-aceme-internal-external) and development of skills in the machining of these threads. Milling Machine 1: Introduction to milling with emphasis on types of machines, terminology, safety, speeds and feeds, cutter mounting and selection. Includes mounting workpieces, squaring and step milling. Prerequisite: concurrent enrollment in 804-379, Math 2; and 804-380, Math 3.

414-382 Machine Tool 3 10 credits
Instructional units include: Milling Machine 3: Advanced work on milling machines, including vertical and horizontal machines. Sawing, form milling, end mill milling, finish considerations and keyways and splines are covered along with speeds and feeds for particular materials.
Standard attachments and workholding problems are covered. Lettering on parts and die components is accomplished with a pantograph.

Milling Machine 4: Additional work in milling with advanced setups and tooling. Students acquire skills in setting up and understanding hori­
toning, T-slots, angular and form milling. Stresses holding irregular parts and time for operations of a similar nature. English and metric dimen­
sion specifications are used to machine parts, pockets and inserts.

Horizontal Boring Bar: Boring and milling operations are developed on the horizontal bar with emphasis on loading, holding and machining
large work pieces as practiced in the tool and die trade. Experience with
large tooling, rotary table operations and safety practices are stressed.

Grinding: Surface and cylindrical grinding to include the skills necessary
for step, straight, taper, internal and external operations. Emphasizes
workholding and wheel mounting, coolant and finish.

Prerequisites: 420-380, Machine Tool 1; and 420-381, Machine Tool 2.

420-383 Machine Tool 4 10 credits
Instructional units include: Milling Machine 5. Completion of milling machine operations with emphasis on industrial requirements and stan­
dards. Operations include rotary table work, jigs and fixtures, indexing, rework and pantograph. Special attachments and setups for advanced
operations are studied.

Special Machining Processes: Numerical control machining, program­
ming and machine operations are explored and applications made by stu­
dents. Electrical discharge machining operations and applications are
studied along with electrodes, finish and machine setups. The latest
machine tool developments and practices are studied.

Advanced Grinding: Development of skills in the grinding and measur­
ing procedure for parallel surfaces and the squaring and sharpening of
milling cutters. Side dressing of wheel and step grinding as well as fix­
ture and special work holding problems.

Prerequisites: 420-380, Machine Tool 1; 420-381, Machine Tool 2; and
420-382, Machine Tool 3.

420-384 Intro. To Computer Numerical Control Applications 2 credits
Basic hands on instruction using the CNC vertical milling machine and
CNC Turning Center. Emphasis is on 2D 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 meth­
ods. Preset 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 3D parts and
multiple machining operations. The CNC wire cut machine is intro­
duced, and both simple and complex parts are machined. Prerequisite:
420-384, Intro to CNC Appl.; 420-397, Intro to CNC and concurrent
enrollment in 420-399, Advanced CNC.

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 fea­
tures and design of dies.

420-395 Tool Making Theory 2 1 credit
Continuation of Tool Making 1 covers advanced mold and die fixuring
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 Intro. to Computer Numerical Control 2 credits
Experience in manual programming of numerical control machines.
Covers the history, justification, types of control systems and tape prepara­
tion. Students program a part, punch a tape and make the part on a
computer numerical control milling and turning machine. Includes intro­
duction to 2D CAD-CAM computer programming system. Written
reports are required. Prerequisite: 420-380, Machine Tool 1.

420-389 Special Problems Machine Tool 1 credit
Build and prove the die, jig, fixture, mold or special tool introduced and
developed 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.

420-389 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, Numerical Control.

421 Mechanical Drafting

421-392 Drawing Interpretation-Industrial Maintenance 2 credits
Basic principles of interpreting engineering drawing and schematics are
studied. Through interpretation and sketching, students develop a visual­
ization of the part, section or assembly. Drawings pertinent to the trade
are used along with examples and discussions of manufacturing proce­
dures.

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 pre­
sented. The majority of classroom time is spent working with and inter­
preting drawings and prints. Basic sketching is also covered.

421-395 Drawing Interpretation 2 credits
Basic principles of engineering drawings are discussed. Through inter­
pretation and sketching, students develop a visualization of the part, sec­
tion 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, identifi­
cation methods and alloy influences. Properties are studied utilizing test­
ng, 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 sol­
dering 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 3/8" E6010, E6011, E7018 and low-hydrogen electrodes in welded assemblies. Also covers plug welding, oxy-fuel hand and semi-automatic pipe beveling and horizontal pipe welding. Prerequisite: 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 E6010 and low-hydrogen electrodes in weld assemblies. Prerequisite: 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 E6010 and low-hydrogen electrodes in weld assemblies. May include additional skill development or independent study of special welding processes, techniques and applications. Prerequisite: 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 (approx. 36% Ar, 64% CO2). 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 hoods/hoppers, 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 bend 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, carburation and electrical systems are also included. Snowmobiles, chain saws, 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 log splitter or motorcycle engine stand or 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 2 credits
Covers 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 application are conducted.

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 to various machines along with maintenance and troubleshooting.

462-308 Heating and Air Conditioning 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.

462-311 Industrial Maintenance Mechanic I 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 placed on quality control techniques which give the maintenance person an understanding of his/her role in an organization.

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. Prerequisite: 414-319, Semiconductor Dev.; 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 calculating. Cost saving ideas and plans in the area of energy savings are also presented and discussed. Prerequisite: 462-308, Heating and Air Cond.; 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. Prerequisite: 462-306, Industrial Fluid Power; or instructor consent.

462-317 Building Service Maintenance 3 credits
Covers safety, schematics, wall framing, electrical services, insulation, drywall applications, painting, floor applications, roofing and siding applications. Includes the study of appropriate applications of material 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 model codes (NEC, NFPA, ANSI, etc.) are contained as well as shop safety, maintenance record keeping, parts ordering and shop operation.

462-322 Industrial Maintenance Mechanic 2 credits
Instruction on installing, troubleshooting and maintaining manufacturing systems, with special emphasis on automated systems. Prerequisite: 462-311, Industrial Maintenance Mechanic I; or consent of instructor.

462-330 Special Problems 3 credits
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.

502 Barber/Cosmetologist
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, facials, basic haircutting and hair tapering. Students work on patrons and are given on-the-job instruction to develop the necessary skills.

502-302 Barber/Cosmetology Techniques 2 12 credits
Continuation of Barber/Cosmetology Techniques 1, emphasizing studies and applications in advanced haircutting, thermal waving, blow-drying, permanent waving, hair coloring, hair straightening, hair relaxing, thermal hair straightening and facial services. Students continue to work on patrons with instructions while performing these services.

502-303 Barber/Cosmetology Techniques 3 8 credits
Continuation of Barber/Cosmetology Techniques 2, emphasizing 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.

502-311 Barber/Cosmetology Theory 1 3 credits
Students study hair analysis, shampooing, scalp and hair treatments, facials and basic haircutting.

502-312 Barber/Cosmetology Theory 2 3 credits
Theories of advanced haircutting, chemical services and facial services are presented.

502-313 Barber/Cosmetology Theory 3 5 credits
Theories of hairstyling, nail services, facial make-up, advanced perming and hair coloring are presented.

502-390 Barber/Cosmetology Science 1 2 credits
Toilets, 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 barbering 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 as 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
503-105 Chemistry of Hazardous Materials 1 3 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 theoretical information and practice in research skills to enable them to prepare for handling of hazardous materials incidents.

503-106 Chemistry of Hazardous Materials 2 2 credits
Covers firefighting tactics with chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket materials, toxic fumes and health hazards.

503-108 Building Construction and Design 3 credits
Covers basic principles of structural design, as it relates to fire prevention and safety. Students become familiar with various types of construction and building codes and fire prevention ordinances related to construction.

503-110 Fire Hazards and Causes 3 credits
Covers fundamentals of fire investigation and practices. Students examine the role of the modern fire investigator and the techniques used to determine the cause and origin of various fire situations, including arson.

503-112 Fire Prevention 3 credits
Examines and explores the need for a complete and thorough fire prevention program in all areas of society. Fire prevention organizations, both private and public, inspection, interpretation and enforcement of
codes and ordinances, as well as reports and records, are covered. Public relations and educational programs are also emphasized.

503-114 Fire Protection Systems 3 credits
Students survey and examine various suppression and detection systems presently in use. The design and operation of sprinkler systems, portable fire extinguishers, foam systems, carbon dioxide systems, dry chemical systems, halogenated agent systems, explosions, suppression systems and various other fire detection systems are studied.

503-120 Equipment and Apparatus 2 credits
Involves a complete study of conventional and up-to-date firefighting apparatus and equipment. Includes the theory of operation and problems of maintenance as well as the considerations for application of new equipment and new equipment purchase.

503-125 Fire Suppression 3 credits
Covers the procedures involved in the task and tactical levels of fire suppression. Basic company functions are studied in conjunction with their role in an incident management system.

503-131 Principles of Fire Control 2 credits
Covers principles and practices used in fire suppression and control. Students learn the chemistry and physics of fire, extinguishing agents and the different techniques employed in the prevention and extinguishment of fire.

503-134 Introduction to Fire Organization 2 credits
Overview of the public and private sectors. Specific subjects include history of fire protection, fire protection services, fire science terminology and careers in the fire service field—public and private.

503-145 Water Supply Hydraulics 3 credits
Provides a basic knowledge of hydraulics, in theory and practice. Students calculate and compute water-flow problems for municipal, industrial and fire service situations. It is recommended that students with a weakness in math complete Industrial Math 1 and 2 before enrolling in this course.

503-150 Standards and Loss Control 3 credits
Surveys and examines the methods and procedures used in preventing and controlling losses in the industrial environment. Also covers OSHA standards and practices as well as laws and codes governing industry.

503-153 Strategic Operations and Disaster Planning 3 credits
Students learn the procedures involved in the strategic level of incident management. The incident command system is studied in depth in relation to various local, state and federal agencies.

503-160 Hazards of Industrial Processes 3 credits
Investigates the hazards encountered by fire service personnel in combating fires and other emergency situations in industrial operations. Covers environmental, chemical, radiological and mechanical hazards.

503-300 Fire Recruit Academy 5 credits
Offers 200 hours of fire service education culminating in certification as a state certified firefighter.

504 Police Science Technology

504-102 Organization and Administration 3 credits
Introduces managerial theory and organizational behavior. Universal concepts which apply to all work situations are presented. Intended to be a prerequisite to all other management courses. The objective is to provide knowledge and insight about organizations in order to improve student success later as an organizational member. Additionally, students research and design, as group members, a screening and selection program similar to public safety hiring programs currently in practice.

504-111 Intro. to Criminal Justice Administration 3 credits
A survey of the criminal justice system from English Common law heritage to the present. Major emphasis is on presenting an overview of the system, its organization and operation. Offers the opportunity to explore and critically analyze the police role in a free and democratic society. Developments of policing society from the perspective of the past, present and future are studied. Culminates with student groups actively debating a contemporary policy issue using the advocates format.

504-113 Criminal Law Procedures 3 credits
Gives an in-depth view of criminal law beginning with a study of procedural law and terminating with an analysis of substantive criminal law, its scope, definition, classification, and the elements constituting some of the more common crimes. Prerequisite: 504-111, Intro. to Criminal Justice Administration.

504-115 Criminal Evidence 3 credits
Covers the basic principles of evidence including the constitutional limitations imposed on law enforcement authorities with respect to the following areas: probable cause for arrest, arrest, search and seizure, interrogation and confessions. Also covers evidence from the perspective of the practical problems of evidence gathering and courtroom presentation. Prerequisite: 504-113, Criminal Law Procedures.

504-121 Patrol Procedures 3 credits
Covers the patrol operation as it exists in the modern police department. Analyzes the varied methods of patrol, activities, responsibilities and deployment and distribution problems. Also explores the role of the patrol unit in police and community relations and crime prevention.

504-123 Criminal Investigation 4 credits
Covers basic techniques of investigation procedures which include: crime scene procedures, collection and preservation of evidence, evaluation and comparison of evidence. Students also learn to develop sources of information and surveillance techniques. Laboratory exercises enable students to obtain hands-on training in the use of evidence collection techniques and procedures. Selected crime areas are reviewed in order to learn investigative techniques employed in dealing with those situations and also preventive procedures.

504-131 Traffic Investigation and Enforcement 3 credits
Study of traffic laws, their basis, development and integrated relationship with Wisconsin Motor Vehicle Laws. Enables students to understand human failings and reactions as operators of motor vehicles. Covers the use of discretionary power, and necessary coordination with traffic engineers, statisticians and educators, by enforcement representatives on local, state and national levels for the welfare and safety of the public.

504-135 Juvenile Justice 3 credits
Study of juvenile delinquency which emphasizes factors and causes that result in delinquent behavior. The juvenile (adolescent) is examined from a contemporary standpoint relative to societal changes.

504-136 Juvenile Law 3 credits
Covers the juvenile justice system. The philosophy of the juvenile court is examined. Wisconsin's Children's Code is studied, and the juvenile as a victim is discussed. Prerequisite: 504-135, Juvenile Procedures 1.

504-141 Technical Report Writing 3 credits
Basic writing skills are reviewed in preparation for learning to document, in a clear, concise and accurate fashion, the essential elements of information contained in police reports. It is recommended that students complete 801-151 and 801-152, Communication Skills 1 and 2, before enrolling in this course.

504-143 Forensics 3 credits
Introduces the crime scene, the various types of crime and the basic theories of crime, using the criminal justice system as a backdrop.

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
508 Dental Assisting

508-304 Dental Materials 2 2 credits
The chemical and physical composition, functions and limitations of the materials used in dentistry are discussed in this course. 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, decay, dental deposits, nutrition, and preventive dentistry.

508-307 Dental Theory 2 1 credit
This course 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
This course provides a discussion of various types of restorative materials used in dentistry. The use 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
This course consists of 1) a survey of structure and function of the body in general, i.e., skeletal system, cardiovascular system, respiratory, central nervous system, and reproduction; and 2) 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, nerves 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 skills and models.

508-320 Dental Practice Administration 1 credit
This course 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
This course involves study of the theory related to the skills needed in chairside dental assisting. Some of the topics which are included are equipment use 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
This course 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 autoclave, and aseptic technique.

508-323 Dental Assisting Radiography 2 credits
In this course, 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.

508-324 Chairside Theory 2 1 credit
This course continues study of the theory and skills needed in chairside dental assisting. Emphasis is placed on four-handed dentistry and expanded duties. Included are charting, matrix bands, fluoride application, orthodontics, periodontics, endodontics, prosthodontics, public health, geriatric dentistry, and dentistry for the disabled patient.

508-325 Chairside Techniques Laboratory 2 1 credit
This course offers instruction and practice in chairside 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.

508-335 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.

508-336 Clinical Affiliations 2 4 credits
This is a continuation of 508-335, Clinical Affiliations. At the end of the course, the student will have affiliated a minimum of 300 hours.

508 Dental Hygiene

508-101 Clinical Dental Hygiene Laboratory 2 2 credits
This is an 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 2 credits
A continuation of Clinical Dental Hygiene Theory and Laboratory 1 with further study of patient assessment procedures including treatment planning, phase microscope, oral indices, vital signs, occlusion, special needs patients and patient counseling.
508-165 Dental Hygiene Theory and Laboratory I 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 aseptic 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
This course involves 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
A continuation of Clinical Dental Hygiene Theory 2 with emphasis on treatment planning, x-ray interpretation, advanced instrumentation, pain control, four-handed dental hygiene, patient motivation, and paralleling radiographic techniques.

508-118 Clinical Dental Hygiene Laboratory 3 4 credits
A continuation of Clinical Dental Hygiene Laboratory 2, this course puts special emphasis on advanced instrumentation techniques.

508-123 Clinical Dental Hygiene Theory 4 1 credit
Continuation of Clinical Dental Hygiene Theory 3 with emphasis on TEAM dentistry, legal issues, practice settings, management skills, job selection, interviewing and resumes.

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.

508-128 Dental Materials 2 credits
This course 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
This course is 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 enables 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
This course involves a study of the periodontium-etiolo, classification and characteristics of periodontal disease, a study of the cause, prevention and treatment of periodontal disease with clinical application and role of the dental hygienist.

508-138 Dental Radiography 2 credits
This course involves 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. Electrooptics of the equipment, position of films, angulation of the machine and processing and moulding of dental radiographs are also discussed.

508-139 Histology 2 credits
This course encompasses an overview of embryological 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 structures.

508-142 Pharmacology 2 credits
This course involves a study of the principles of pharmacology and the pharmacology of representative drugs which are in current use and affect dental practice. Special consideration is given to antibiotics, sedatives, pain-relieving drugs and anesthetics.

508-145 Pathology 3 credits
This course is an attempt to understand oral disease so that it can be properly diagnosed and adequately treated. It 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
This course involves 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
This course is concerned with developing 1) an understanding of public health methods; and 2) an awareness of the dental hygienist's role in the promotion of dental health within the context of the total health of the community.

509 Medical Assistant

509-110 Medical Records 3 credits
This course is designed to help students 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
This course is designed to be a continuation of 509-180, Medical Terminology 1. It includes the study of medical insurance, commonly-used medical records, and policies and procedures related to the preparation, use and storage of medical records. Prerequisites: 509-180, Medical Terminology 1.

509-180 Medical Terminology 1 2 credits
This course is designed to help the student become familiar with medical terminology, to understand how medical terms are formed, to become familiar with the meaning of many word roots, prefixes and suffixes, to be able to spell, define and pronounce many medical terms by understanding word components, and to become skilled in the use of a medical dictionary.

509-181 Medical Terminology 2 2 credits
This continuation course expands the information in 509-180, Medical Terminology 1.

509-303 Body Structure and Function 2 credits
This course is 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.
This course consists of 12 hours of classroom instruction during the final semester in preparation for employment. This course also introduces some of the features in an automated or electronic system designed to give students fundamental knowledge in the following areas: 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.

This 13-week course builds upon concepts and skills introduced in 509-360, Medical Terminology I; or equivalent. The course is designed to extend the student's learning to include phonology and simple hematology techniques. Prerequisite: satisfactory completion of 509-355, Clinical Lab I.

This introductory course is designed to acquaint students with simple laboratory techniques that may be performed by a medical assistant in a physician's office. Through demonstration and practice, students learn to perform common tests used in the medical office. Simple microbiology and urinalysis testing are emphasized.

This 13-week course focuses 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 and conduct discussions, and research a short presentation. Prerequisite: satisfactory completion of 509-360, Medical Terminology I; or equivalent.

This 13-week course focuses 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 Assting I; or equivalent.

This 13-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; billing; 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, 30 wpm typing speed.

This course consists of 12 hours of classroom instruction during the final semester in preparation for employment, a 160-hour assignment to a local office or clinic, and a two-hour evaluation of the experience. During the 160-hour externship, the student works four, 40-hour weeks and provides own transportation. Prerequisite: satisfactory completion of all curriculum and recommendation of faculty.

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.

Nursing Fundamentals is a foundation course designed to help the student develop an understanding of the role of the associate degree nurse. The course introduces the 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 introduced are the other curricular concepts of human needs, life span and common health problems. Selected concepts related to physiologic, safety/security and love/belonging needs are discussed. Life span concepts are considered in terms of how these affect human needs. The student is introduced to the nursing process with emphasis on client assessment and the implementation of basic skills. Opportunity for practice and simulated demonstration of these skills is provided in the college 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.

This course will assist the student in developing understanding of the role of the nurse and how nursing care is affected by human needs, life span events and common health problems. The life span concepts of family dynamics during times of change and loss are developed. The effects of the individual's illness, hospitalization or disability on the family are explored. Needs of clients during the perioperative period are described. In addition, needs of clients with musculoskeletal, neurological and infectious health problems are identified. The role of the nurse in caring for these clients is emphasized. Clinical experiences are provided in structured health care settings. The provider role of the nurse is emphasized with a focus on communication skills and on the assessment, planning and implementation of nursing care. 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.

This course will assist the student in developing understanding of the role of the nurse and how nursing care is affected by human needs, life span events and common health problems. The life span concepts of normal aging, including physiological and psychosocial changes are explored to identify the needs of elderly clients. Common needs of clients with gastrointestinal health problems and cancer are identified. The role of the nurse in caring for these clients is emphasized. 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.
developed. The nurse's role in client teaching, admission, discharge and referral is emphasized. Clinical experiences are provided 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
This course is designed to help increase the student's understanding of the role of the nurse and how human needs are affected by life span events and common health problems. The content focuses on childbearing families. In addition, the nurse's role in modification of care for infants, children, and adolescents during illness and/or hospitalization is explored. Assessment, planning and implementation skills of the nurse continue to be developed. The evaluation step of the nursing process is expanded and applied in the clinical setting. Communication skills continue to be developed. The nurse's role in client teaching, admission, discharge, and referral is emphasized. Clinical experiences are provided with a focus on childbearing 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
This course 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. Levels of practice, the role of the associate degree nurse, and legal responsibilities of nursing practice are discussed. In addition, the structure and authority of the State Board of Nursing, the process for licensure and employment responsibilities and opportunities are included. The course introduces the student to 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 801-151, Communication Skills 1.

510-156 Nursing Management/Psychiatric Nursing 6 credits
This course has two areas of focus: psychiatric nursing and the role of the nurse as manager of client care. The role of the nurse as provider of care for clients with common mental health problems is presented. Needs of clients who are depressed, psychotic, anxious, in crisis, or involved in substance abuse are discussed. Special emphasis is given to development of therapeutic communication and to evaluation of self. The role of the nurse as manager of care is also a focus. Content includes role and scope of practice of the associate degree nurse with other nursing care providers and with groups of clients. Communication as a member of the interdisciplinary health care team is emphasized. Clinical experiences with psychiatric clients will be provided. In addition, the student will have a clinical experience in an extended care facility. In setting the student will have the opportunity to focus on the role of manager of nursing care for a group of elderly clients. 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 801-152, Communication Skills 1.

510-157 Advanced Medical-Surgical Nursing 5 credits
The focus of this course is on the role of the nurse in providing care for ill clients in the acute care setting. Needs and care of clients with respiratory, cardiac, hematological and other complex health problems are presented. Life span concepts concerning chronic illness and adaptation of nursing care for young adult and middle-aged clients are explored. This course assists the student in preparing for transition to the role of the associate degree nurse in providing nursing care in the acute care setting. Emphasis is placed on setting priorities, planning for continuity of care, organizing time effectively, and on increasing skill in communicating with clients, families, and other members of the health care team. The responsibility of the nurse for continued self-development is addressed. Clinical experiences are provided in acute care settings. Prerequisites: 510-153, Intermediate Medical-Surgical Nursing; 510-154, Parent-Child Nursing; 810-201, Fundamentals of Speech; OR 801-152, Communication Skills 1.

510 Practical Nursing

510-334 Elementary Nursing 5 credits
This course is 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 more 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 and 510-339, and, with other first level courses: 510-335, 510-336.

510-335 Body Structure 2 credits
This course 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, 510-336, 510-339, 510-356. This course may be taken prior to entering the program on a space available basis.

510-336 Nursing the Adult 1 4 credits
This course 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 these 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 taken concurrently with 510-334 and 510-339.

510-337 Nursing the Adult 2 7 credits
This course 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. Prerequisite: first level courses: 510-334, 510-335, 510-336, 510-339, 510-356. Course taken concurrently with 510-359 and 510-362.

510-338 Nursing the Adult 3 and Law 5 credits
This is 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, 510-339, 510-362.
510-339 Interpersonal Relationships in Nursing 1 credit
This course 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 situation and techniques utilized in developing interpersonal relationships are explored. The role of the practical nurse within the framework of various health care delivery systems and the use of 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 practical nurse, are identified. The foundation for identifying the client needs is established through an understanding of human development using the theories of Maslow, Erikson, Freud, and Beck. The basic concepts of stress, how it affects human behavior, and stress management are incorporated. Taken concurrently with 510-334 and 510-336.

510-356 Growth and Development 2 credits
This course is designed to help the student gain an understanding of the developing person from infancy through senescence. It includes normal growth and development and identifies the appropriate developmental tasks for each stage. Gerontology is discussed with an emphasis on preventive nursing care in the older adult in the nursing home and hospital. Content also includes exploration of the tasks of facing death. The study of nutrition and nutritional requirements during the life cycle comprise the remainder of 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, 510-335, 510-336, 510-339. Course may be taken prior to entering the program on a space available basis.

510-359 Nursing the Mentally III 3 credits
This course 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 behavior. 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, 510-335, 510-336, 510-339, 510-356. Course taken concurrently with 510-362 and 510-337.

510-362 Parent-Child Nursing 4 credits
This course is designed to assist the student 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. Prerequisites: first level courses: 510-334, 510-335, 510-336, 510-339, 510-356. Course taken concurrently with 510-359 and 510-337.

511 Culinary Arts

511-104 Intro. to Gourmet Food Preparation 4 credits
Covers basic gourmet kitchen techniques and functions. Students make various stocks for the preparation of basic sauces and gain knowledge of gourmet soups and garnishes. Food created is available through the Gourmet Dining Room to students, faculty, staff and the general public.

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.

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. Includes: yeast goods, muffins and biscuits, pastries, cookies and cakes. Formulas are analyzed according to baker's percentages.

511-111 Entrees I 2 credits
Provides experience in the production of quality foods in quantity. 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 cooking.

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 cooking.

511-115 Baking I 2 credits
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 cheeses. Students practice basic baking techniques. Ingredients, cost, recipes and formula comparisons are calculated.

511-116 Food Service Institutions 3 credits
Students learn the various types of dining service appropriate to different service operations and gain an appreciation of the relationships between "front" and "back" of the house. In-house marketing strategies of food and beverage sales, staffing and effective service techniques are discussed. Practical application of these concepts is used in the MATC Gourmet Dining Room operation.

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 preparation. Preparation of rice and pasta products are also made. Intermediate cake decorating techniques are demonstrated and practiced.

511-121 Entrees II 2 credits
Continuation of basic skills learned in Entrees I, 511-111. Emphasizes helping students become proficient in the art of various entree cooking.

511-123 Baking II 2 credits
Covers advanced aspects of production baking. Products made include specialty yeast breads and rolls, puff pastry, creams and Bavarians, crème brûlée 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.

511-129 Vegetables/Starches 2 2 credits
Continuation of Vegetables/Starches 1, 511-119 covering advanced techniques in the preparation of various vegetables and starch products.

511-130 Gourmet Foods 4 credits
Continuation of fundamental principles taught in Intro. to Gourmet, 511-104 with 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 and some table-side cooking techniques are practiced in the gourmet restaurant operation.
511-133 Ice Sculpturing and Decorative Foods 2 credits
Students use the appropriate tools and techniques to create ice sculptures for show and decorative pieces to accent buffet tables. Also includes chandelier work and aspic glazes. The classical art of pulled sugar work is demonstrated. Techniques learned are applied to create artistic displays for show pieces and culinary exhibits.

511-140 Culinary Language 1 credit
Introduction to French sounds and structures which occur in the culinary world. Produce correctly-written menus and pronounce culinary terms acceptably. Based on a humanistic approach to learning, students enjoy increased self-confidence.

511-152 Nutrition and Menu Planning 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. Students are required to successfully pass the certification exam administered by the Educational Foundation of the National Restaurant Association for completion of the course.

511-156 Food Costs and Purchasing Analysis 3 credits
Covers the calculation of food costs and the use of food cost records. Problems are presented that are related 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.

511-169 Food Management 2 credits
Provides analysis of staffing, internal human relations, budgetary and operational accounting systems. Covers the application of marketing techniques relating to menu merchandising and restaurant promotion. Laws and governmental regulations affecting restaurants and institutional food services are examined.

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. Current 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 laws; and liens and eviction.

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, regarding size, usage, placement, environmental impact, pricing and sanitary considerations. Collaborative learning techniques are used.

511-193 Job Orientation 1 credit
Informs students of specific occupational information which prepares them for seeking employment. Personal data sheets, job interviews, letters of introduction and recommendation are covered. Representatives of labor, management, business and the professions are invited to discuss points of interest toward becoming an employee.

512 Surgical Technician
512-300 Introduction to the Operating Room 1 credit
This course is an introduction to the Surgical Technician Program, the student's function, hospital organization and lines of authority. 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
This course is 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 functions. Limited reference is made to abnormalities and what happens when body parts do not function together due to disease, injury, or malformation.

512-310 Surgical Technician Communications 1 credit
This course is 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 attainment of employment are also emphasized.

512-315 Surgical Technician Theory and Laboratory 1 8 credits
In this course, lectures and demonstrations are supplemented by clinical experience in the operating room. Emphasis is placed on the evolution of surgical asepsis, the process of prevention and control of infection, care and safety of the surgical patient, principles of operating room techniques, specific surgical procedures, and related hospital and nursing activities. Development of the role of the scrub technician and the assisting circulator is stressed.

512-317 Functional Microbiology 1 credit
This course is designed to introduce students to the study of morphology and classification of microorganisms and their effect on human body tissue. It includes a study of the infectious process and the transmission of infectious 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
This course is designed to give students a working knowledge of surgical procedures involved (including the anatomy of the areas and pathophysiology), positioning, surgical preparation, draping, instruments and accessory or special equipment used for each specific surgical procedure. A unit on cardiopulmonary resuscitation (CPR) is included.

512-321 Surgical Technician Anatomy 2 1 credit
This course is directly related to the surgical procedures seminar. It is designed so that students review, expand and associate specific body structures with related surgical procedures.

512-323 Surgical Technician Laboratory 2 12 credits
During this course, clinical experience is provided in hospital operating rooms. Students practice and perfect operating room skills under strict supervision employing adaptation consistent with individual hospital procedures. 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
This course provides an introduction to the profession of medical technology and the tasks of the medical laboratory technician. It includes the study of medical terminology, laboratory safety, the collection of blood specimens, performance of basic hematology procedures and professionalism.

513-101 Clinical Microscopy 3 credits
This course covers the physical, chemical and microscopic examination of urine, some special procedures performed on urine, and an introduction to the study of morphology and classification of microorganisms.
513-104 Hematology 5 credits
This course covers the study of blood, hematopoiesis, principles and procedures for routine hematologic tests in the clinical laboratory, principles and procedures for selected specialized hematology tests in the clinical laboratory, coagulation and blood diseases. Prerequisite: 513-100, Introduction to Medical Laboratory Careers, consent of instructor.

513-107 Instrumentation 2 credits
This course involves study of the fundamentals of clinical laboratory instrumentation, which includes the principles of operation, routine cleaning and maintenance of clinical laboratory instruments, and special procedures as applied to specific instruments.

513-108 Clinical Immunology 5 credits
This course provides theoretical background and practical application of immunological principles in serology, and blood banking. Emphasis is on the serodiagnostic methods used for identification of certain disease states, and Rh compatibility testing protocols, including donor and patient blood testing. Prerequisite: 513-104, Hematology, or consent of instructor.

513-109 Clinical Chemistry 5 credits
This course includes the study of titrmetric, spectrophotometric, electrohemetic, and other routine chemistry tests. The testing processes used in this course include various automated instruments, pipetting, quality assurance techniques, and preparation of standard curves. Prerequisite: 806-201, General Chemistry, or 806-210, General Chemistry 1 and 2.

513-111 Clinical Microbiology 5 credits
This course involves in-depth study and application of laboratory methods used in the isolation and identification of pathologic microorganisms - especially for bacteria, parasites and fungus, and sensitivity testing of anti-microbial agents. This course also provides an overview of the clinical basis of infection and the specimen 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 and the Post-Practicum Seminar. The Pre-Practicum Seminar, held prior to the practicum assignment, is designed to prepare medical laboratory technician students for the practicum. Prerequisite: completion of all program courses except Practicum and Pre-Practicum Seminar. The Post-Practicum Seminar is comprised of examinations given at hospital laboratories following each rotation, a mock registry exam at MATC, including the practicum, and a program evaluation. Prerequisites: all program courses including Pre-Practicum Seminar, and 513-111, Practicum.

513-113 Practicum 10 credits
Students are assigned an 18-week externship (fourth semester) at an affiliated hospital laboratory and enrichment sites. Some of the affiliating laboratories are outside Madison. Therefore, students can anticipate being placed for the practicum in Baraboo, Fort Atkinson, Green Bay, Marshfield, Beloit, Neenah, Monroe or Beaver Dam as well as in Madison. Prerequisites: all program courses except Pre-Practicum Seminar.

514 Occupational Therapy Technician
514-101 Introduction to Occupational Therapy 3 credits
Students are introduced to occupational therapy and the OT assistant career. Medical terminology and abbreviations are also covered.

514-105 Field Observation 1 credit
A one-week placement (40 hours) provides opportunity for observation and participation in the work situation and activities which an occupational therapy assistant may encounter. Objectives emphasize further orientation to occupational therapy services in traditional mental health and physical rehabilitation settings as well as practice in newer community-based intervention programs. A pre-practicum weekly seminar is held to coordinate third semester fieldwork and provide transitional preparation for fourth semester extended fieldwork. 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
This course is directed toward increasing students’ self-awareness and developing the skills and attitudes needed for effective client and co-worker relationships. Content emphasizes understanding the processes of behavior change, rapport-building and use of self within dyadic and group contexts. Experiential learning activities promote self-assessment and skills practice.

514-112 Therapeutic Skills 2 2 credits
This course is a continuation of Therapeutic Skills 1 and provides students with an opportunity to explore the ways therapeutic use of self is integral to the group process. Students practice the skills needed to plan, implement and evaluate group activities. Varied class experiences enhance students’ understanding of how group activities are used to meet therapeutic goals. Prerequisite: 514-110, Therapeutic Skills 1.

514-115 Developmental Principles 4 credits
This course reviews normal developmental sequences, emphasizing the relationship between sensorimotor, cognitive and psychosocial performance components and functional abilities. The developmental frame of reference is applied to pediatric and adult OT treatment contexts.

514-117 Biological Foundations of Human Performance 2 credits
This course covers the biological components of human performance. Coursework stresses the analysis of how disease, physical injury, developmental delay or aging can affect human functioning. Learning activities focus on intervention strategies to enhance human potential within these areas. Prerequisite: 806-207, Anatomy and Physiology I.

514-120 Occupational Therapy Process 4 credits
This course involves comparing occupational therapy and nursing home resident activity services; exploring the occupational therapy assistant role at each stage of the OT process, with emphasis on screening, evaluation and care planning; developing basic performance skills required in practice; and applying knowledge and skills in a resident activities field placement.

514-125 Community Practice 3 credits
This course focuses on ways to promote a client’s functioning in the community with specific emphasis on work settings. Students review principles of prevention and normalization. Teaching skills are developed, including client needs assessment, resources research and program development and implementation. Approaches to working with persons who are developmentally disabled are stressed, including behavior management strategies. Prerequisite: 514-115, Developmental Principles.

514-130 Physical Rehabilitation Practice 5 credits
This course emphasizes common health conditions and functioning problems clients may experience in medical, surgical and physical rehabilitation situations, including related occupational therapy services. Coursework stresses skill development in client interaction and therapy intervention through micro-therapy simulations and exposure to various prevention strategies and rehabilitative procedures such as work simplification, adaptive techniques, splinting and range-of-motion exercises as well as rationale for each. Instruction in cardiopulmonary resuscitation is also included. Prerequisites: 806-207, Anatomy and Physiology I; 514-117, Biological Foundations of Human Performance; 514-120, OT.
514·135 Mental Health Practice 4 credits
This course emphasizes common mental health conditions and functioning problems clients may experience as well as related occupational therapy services. Coursework stresses skill development in client interaction and therapy intervention through micro-therapy simulations and exposure to various rehabilitative procedures such as interviewing, assessing clients’ behavior and performance skills, planning treatment, and developing various activity interventions. Prerequisites: 809-231, Introduction to Psychology OR 809-199, Psychology of Human Relations; 809-237, Abnormal Psychology; 514-110, Therapeutic Skills 1; 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
This course explores various aspects, issues and trends in health care delivery and how these impact on the practice of occupational therapy. Concurrent enrollment in 514·105, Field Observation is recommended.

514·145 Recreation Practice 3 credits
This course introduces the theory of recreation; the importance of play and leisure activities to health; selection of activities appropriate to client developmental level, interests, abilities and lifestyle; and orientation to community recreational resources. Skills in performing, as well as leading, group or individual recreational activities are developed. Prerequisites: completion of first and second semester OT courses is recommended.

514·148 Minor Media 1 1 credit
This course provides students with experience and skill development in a variety of craft media. Students are introduced to teaching method alternatives and department maintenance duties.

514·149 Minor Media 2 1 credit
This course provides students with experience and skill development in a variety of craft media. Teaching methods, activity analysis and activity adaptation are emphasized. Prerequisite: completion of 514·148, Minor Media 1 is recommended.

514·150 Media and Skills 4 credits
This course involves the refinement of skills in analyzing activities, selecting activities suitable to the needs and interests of clients, and leading or teaching activities and adapting them to client limitations. Activities such as ceramics, woodworking, weaving, music, dramatics and computer use are included. Prerequisites: completion of first and second semester Occupational Therapy courses.

514·160 Mental Health Fieldwork 4 credits
514·165 Physical Rehabilitation Fieldwork 4 credits
514·175 OT Fieldwork-Specialty 3 credits
These courses include full-time fieldwork placements in physical rehabilitation, mental health and an additional specialty practice area in approved training centers throughout Wisconsin and adjoining states. Fieldwork education emphasizes integration of academic and practical experiences toward achieving entry-level OT assistant competencies and work habits. Fieldwork prerequisites: satisfactory completion of first, second and third semester courses; demonstration of prerequisite professional skills.

514·170 Seminar on Practice and Management 1 credit
This colloquium 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 many graduates will head activities departments in nursing homes and community settings. Prerequisite: completion of or concurrent enrollment in fourth semester fieldwork courses.

514·180 Special Problems 1-3 credits
This 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
This course discusses the basic principles and techniques of routine respiratory care procedures. The laboratory portion provides the opportunity to use the equipment and apply theory of operation. A 32-hour introductory clinical rotation provides an observational experience to 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
This course is 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
This course is 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
This is the first of a two-semester course designed to prepare students in mechanical ventilation, infection control, airway management and cardiopulmonary monitoring. Prerequisites: 515·101, Respiratory Care Fundamentals; 515·115, Pulmonary Physiology; 806·273, Microbiology.

515·122 Respiratory Care Procedures 2 5 credits
This is a continuation of 515·120, Respiratory Care Procedures 1 and is taken concurrently with 515·126, Respiratory Care Clinical Practice 2. This course is 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 as well as 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.

515·125 Respiratory Care Clinical Practice 1 5 credits
This course involves 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; 806·273, Microbiology.

515·126 Respiratory Care Clinical Practice 2 5 credits
This course involves 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...
515-127 Respiratory Care Clinical Practice 3 2 credits
This course involves 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; 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. Prerequisites: 515-115, Pulmonary Physiology.

515-131 Pharmacology 2 credits
This course is designed to give respiratory care students the knowledge needed to safely administer pulmonary medications. It is also designed to give the student knowledge of important non-respiratory drugs which are commonly given to respiratory care patients. Prerequisites: 515-115, Pulmonary Physiology.

516 Optometric Technician
516-301 Ophthalmic Pre-Testing 3 credits
This course 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 presentation 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
This course covers the properties of light and the function of a lens in vision correction. Included is a review of basic mathematics 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
This course is intended to familiarize 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 translation.

516-325 Optical Dispensing 1 3 credits
This course covers basic examination and the selection and fitting of the practitioner to the need of the patient. Prerequisites: Ophthalmic Pre-Testing.

516-326 Optical Dispensing 2 3 credits
This course assists the student in developing the skills of the optical dispensing practitioner. It also covers the various lens materials, materials and design of the lens. Prerequisites: Optical Dispensing 1.

516-330 Contact Lenses 3 credits
This course 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: Basic Optical Concepts and Ocular Anatomy.

516-335 Ophthalmic Specialty Testing 3 credits
This course 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, low vision, and the treatment of eye diseases including instillation of eye medications and eye patching. Patient instruction and assistance are emphasized in laboratory sessions. Prerequisites: Ophthalmic Pre-Testing.

516-339 Human Relations 1 credit
This course 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, 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 2 credits
This course 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 Preclinical 2 credits
This course 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: Ophthalmic Pre-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. Prerequisites: satisfactory completion of all first semester courses plus enrollment in second semester courses.

518 Food Service
518-301 Food Theory 2 credits
Basic methods of food preparation techniques, standards, principles, and mise en place used in recipes for quantity food production. Small quantity lab production of eggs, vegetables, meats, dairy products, bread and soup. Emphasis on proportions and quality control. The course also covers the various food preparation techniques and methods used in soup preparation. Thick and thin soups are covered along with the proper herbs and spices used in soup cookery.

518-302 Soups 1 2 credits
Students gain experience in the production of quality soups in quantity. Given a recipe 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
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, job expectations, culinary terms, introduction to food preparation lab facilities, setting up catering service, and practice for performance expectations.

518-310 Basic Food Production 4 credits
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, portioning and quality control.

518-311 Entrees 1 3 credits
Students gain experience in the production of quality foods in quantity. Emphasizes techniques and methods used 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
Introduction to equipment and methods used in short order cooking, i.e., deep fat frying, grilling and sandwich making.
518-313  Food Theory I  1 credit
Study of the physical properties, terminology and principles involved in
the preparation of eggs, milk, meat, poultry, fish, fruit, vegetables, soups,
sauces, cereal products, batters and doughs, salad dressings, cheese,
gelatin and beverages.

518-315  Baking I  2 credits
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 tech-
niques. Ingredient cost-outs and formula comparisons are calculated.

518-318  Food Service Sanitation  1 credit
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 regula-
tions and standards governing food establishments.

518-319  Vegetables/Starches I  2 credits
Experience in selecting and preparing vegetable and starch items.
Students clean, prepare and evaluate vegetables using various cooking
methods. Preparation of rice and pasta products is included.

518-321  Entrees 2  2 credits
Continuation of basic skills learned in Entrees 1. 518-311. Emphasizes
developing proficiency in the art of entrée preparation.

518-323  Soups 2  1 credit
Further practical experience preparing various types of soups using tech-
niques learned in Soups 1. 518-313.

518-325  Baking 2  1 credit
Focuses on developing production speed. Products made in the lab
include specialty yeast breads and rolls, cream pies, creamed and foam
cakes, buttercream icings and basic cake decorating.

518-326  Breakfast/Grill  2 credits
Practicum lab provides experience in preparing breakfast meats, a variety
of egg dishes, batters, casserole items, cereals and the principles
involved in preparation of breakfast items.

518-329  Vegetables/Starches 2  2 credits
Continuation of Vegetables/Starches I. 518-319. Covering advanced
principles in the preparation of various vegetables and starch products.

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.

518-352  Nutrition/Menu Planning  1 credit
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 Math  1 credit
Objectives include: becoming proficient in basic operations using whole
numbers, common fractions and decimal fractions; understanding per-
cent and solving problems involving it; solving verbal problems as a
consumer and as one preparing for an occupation; understanding opera-
tional procedures of weights and measures, portion control, converting
standard recipes, production formulas, food costs and menu pricing.

518-361  Field Experience 1  2 credits
The two field experiences provide an opportunity to apply and develop
skills learned in the classroom. Working in an actual food service opera-
tion, students develop a positive work attitude and work ethic as a poten-
tial employee of the food service industry.

518-370  Employment Orientation  1 credit
Job-seeking and job-keeping skills are presented through mock inter-
views, role playing, group discussion, writing the resume and practicing
positive job attitudes. Personal goals and interests are defined by the stu-
dent to help develop a positive self-concept.

518-382  Decorative Foods/Garde Manager  2 credits
This laboratory course provides practical experience in producing deco-
rative foods for commercial use and introduces the fundamental tech-
niques of the art of garde manger, buffet presentation, area planning,
salad dressings, marinades, aspics, chaud froide, hors d'oeuvres, appeti-
ers, pates, and cold food presentation for practical and culinary displays.
This class acts as a staging area for development curricular concepts.
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 profes-
sion. 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 individu-
als, groups, families and communities. Addresses problems, needs, con-
ditions and events that bring people to human service organizations.

520-110  Assessment and Program Planning  3 credits
Focuses on the process of gathering functional assessment information
and utilizing it to develop appropriate support systems for individuals
with disabilities. Emphasizes learning how to perform ecological assess-
ments and plan functional individual habilitation/educational plans.

520-112  Introduction to Developmental and
Other Disabilities  3 credits
Introduction to developmental and other disabilities, including mental
retardation, chronic mental illness, traumatic brain injury, autism and
multiple handicaps. Discussions focus on service delivery systems for
people with disabilities and the ways in which graduates will participate
in the service system. Descriptions of the effects of different types of
developmental disabilities comprise a major portion of the course.

520-116  Teaching Strategies for Persons
with Disabilities  3 credits
Continuation of 520-110. Assessment and Program Planning, focusing
on methods and strategies to implement individual habilitation/educational
plans. Students learn a variety of teaching strategies, data collection
methods and positive approaches to supporting persons with disabili-
ties in community settings.

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 con-
sumers affected by a social problem can clearly define an issue, set a
goal, and organize strategies and techniques to bring about social
change.
520-135 Issues in Alcohol and 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. Provides an accurate description of the effects of psychoactive drugs, identifies methods of substance abuse treatment, and introduces the local treatment services. This course is endorsed by the Wisconsin Alcoholism and Drug Counselor Certification Board, Inc.

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 and recordkeeping, and consultation) and provides a structured learning environment in which students can practice, demonstrate, and develop skills in these core functions. This course is endorsed by the Wisconsin Alcoholism and Drug Counselor Certification Board, Inc.

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.

520-140 Human Service Agency Experience 2 5 credits
Students continue their on-the-job training in community agencies for 20 hours per week. By the end of the course, students have the skills of an entry-level human services worker. Prerequisite: 520-139, Human Service Agency Experience 1.

520-141 Introduction to Community Mental Health 3 credits
Introduction to the mental health system in Wisconsin and major categories of mental illness using DSM-III. For each major mental illness category, students learn about treatment methodologies and commonly prescribed drugs. Also teaches crisis identification and intervention techniques. The special problems of people with a dual diagnosis of AODA and mental illness are also addressed.

520-150 AODA 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, and ethnic and other minority groups.

520-157 Human Service Counseling Skills 3 credits
Introduces basic concepts of psychoanalytic 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.

520-160 Introduction to Gerontology 3 credits
Covers psychological, sociological and physical aspects of aging. Addresses aging as a social issue and explores the problems confronting the elderly in American society.

520-162 Administration in Gerontology 3 credits
Teaches ways to manage a facility or agency that serves older adults. Addresses agency purposes, finances, record-keeping, administrative policies and facility management. Emphasizes budgeting, financial resource development and the administrative tasks of staff and volunteer supervision.

520-164 Case Management and Program Development for Older Adults 3 credits
Covers basic principles of case management, including assessment and interview skills. Students learn to develop programs for older adults, including identification of needs, budgeting and evaluation.

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
Continuation of Human Service Agency Experience Conference 1. Students develop skills specific to field work placement and complete a major project for their field work agency. Taken concurrently with 520-141, Human Service Agency Experience 2. Prerequisite: 520-188, Human Service Agency Experience Conference 1.

526 Radiography

526-101 Introduction to Radiologic Technology 5 credits
This course is 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.

526-102 Radiographic Anatomy 3 credits
This course involves the inter-relationship 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.

526-103 Radiographic Physics 2 credits
This course defines, discusses and demonstrates the use of fundamental and derived units and reviews basic math, 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.

526-111 Radiographic Procedures 1 5 credits
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. Prerequisite: completion or concurrent enrollment with 526-101, Introduction to Radiologic Technology, 806-218, Anatomy; and 509-180, Medical Terminology.

526-112 Radiographic Procedures 2 5 credits
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: urinary and gastro-intestinal tract, skin, spine and mammography. Prerequisites: 526-101, Introduction to Radiologic Technology; 526-102, Radiographic Anatomy; 526-111, Radiographic Procedures 1; and 509-180, Medical Terminology.

526-121 Applied Clinical Radiography 1 2 credits
Students perform standard radiographic examination of patients of chest, abdomen, urinary and gastro-intestinal tract, extremities, skull, mamm...
mography, and shoulder and pelvic girdle with appropriate supervision. Students assist technologist with the exams studied in Radiographic Techniques 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. Prerequisite: 526-112, Radiographic Procedures 2; 526-131, Radiographic Techniques 1; and 526-141, Radiologic Science.

526-122 Applied Clinical Radiography 2 2 credits
This is a continuation of Applied Clinical Radiography 1. Students may perform all standard projections of chest, abdomen, urinary and gastrointestinal 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 1; 526-112, Radiographic Procedures 2; 526-141, Radiologic Science; and 526-132, Radiographic Techniques 2.

526-123 Applied Clinical Radiography 3 1 credit
This course is 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.

526-124 Applied Clinical Radiography 4 1 credit
This course is 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.

526-131 Radiographic Techniques 1 5 credits
This course involves 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: completion of 526-101, Introduction to Radiologic Technology; 526-102, Anatomy, and completion of or concurrent enrollment in 526-103, Radiographic Physics.

526-132 Radiographic Techniques 2 3 credits
A continuation of 526-131 Radiographic Techniques 1, this course concentrates on methods of special radiographic techniques for stereoradiography, scintigraphy, 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.

526-141 Radiologic Science 3 credits
This course features a discussion of x-ray properties, including x-ray production, interaction of x-rays with matter, other x-ray properties, basic single- and three-phase x-ray circuits, construction of x-ray tubes and methods of radiation, detection and measurements. 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: completion of 526-103, Radiographic Physics; and 526-101, Introduction to Radiologic Technology, and completion of, or concurrent enrollment in, 526-111, Radiographic Procedures 1.

526-150 Special Procedures 4 credits
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 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 the test tools, and then the results are intensively reviewed with reports submitted to the department supervisor for corrective action, if needed. Prerequisites: completion of 526-121, Applied Clinical 1; 526-111 and 526-112, Radiographic Procedures 1 and 2; 526-103, Radiographic Physics; and 526-141, Radiologic Science; completion of, or concurrent enrollment in, 804-171, Basic Computer Mathematics.

526-153 Introduction to Specialized Radiology 1 credit
Students are given the opportunity to rotate to other radiology sub-specialties of MRI, radiotherapy, nuclear medicine and ultrasound. MRI and radiation therapy equipment are discussed, demonstrated (if applicable), toured (if applicable), 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 1 credit
This course is 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, 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 the patient exam base. This course is normally offered in the first fall semester. Prerequisites: completion of, or concurrent enrollment in, 526-101, Introduction to Radiologic Technology; 526-102, Radiographic Anatomy; 526-111, Radiographic Procedures 1; and 509-180, Medical Terminology.

526-162 Practicum 2 2 credits
This course is 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, shoulder and pelvic girdles, mammography and skull. 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 the patient exam base. This course is normally offered in the first spring semester. Prerequisite: 526-161, Practicum 1 and all its prerequisites.

530 Medical Coding
530-301 Pathophysiology/Pharmacology 2 credits
This course is designed to give the beginning student an insight into the basic pathophysiology/pharmacology, including fundamentals needed for understanding and evaluation of 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.

530-302 Medical Records 1 credit
This course is designed to give 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-4/HCPCS coding systems are emphasized.

530-303 ICD-9-CM Coding 3 credits
This twelve-week course is designed to give the beginning student an insight into the fundamentals 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-4/HCPCS coding systems are emphasized. Expansion of knowledge regarding payment methodologies and knowledge of computerized coding software is emphasized.

530-304 CPT-4 Coding 2 credits
This six-week course focuses on the fundamentals of the CPT-4/HCPCS coding system utilizing medical information and is a continuation of concepts presented in 530-303 ICD-9-CM Coding. Students utilize instructions relating to use of CPT-4/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 unpaid 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-4/HCPCS knowledge.

531 Emergency Medical Services

531-105 Hazardous Materials Incidents 2 credits
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.

531-110 Paramedic Fundamentals 3 credits
This foundation course prepares 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.

531-112 Adult Emergencies 1 3 credits
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.

531-114 Adult Emergencies 2 3 credits
Continuation of Adult Emergencies 1.

531-116 Paramedic Pharmacology 2 credits
Enables students to safely administer the commonly used pre-hospital emergency medications.

531-118 ECG Interpretation for Paramedics 2 credits
Includes the etiology and ECG characteristics of all major dysrhythmias. Interpretation will focus on utilization of a lead II rhythm strip.

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 pediatric and obstetrical units is required.

531-122 Advanced Paramedic Procedures 1 credit
Provides demonstration and supervised performance of cardiac resuscitation, pericardiocentesis, thoracic decompression and intraosseous infusion in a laboratory setting.

531-123 First Responder 2 credits
Provides a current study of the practical and legal aspects of emergency treatment and the rescue of persons involved in all sorts of situations where loss of life is a prime consideration.

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 PCE 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 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.

531-330 EMT Basic 3 credits
This course follows the U.S. Department of Transportation EMT Basic course curriculum. Hospital emergency room experience is required. Wisconsin Ambulance Attendant Licensure Exam is provided.

531-332 EMS Vehicle Operator 1 credit
This is the U.S. Department of Transportation Emergency Vehicle Operator course for ambulance operations. Includes defensive driving, range driving, driver evaluations, and vehicle maintenance/troubleshooting.
531-334 EMS Rescue Principles 1 credit
Reviews extrication techniques for auto accidents and expands extrication and rescue techniques including agricultural hazards, industrial problems and water rescue. Provides hands-on experience in field settings.

531-336 EMS Systems Management 1 credit
Includes radio communications, medical records and reports, introduction to systems management, training, recordkeeping, personnel management, supply/inventory control, and other daily administrative responsibilities. Experience is provided through field trips to dispatcher center(s) and ambulance service manager(s).

531-338 EMS Personal Communications 1 credit
Includes the dynamics of communication, principles of speech, stress management, and patient interview techniques.

531-340 Emergency Medical Technician Basic-Fire 3 credits
This course follows the U.S. Department of Transportation EMT Basic course curriculum. Hospital emergency room experience is required. Wisconsin Ambulance Attendant Licensure Exam is provided.

531-342 Hazardous Materials Incidents 1 credit
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.

536 Pharmacy Technician
536-310 Pharmaceutical Calculations 2 credits
This course reviews basic math, including addition, subtraction, multiplication and division of whole numbers. The course covers mathematical systems used by health professionals, emphasizing the metric, apothecary, apothecaries, 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 communication, 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, filing 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
This course is a continuation of Pharmacy Operations 1; it emphasizes over-the-counter drugs, glucose monitoring devices, syringes, IV pumps and durable medical equipment, drug distribution systems, and intravenous pharmacy services.

536-315 Pharmacy Regulation and Inventory Control 2 credits
This course 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
Pharmaceutical terminology is presented, including generic and brand names of drugs by pharmacologic classification. A survey of actions, reactions and routes of administrations of major pharmacologic groups is presented.

536-324 Pharmacy Unit Dose 2 credits
This is 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, deliver and/or exchange of medications and filling of unit doses.

536-326 Pharmacy Sterile Products 3 credits
This is a laboratory study of the aseptic compounding techniques for parenteral administration. Emphasis is placed on the equipment and aseptic techniques used in the preparation of parenteral admixtures (injectable solutions), and infection control.

536-330 Pharmacy Bulk Compounding 2 credits
This is a study of compounding techniques of solutions, powders and ointments. Emphasis is placed on safety, cleaning, and housekeeping; packaging; batch records; labeling; use and maintenance of compounding equipment; weighing and measuring; and compounding of products of high quality.

536-338 Pharmacy Clinical Affiliation 1 1 credit
This course provides on-the-job experience and training to expose the student to different pharmacy settings. Students are assigned to a cooperating affiliation site and are under the supervision of a registered pharmacist.

536-339 Pharmacy Clinical Affiliation 2 4 credits
This course continues Pharmacy Clinical Affiliation 1. Emphasis is placed on practicing skills and gaining experience in all aspects of drug preparation and distribution utilized by the participating affiliation site.

536-346 Pharmacy Seminar 1 credit
This course consists of students sharing and presenting their experiences to their fellow students, as well as an examination of job placement techniques.

602 Automotive Technology
602-102 Service Repair Procedures 4 credits
Covers automobile 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 Industrial Mathematics 1, 804-141.

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: Service Repair Procedures, 602-102.

602-152 Computerized Engine Controls 4 credits
Focuses on automotive 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: Driveability and Fuel Systems, 602-156.

602-153 Power Transmission Systems 3 credits
Course topics include: operation and theory of clutches, transmissions, 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: Technical Science 1, 806-151.
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: Industrial Mathematics 2, 804-142; or concurrent enrollment.

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 Industrial Mathematics 1, 804-141.

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: Industrial Mathematics 1, 804-141; 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: Power Transmission Systems, 602-153.

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, electrical 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 designs, 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: Industrial Mathematics 1, 804-141; or concurrent enrollment.

602-166 Driveability and Fuel Systems 4 credits
Covers diagnosis and repair of electrical and fuel systems. Stresses the use of computerized test equipment to properly tune a vehicle for good driveability. Examines carburetor systems with an introduction to computerized engine controls. Prerequisite: Industrial Mathematics 1, 804-141 or concurrent enrollment.

603-175 Special Problems 3 credits
Instruction based on individual needs for advanced technical knowledge or skill in the automotive service area. Prerequisite: permission of the instructor and the division chairman and fourth-quarter student.

605 Electronic Technology

605-109 Electronics For Power Welding Sources 3 credits
Basic principles of AC and DC circuits are used to study the operation of electrical arc welding equipment. Emphasizes troubleshooting commercial arc welding equipment. Students participate in classroom and laboratory exercises in the study of the basic concepts and laws of alternating and direct current circuits. Includes the study of Ohm's law, half, full wave and bridge rectifier circuits. 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, Thévenin, Norton, and maximum transfer of power theorems. Proper techniques with digital multimeters for the measurement of current, voltage, and resistance are emphasized. DC 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 Applied Electronics Tech 1, 605-171.

605-113 Analog Solid State Devices I 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, optical coupler), 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 learn the DC biasing of OP-AMPS. Lab procedures introduce practical use of these solid state devices, emphasizing troubleshooting procedures. Prerequisite: DC Fundamentals, 605-112.

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; commutational reactive, inductive and capacitive circuits; superposition of AC and DC voltages; series and parallel resonant filters; and frequency response of circuits. Develops proficiency in the use of lab equipment with AC circuits including frequent use of the oscilloscope. Prerequisites: DC Fundamentals, 605-112; and Applied Electronics Tech 1, 605-171. Concurrent enrollment in Applied Electronics Tech 2, 605-172.

605-115 Analog Solid State Devices-AC Analysis 3 credits
Practical theories and concepts essential to the understanding of rectifiers, transistor amplifiers, oscillators, and operational amplifiers. Proficiency with the oscilloscope and other lab equipment is enhanced. Prerequisites: Analog Solid State Devices I, 605-113; AC Fundamentals, 605-114; and Applied Electronics Tech 1, 605-171.

605-116 Advanced Analog Solid State Circuits 4 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: AC Fundamentals, 605-114; and Analog Solid State Devices-AC Analysis, 605-115. Credit or concurrent enrollment in Digital Circuits Fundamentals 2, 605-119, is recommended.

605-118 Digital Circuit Fundamentals I 3 credits
Covers basic digital fundamentals including number systems, codes, devices and device specifications. Uses Boolean Theorems to introduce the concept of Logic Circuit Simplification. Uses the Karnaugh Map Method for circuit simplification. Logic gates and Boolean algebra theory are validated in lab procedures which emphasize troubleshooting techniques. Project work is started with the introduction of computerized circuit board layout, board construction, and project implementation. No prerequisite.

605-119 Digital Circuits Fundamentals II 3 credits
Basic digital fundamentals are continued with flip-flops and related devices, digital arithmetic operations and circuits, counters, and registers using integrated circuits. Project work is assigned and individuals projects completed. Prerequisites: DC Fundamentals, 605-112; Analog Solid State Devices I, 605-113; Applied Electronics Tech 1, 605-171; and Digital Circuit Fundamentals I, 605-118.

605-130 Measurement and Industrial Devices Apps. 3 credits
Advanced use of test instruments (DMMs, oscilloscopes, modulation techniques, etc.) and automatic test and modern manufacturing systems. Investigates sensors, final actuators (including motors), SCRs, triacs, and operational amplifiers. Prerequisites: AC Fundamentals, 605-114; Analog
605-136 Biomedical Electronics 3 credits
Covers various applications of electronics to biomedical instruments, measurement and equipment. Includes instrumentation circuits and techniques; biological signal characteristics; basic biomedical instrumentation; safety requirements of biomedical equipment; ECG, EEG, EMG, pH, and other measurements; electroencephalographs; spectrometers; radiological and other imaging techniques; patient monitoring; pacemakers; signal filtering; telemetry; stimulators; and other topics. Labs include work with basic measurement techniques and circuits using breadboards and some possible work with actual commercial devices. Discusses basic biological control systems. Prerequisites: students should have a knowledge of basic DC and AC circuits.

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 unijunction transistors and thyristors, common bipolar, field effect, multistage, class A-B-C amplifiers and oscillators. Covers differential 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 micro-computer controls. Prerequisites: Advanced Analog Solid State Circuits, 605-116; Measurement and Industrial Devices Applications, 605-130; Electronic Computers and Assembly Language, 605-173; and Introduction to Digital Systems, 605-176.

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: Advanced Analog Solid State Circuits, 605-116; and Introduction to Digital Systems, 605-176.

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: Advanced Analog Solid State Circuits, 605-116; and concurrent enrollment in Microprocessors and Digital Systems, 605-152; 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: Electronic Computers and Assembly Language, 605-173; Introduction to Digital Systems, 605-176.

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 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: Advanced Analog Solid State Circuits, 605-116; and concurrent enrollment in Microprocessors and Digital Systems, 605-152; or consent of instructor.

605-154 Troubleshooting and Maintenance of Composite 3 credits
Students gain hands-on experience with video monitors and TV receiver systems, using schematic diagrams and test equipment to locate problems in malfunctioning equipment. Emphasizes the "art" of speedy, logical diagnosis using the proper mix of theory and test instruments. Students study composite video monitors and standard RF television systems. Equipment in varying states of improper operation is examined and repaired. Extensive experience is gained in using and interpreting schematics, signal tracing, signal injection, locating circuit defects, using data sheets, and catalogs. Prerequisites: Advanced Analog Solid State Circuits, 605-116; and concurrent enrollment in Microprocessors and Digital Systems, 605-152; or consent of instructor.

605-171 Applied Electronic Math 1 3 credits
First of a two-part applied electronics math sequence focused on math concepts most needed by technicians on the job. Closely tied to the 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 the math and the electronic circuits. Prerequisites: satisfactory score on the math portion of the ASSET test.

605-172 Applied Electronic Math 2 3 credits
Continues to develop the math 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. Prerequisites: satisfactory completion of Applied Electronics Math 1, 605-171; 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; Digital Circuits 1 and 2, 605-118 and 605-119.

605-174 Introduction to C Language 3 credits
Introduction to the basics of C language programming using the Turbo C compiler. Students gain experience in programming while learning about the features of the language. Covers the debugging features of Turbo C. Classroom time is structured to maximize hands-on activities. Prerequisite: Electronic Computers and Assembly Language, 605-173; or consent of instructor.

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.
606-116 Machine Design Technology

606-110 Intro 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
Continuation of 606-100 with further opportunity to apply basic skills and theory of engineering graphics. Includes section views, auxiliary views and dimensioning practices. Prerequisite: Introduction to Mechanical Graphics, 606-100, or consent of the instructor.

606-106 Advanced Mechanical Graphics 3 credits
Includes threads and fasteners, springs and gaskets, 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 and limits and fits as a design tool. Selected drawings are done utilizing CAD software. Prerequisite: Intermediate Mechanical Graphics, 606-102.

606-104 Advanced Mechanical Graphics 3 credits
Introduces tolerances and limits and fits as a design tool. Selected drawings are done utilizing CAD software. Prerequisite: Intermediate Mechanical Graphics, 606-102.

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 2D and 3D drawings. Prerequisite: Advanced Mechanical Graphics, 606-104.

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 curve are studied. All problems are solved graphically. Prerequisite: Intermediate Mechanical Graphics, 606-102.

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. Prerequisite: Advanced Mechanical Graphics, 606-104; Statics and Mechanics, 606-155.

606-116 Machine Design 3 credits
Applies basic principles of mechanics and strength of materials to design of machine parts. Includes bolts, nuts, shafts, clutches, belts, chains, gears and bearings. Prerequisite: Strength of Materials, 606-170.

606-120 Intro 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: Introduction to Mechanical Graphics, 606-100; or equivalent work experience and 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: Introduction to CAD-MDT, 606-120.

606-151 Industrial Hydraulics 2 credits
Introduction to the field of mechanisms 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, non-concurrent-co-planar forces, (trusses) and concurrent-co-planar forces. Prerequisite: Technical Mathematics, 804-151; and concurrent enrollment in Technical Math 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, facilities and economics through visitation of various manufacturing concerns, classroom exercises and assigned reading.

606-170 Strength of Materials 3 credits
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: Statics and Mechanics, 606-155.

606-182 Manufacturing Costs/Product Analysis 3 credits
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: Manufacturing Processes, 606-160; and Manufacturing Materials Processing, 621-126.

606-186 Product Development 3 credits
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.

606-193 Job Orientation I credit
Acquaints students with some of the steps in the process of securing meaningful 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.

607 Civil Engineering Technology

607-133 Civil Engineering Estimating 2 credits
Stresses estimating for general civil engineering work. Covers the preparation of detailed estimates as prepared by 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.
607-140 Strength of Materials 3 credits
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: Mechanics, 607-178.

607-147 Basic Civil Drafting 3 credits
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.

607-154 Surveying 1 (Architecture) 3 credits
Fundamentals of surveying as they apply to architecture. Includes the use of surveying equipment and instruments. Covers boundary, topographic and construction surveying. Prerequisite: completion of or concurrent enrollment in Technical Mathematics 1, 804-151.

607-155 Introduction to Surveying 4 credits
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: Technical Mathematics 1, 804-151; or concurrent enrollment. Pre-College Geometry is helpful.

607-157 Route Surveying 4 credits
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: Technical Mathematics 1, 804-151.

607-158 Advanced Surveying 3 credits
Covers principles of advanced surveying. Includes triangulation, plane coordinates, astronomical observations, topographic mapping and use of the total station and electronic distance measuring (EDM) system. Prerequisite: Route Surveying, 607-157.

607-159 Legal Elements of Land Surveying 3 credits
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.

607-171 Structural Detailing 3 credits
Presents principles involved in producing detailed drawings of structures. Includes concrete, steel and prestressed concrete members. Prerequisite: Introduction to CAD 2D, 614-125.

607-173 Boundary Location 3 credits
Covers principles and practices of boundary control. Laws and customs relating to boundary, writing property descriptions and field practice in locating property are covered.

607-176 Water Supply and Sewerage 2 credits
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, sewage treatment and collection systems. Prerequisite: third-semester standing.

607-177 Legal Elements of Engineering Technology 3 credits
Covers legal principles involved in a civil technician's work. Includes contract law, construction contracts, specifications and ethics.

607-178 Mechanics 3 credits
Principles of engineering mechanics including parallel forces, concurrent forces, non-concurrent forces, non-co-planer forces, friction center of gravity and centroids. Prerequisite: Technical Mathematics 2, 804-152.

607-181 Field Inspection and Materials Testing 3 credits
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. Prerequisite: Technical Mathematics 1, 804-151; Communication Skills 1, 801-151.

607-190 Special Problems - Civil 2 credits
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.

113 Metallurgy
113-100 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 fine 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 Technical Mathematics 1, 804-151.

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. Areas of planning are: excavation and backfill, foundations, floor plans, windows and doors, structural components, exterior characteristics, electrical wiring, stairways and fireplaces, joint framing and rafter framing, interior built-ins, plot plans, heat loss and heating, plumbing systems, and pictorial projections. Prerequisite: Architectural Theory and Drafting 1, 614-111.

614-113 Architectural Theory and Drafting 3 3 credits
Basic use of computer-aided drafting and design systems. Students acquire introductory level skills in 2D and 3D drafting as it applies to CADD systems. Prerequisite: Architectural Theory and Drafting 2, 614-112.

614-114 Architectural Theory and Drafting 4 3 credits
Covers advanced engineering design and drafting. Includes advanced CADD applications. Prerequisite: Architectural Drafting 3, 614-113.

614-118 Architectural Rendering 2 credits
Application of perspective principles to architectural presentations. Emphasizes pencil techniques, wash and tempera colors. Prerequisite: Architectural Theory and Drafting 1, 614-111.
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 Technical Mathematics 1, 804-151.

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: Architectural Theory and Drafting 2, 614-112.

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-2D 2 credits
Makess 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 and specifications and published construction cost data. Emphasis is on understanding estimating techniques and methods of preparing estimates and take-offs. Prerequisite: Technical Mathematics 1, 804-151.

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 timber, 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: Architectural Drafting, 614-111.

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 mixes, 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: Architectural Theory and Drafting 1, 614-111; Technical Mathematics 1, 804-151; or concurrent enrollment in Strength of Materials, 667-140.

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 completion of 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.

621 Industrial Welding Technology

621-104 Computer Aided Mfg. Systems 4 credits
Computer-aided welding principles including material handling, positioning, jigs and fixturing. Students program 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 to 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 using 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 of the operations in machining electrical, sheet metal, and welding fabrication of materials. Prerequisite: Manufacturing Processes, 606-160.

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 non-destructive 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, metallurgy or weldment analysis may be assigned special problems through consultation with the department's lead teacher and/or division dean.

621-193 Job Orientation 1 credit
Specific occupational information prepares students to seek employment. Covers personal data sheets, job interviews, letters of introduction and recommendation. Former graduates 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 operation of transmission electron microscopes (TEMs). The effects of microscope variables on image, the obtaining of diffraction patterns and microscope optics are included.

636-115 Photographic and Hazardous Materials Lab 1 credit
Students produce finished, high quality micrographs from both TEM and SEM outputs. Includes dark-room methods as well as methods of optimizing photo quality as a function of film type, exposure and all other relevant microscope and camera variables. Hazardous materials which an electron microscopist might encounter are studied so that students can safely deal with such materials.

636-121 Biological Sample Prep for SEM and TEM 3 credits
Lecture-lab course covering biological sample preparation for both SEM and TEM. Includes critical point drying, fixation, dehydration, embedding, staining, ultramicrotomy, low temperature methods, thin film application, etc. Prerequisite: grade of C or better in SEM (636-111) and TEM (636-112) or consent of instructor.

636-122 Physical Material Prep for SEM and TEM 3 credits
Lecture-lab course covering non-biological specimen preparation for both SEM and TEM. Includes replica preparation methods, thin sectioning methods, polishing, etching, mounting, fracturing methods, etc. Prerequisite: grade of C or better in SEM (636-111) and TEM (636-112), or consent of instructor.

636-131 Advanced Biological Techniques and Ultrasound Studies 3 credits
Students prepare biological samples for both SEM and TEM using methods not previously presented, such as colloidal gold labeling. Includes ultrasound studies to enable students to recognize features encountered in micrographs. Covers biological interpretation, identification and analysis of micrographs. Prerequisite: grade of C or better in Biological Sample Prep for SEM and TEM, 636-121; 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 SEM and TEM. Includes metallurgical studies to enable students to identify microstructure, fracture types, dislocations, etc. Interpretation of reciprocal lattice patterns from electron diffraction in crystals are included. Prerequisite: grade of C or better in Physical Materials Prep. for SEM and TEM, 636-122; 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.

636-141 X-Ray Microanalysis 4 credits
Students perform elemental analysis with energy dispersive X-ray systems in both SEMs and TEMs. The use of quantitative computer analysis will constitute a major part of this course.

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 lens. Prerequisite: grade of C or better in Scanning Electron Microscopy, 636-111; Transmission Electron Microscopy, 636-112; and Advanced Physical Techniques and Material Science Studies, 636-132; or consent of instructor.

636-147 Electron Microscopy Special Project 2 credits
Students choose an independent project resulting in a final report that will include micrographs from both SEMs and TEMs.

801 English

801-100 American Sign Language 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.

801-151 Communication Skills 1 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 2 3 credits
Applies skills taught in Communication Skills 1 to specific communication situations, both oral and written. Students learn how to prepare a detailed resume 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.

801-159 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 lay person. Prerequisites: 801-151, Communication Skills 1; and 801-152, Communication Skills 2; or consent of instructor.

801-197 Technical Reporting 3 credits
In-depth investigation into technical resources and practice in preparing and presenting oral and written technical communications. Emphasizes the six stages of preparation and performance: researching, planning, organizing, writing, revising and presenting. In these reports, the use of visual aids/graphic illustrations is stressed along with audience analysis. Also reviews applied technical correspondence and group problem-solving. Students engage in technical activities directly related to their program. Prerequisites: 801-151, Communication Skills 1; and second-semester standing.

801-201 English Composition 1 3 credits
Basic course in expository writing develops skills for preparing a research paper. The readings, which provide materials for discussion and models for study, are intended to aid students in acquiring the skill of
801-202 English Composition 2 3 credits
Continuation of English Composition 1. Extends the skills of critical reading and expository writing using essays, fiction, drama and poetry to provide further practice in expressing thought through effective written English. Prerequisite: English Composition 1, 801-201.

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 1; or consent of instructor.

801-204 Introduction to Modern Literature 1 3 credits
This course surveys modern literature (mostly 19th century British and American writers) in relation to society and to major developments in the arts of fiction, drama, and poetry. Prerequisite: English Composition 1, 801-201.

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: English Composition 1, 801-201.

801-217 Survey of American Literature I 3 credits
Covers major writers of the 18th and 19th centuries in American prose and poetry. Prerequisite: English Composition 1, 801-201.

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: English Composition 1, 801-201.

801-219 Survey of Western World Literature 1 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: English Composition 1, 801-201.

801-220 Survey of Western World Literature 2 3 credits
Studies the outstanding literary masterpieces of Western literature from the end of the Renaissance (16th century) to the last quarter of the 20th century. The first semester is not a prerequisite of the second. Prerequisite: English Composition 1, 801-201.

801-228 Introduction to Modern Literature 2 3 credits
Surveys modern literature (mainly British and American of the 20th century) in relation to contemporary society and major developments in the arts of fiction, drama and poetry. Prerequisite: English Composition 1, 801-201.

801-229 Contemporary Literature 3 credits
Surveys contemporary literature (mainly British and American) in relation to contemporary society and to major developments in the arts of fiction, drama and poetry. Readings cover material from the 1950s to the present. Prerequisite: English Composition 1, 801-201.

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: English Composition 1, 801-201.

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 reportage and provides practical experience in news gathering, editing, interviewing and copywriting. Prerequisite: 801-201, English Composition 1.

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 non-fiction, 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 news-magazine, SLANT. Prerequisites: 801-245, News-Writing and Reporting; or 801-201, English Composition 1; 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 criticisms. The works are selected to represent varied perspectives in race, class and sexual preference. Prerequisite: English Composition 1, 801-201.

801-311 English Fundamentals 3 credits
Prepare students to handle the fundamentals of English correctly and effectively through an intensive study of structure, grammar, punctuation, mechanics, diction and usage.

801-312 Composition Fundamentals 3 credits
Meets the needs of students who have passed English Fundamentals, but who lack the skills necessary for success in Communication Skills 1 or English Composition 1. For students who lack the skills required to control sentence completeness and structure or who need practice to attain fluency and clarity in framing sentences.

802 Foreign Language

802-211 Spanish 1 4 credits
For the beginning student, emphasizes sequential development of linguistic skills—from listening and speaking through reading and writing. Oral-aural practice is available via intensive classroom exercises and accompanying taped for laboratory and individual drill.

802-212 Spanish 2 4 credits
Continuation of 802-211. Spanish 1 with the same primary emphasis on listening, speaking, reading and writing.

802-213 Spanish 3 4 credits
An intensive grammatical review is undertaken to consolidate the student's general knowledge. Continued emphasis is on oral skills. Cultural aspects of Spanish are presented through various literary selections. Prerequisite: 802-212, Spanish 2, or two years of high school Spanish.
802-214  Spanish 4  4 credits
Continuation of Spanish 3 with special attention to problematic nuances between Spanish and English. More intensive reading is undertaken, including an introduction to outstanding writers. Prerequisite: 802-213 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. Studies vocabulary and grammar to enhance students’ ability to speak and write in French. Study of customs and values provides an increased awareness of the 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 listening, speaking, reading and writing skills necessary to handle simple, everyday survival tasks in the French culture. Vocabulary and grammar are studied to enhance students’ ability 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 speaking and writing in French, creatively, 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 on an examination of the conflicts and exchanges in European society which mark the transition from medieval society 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 nineteenth- and 20th-century experiences of European societies through examination 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. The selected nations include Victorian Britain, France during the Third Republic and Stalinist Russia.

803-211  American History 1607-1865  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.

803-213  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. 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 1607-1865; or 803-212, American History 1865-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 white men, 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-Present is recommended.

803-215  American History Since 1945  3 credits
Traces developments in politics, society and culture of the U.S. since 1945. Focuses on new social movements among Blacks and other ethnic groups, youth and women, environmentalism and renewal of religion in American society in recent decades. Covers the rise of the U.S. to global power and domestic consequences and responses to this new status.

803-220  History of Western Civilization 1  3 credits
Introduction to ancient and medieval periods of Western civilization. Focuses on four periods and peoples whose lives and achievements have had a major impact on shaping Western society in ancient and medieval times. 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. Also probes the physical setting in which each society exists and the technologies which each used.

803-221  History of Western Civilization 2  3 credits
Brief survey of Western civilization provides general knowledge used in an examination of a series of topics or issues that have been and continue to be significant in the development of Western Civilization since 1600. Topics, which include industrialization, revolution and imperialism, are traced in historical context that provides a framework for an in-depth analysis of their origins and development as well as their current status.

803-223  History of the Third World: Asia  3 credits
Introduction to civilization in Asia. Explores different lifestyles and ways of thinking significant to historical development in India, China and Japan from early times to the present. Offers perspectives on how and why these Asian societies developed their distinctive approaches to civilization, what happened in 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
Introduction to the civilizations of Africa from early man through the present. 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 an historical discipline concentrating on the basic concepts, concepts and the methodologies used in women's history. May include marriage, family, 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, the use of the calculator in these computations, as well as with powers and roots. The metric and British systems of measure are compared, along with the use of exact and approximate numbers. Basic concepts of algebra are reviewed so that students can solve applied problems that use linear equations and inequalities in one unknown, as well as geometric formulas of perimeter, area and volume. Broadly correlated with 804-141, Technical Mathematics 1 and is preparatory to 804-142, Industrial Mathematics 2. Use of the hand-held, full function calculator is strongly recommended. Prerequisite: high school algebra.

804-142 Industrial Mathematics 2 4 credits

804-151 Technical Mathematics 1 4 credits
Covers basic laws of algebra involving fundamental operations, laws of exponents, and grouping symbols. Studies the solution of linear equations in one, two and three unknowns, including graphical representation and Cramer's rule. Covers formula rearrangement, variation and word problems. Trigonometry is studied from the viewpoint of numerical solution of right and oblique triangles, as well as vectors, including the definitions and laws necessary. The hand-held calculator is used throughout with special emphasis in the trigonometry units. Prerequisite: required score on the placement test and a passing grade in high school algebra.

804-152 Technical Mathematics 2 3 credits
Covers analytic geometry of the straight line, factoring, fractions in algebra, linear equations containing fractions, quadratic equations, exponents, radicals, complex numbers, laws of logarithms, exponential and logarithmic equations, and inequalities. Prerequisite: 804-151, Technical Math 1.

804-171 Basic Computer Mathematics 2 credits
Covers problem-solving and software packages in the technical area using the IBM PC. Emphasizes application problems that students may meet in their specializations. Concepts of programming include input/output of data, decisions, interactive techniques, data storage and alphanumeric data handling.

804-172 Introduction to PC Software 2 credits
Hands-on introduction to modern PC software, including word processing, spreadsheets, data base 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. Stress on 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, and so on). Includes menus, dialog boxes, icons, cursors and input methods (keyboard and mouse). Windows graphics are discussed at length (the 'Graphics Device Interface'). 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 in the C language. Includes graphics programming in C: graphics file formats, hard copy techniques, point processes (histograms, look-up tables, pseudo-coloring), area processes (convolution, edge-detection, filtering), raster operations (image adding, xoring, etc.) and geometric transforms (scaling, rotating).

804-201 Intermediate Algebra 4 credits
Study of real and complex numbers - their construction and result 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 mathematics and science.

804-208 Computer Science (Pascal) 3 credits
Introduction to the theory and use of computing machines. Covers the construction of algorithms and use of the structured language PASCAL to solve problems from the mathematical, physical or social sciences. One section of the course uses only the language PASCAL; another section also uses the procedure-oriented language FORTRAN. Students write approximately eight programs. Consists of three hours of lecture and approximately one hour of informal laboratory per week. Students should expect to spend five to seven hours per week on their own time in addition to the lecture/laboratory hours. Prerequisite: completion of, or concurrent enrollment in, college algebra, 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 "function" concept. 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 mathematics, 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 lin-
car 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. Prerequisite: two
years of high school algebra or equivalent; and a satisfactory mathemat-
ics placement test score.

804-231 Calculus and Analytic Geometry 1 5 credits
For students of mathematics, science and engineering. Provides introduc-
tion to plane analytic geometry, basic properties of limits, rate of change
of functions, continuity, simple derivatives of algebraic functions, curve
sketching, maxima and minima, indefinite integration with applications,
approximating an integration and applications of definite integration,
such as area between two curves, volumes, surface area of revolutions,
centroids, hydrostatic pressure and work. Covers differentiation and inte-
gration 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 in-
tegrals involving the method of partial fractions, integration by parts,
geometry of cones and conics. Polar curves, areas and integrals involv-
ing polar coordinates, parametric equations in kinematics and analytic
graphs and vector differentiation are covered. Scalar and vector prod-
us of two vectors, determinant of vectors, space curves, infinite series
and convergence are covered. Meets five times per week. Prerequisite:
804-231, Calculus and Analytic Geometry 1; or consent of instructor.

804-240 Basic Statistics 4 credits
Basic college statistics for persons with a minimum knowledge of alge-
bra. 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 infer-
ces and decisions made when the underlying data are subject to ran-
don 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 sta-
tistical inference (exclusively 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, propor-
tions, units of measurement, powers and square roots, areas and vol-
umes, signed numbers, and solving simple equations.

804-306 Pre-College Algebra 3 credits
Basic college algebra covers the four fundamental operations with signed
numbers, fractions and polynomials in addition to graphing, solving lin-
ear equations and inequalities, factoring, solving quadratic equations by
factoring, and solving systems of linear equations in two variables.
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.

804-310 Transition to College Mathematics 3 credits
For students who have completed high school algebra and geometry, yet
are not ready for college-level intermediate algebra or technical mathe-
matics. Takes a non-traditional numeric approach to algebra, providing a
basic algebra review with emphasis on the calculator, problem-solving
and graphing. Includes fractions, decimals, exponents, problem solving,
linear equations in one and two variables, operations on polynomials,
quadratic equations, rational expressions and fractional equations.

804-378 Mathematics 1 1 credit
For Food Service and Food Preparation Assistants. Objectives for this
course are: to become proficient in basic operations using whole num-
bers, common fractions and decimal fractions; to understand percent and
be able to solve problems involving it; to be able to solve verbal prob-
lemas as a consumer and as one preparing for an occupation, to obtain an
introduction to the metric system, particularly the volume measures used
in food preparation.

804-379 Mathematics 2 1 credit
Involves a review of fractions, decimals and percentage including the
metric system, measurement, geometry, instrumentation and an introduc-
tion to calculators. Modified to meet the needs of a particular vocation.

804-380 Mathematics 3 1 credit
Covers simple algebra (signed numbers, algebraic manipulations, equa-
tions), ratio and proportion, graphs, and right triangle trigonometry.
Modified to meet the needs of a particular vocation. Prerequisite: 804-
379, Mathematics 2; or its equivalent.

804-381 Mathematics 4 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 com-
pared 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: 804-380, Mathematics 3 or its equivalent.

804-390 Computer Prep. Math 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 computers. 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 database program; dBase, a database program; Lotus 1-2-
3, a spreadsheet program; and Basic, a programming language.
Microcomputer terminology is explained throughout the course.

805 Music

805-201 New College Singers 1 credit
A show choir that performs the best of the popular music repertoire.
Emphasizes a fast paced production with great vocal arrangements and
effective choreography. The show features colorful costumes and excel-
leat sound and light personnel. Provides an opportunity to work within
the serious production of popular music at the college level. Auditions
required.

805-210 Jazz Ensemble 1 credit
A 20-piece big band rehearsing and performing jazz literature. Jazz style
and improvisation are emphasized. Auditions required.

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.

805-227 Music Appreciation 2 credits
A general survey course in music for those interested in learning through
listening to performance of music recordings. The thrust is to learn how
to properly listen to music.
805-243  Pop/Rock Performance Lab  1 credit
For instrumentalists and singers who have achieved some degree of performance ability, this is an opportunity to refine and develop musical skills in the context of a regularly recurring group. Special attention is given to broadening members' repertoire to include a variety of popular styles including blues, jazz, country, hard rock, funk, metal, fusion, and others of the students' choosing. Other possible topics include soloing and accompaniment, improvisation, song forms, and group concerns such as texture and balance. Although instructor is present to provide some focus and technical assistance, the structure, repertoire, and goals of the group will be largely elected by members. The school provides most equipment except for guitars. Open to singers, guitarists, bassists, drummers, keyboardists, and horn players. First semester only.

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
Continuation of Music Theory 1, with special emphasis on secondary chord relationships, modulation, pop and jazz chord symbols, and composition. Prerequisite: 805-261, Music Theory 1. Second semester only.

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 filmstrips, 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, bop, cool progressive, rhythm and blues, jazz/rock, and contemporary fusion and funk styles. No prerequisites. First semester only.

805-264  Great Composers in Music  3 credits

805-265  General History of Music  3 credits
1600-1900. Survey of western musical styles through extensive record listening and biographical studies of composers during the Baroque, Classic and Romantic Periods. Special guest lecturers and attendance at special concerts are an important part of the course. First semester only.

805-267  Ear Training/Keyboard Theory  2 credits
Practical musical skills for all types of musicians. Includes aural identification of scales, intervals and chords; melodic, rhythmic and harmonic dictation; and basic functional keyboard harmony. Students must have taken or concurrently enrolled in Basic Music Theory or Music Theory 1.

805-270  The Music Listener  1 credit
This is an independent study course arranged with instructor Jeff Peronio, Room 106A (246-6055).

805-273  Broadway Musical Theater  2 credits
Covers the history of the Broadway musical. Consists of lecture, 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 the Broadway and London stage. Provides the opportunity to see local musical productions. First semester only.

805-275  Music Television  3 credits
A study of history and the analysis of music video. Includes both their musical and visual content. Students produce a music video which they write, direct and film.

805-277  Techniques of Sound Recording  2 credits
Covers the latest recording methods and equipment. Students receive experience recording various groups within the performing arts area. Emphasis is made on practical techniques and "hands-on" methods.

806  Natural Science
806-104  General Cell Biology  4 credits
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  4 credits
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  4 credits
A one-semester course for students requiring skills and knowledge of the following: preparation and properties of solutions, acid-base chemistry and preparation of buffer solutions, chemical and solubility equilibria, and an introduction to organic and biological chemistry. Basic laboratory skills are developed, including measurement of mass, volume, pH, temperature, and solution concentration. Emphasizes pipetting, titrating, and using the U.V.-Vis. spectrophotometer. Prerequisite: one year of high school chemistry and/or pre-college chemistry and a passing grade on the pre-enrollment chemistry exam, or consent of the instructor. Requires knowledge of basic concepts taught in a first semester introductory chemistry course.

806-111  Chemistry 1  4 credits
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  4 credits
Continuation of 806-111, Chemistry 1. Further study of basic chemical principles and the application of these principles. Introduces properties, structures and reactions of organic compounds. Elementary aspects of biochemistry are considered.

806-141  Technical Science 1-9  3 credits
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 and 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-S 3 credits
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-S or equivalent.

806-151 Technical Science 1 3 credits

806-152 Technical Science 2 4 credits
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, thermo-dynamics is studied. A brief introduction to wave motion follows. Geometric and physical optics precedes 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; 804-151, Technical Mathematics 1; or 804-161, Electronics Mathematics 1. Co-requisite: 804-152, Technical Mathematics 2; or 804-162, Electronics Mathematics 2.

806-155 Health Technical Science 3 credits
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, electricity, ion currents and electric supply.

806-156 Radiography Technology Physics 3 credits
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. Prerequisite: high school algebra and physics or their equivalents are useful.

806-161 Electricity and Magnetism 3 credits
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 5 credits
Primarily for students who need a modern, relevant chemistry 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 fundamentals 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.

806-203 Animal Biology 4 credits
Covers general biological principles and emphasizes cell structure and function, comparative morpholoy of invertebrates, vertebrate anatomy, physiology and genetics. General consideration of biological processes, as they relate to human ecology, is given.

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 on topics of current biological importance. Prerequisite: concurrent enrollment in or completion of 806-203, 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. Prerequisite: one year of high school chemistry. Introductory college level biology course recommended. This course is not acceptable in programs requiring two semesters of Anatomy and Physiology.

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 biochemistry, cell structure and physiology, histology, integument, nervous, endocrine, skeletal and muscular systems. Includes dissection of various fresh and preserved materials as well as examination of a human cadaver. Prerequisite: one year of high school chemistry or one semester of college-level chemistry. This course is the first semester of a two-semester sequence and is not acceptable where a one-semester Anatomy and Physiology course is required.

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 circulatory, respiratory, digestive, excretory and reproductive systems. Includes dissection of a cat as well as examination of a human cadaver. Prerequisite: 806-207, Anatomy and Physiology 1; or consent of instructor. This course is the second semester of a two-semester sequence and is not acceptable where a one-semester Anatomy and Physiology course is required.

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. Prerequisites: one year of high school algebra and one year of high school chemistry; or 806-377, Pre-College Chemistry.

806-210 College Chemistry 2 with Biochemistry 5 credits
Continues the quantitative inorganic emphasis established in College Chemistry 1. Includes the mathematical treatment kinetics, equilibrium, thermodynamics and electrochemistry. A major portion of the semester is also devoted to an introduction to organic chemistry and biochemistry. Prerequisites: 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, electrolystics, 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: alkanes, alkenes, alkyne, alkyl halides, alcohols, ethers, thiols and sulfides; instrumental (IR, NMR) methods of analysis.
and their interpretation. Includes a three hour per week analysis and their interpretation. 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 U.V.-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, carboxylates and pericyclic reactions. Includes a 3 hours per week laboratory component and 4 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.

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 students to understand and function in today's highly technical world.

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. Prerequisites: two years of high school algebra and one year of high school geometry or equivalent. Trigonometry or high school physics or 806-35, 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.

806-230 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.

806-231 Biology of Human Aging 4 credits
Focuses on biological phenomena associated with aging, including theories and characteristics of aging, and 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 806-103, 806-105, 806-203, 806-206, 806-207, 806-208, 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 groupings for star viewing with the school's 6-inch telescope. Recommended prerequisite: high school algebra.

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 Microbiology 4 credits
Appropriate for nursing students or others in health-related fields. Covers the structure and metabolism of amino acids, proteins, carbohydrates, lipids and nucleic acids. Includes enzyme function and inhibition, hemoglobin, metabolic diseases, membranes, hormones, vitamins, nutrition, bioenergetics, protein synthesis and DNA structure and function. Prerequisites: at least one semester of college chemistry, including a basic knowledge of organic functional groups, or consent of the instructor. Courses which satisfy this requirement are 806-205, General Chemistry; 806-210, General and Biological Chemistry; or 806-212, Introductory College Chemistry 2, or University of Wisconsin Chemistry 104 or 108.

806-273 Microbiology 3 credits
Covers general topics and specific microbial pathogens. Material is organized in such a way that the same topics are covered in lecture and laboratory at the same time. Includes morphology of micro-organisms, sterilization and disinfection methods, pathogens causing disease in various body systems, normal flora of the body, drug sensitivity testing, complete blood counts, dental microbiology, fungal infections, eucaryotic parasites 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.

806-280 Environmental Issues 4 credits
Introduces diverse issues of human impact on the earth's ecosystems and how humans must deal with the results because we are 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. Socioeconomic, 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. Provides excellent preparation for college-level physics or for physics-based technical science. Includes basic concepts of physics through lecture, demonstrations and lab experience. Develops good algebra-based problem solving skills and strategies. Covers the basic of scientific notation, metric system, significant figures, motion, force, energy, momentum and relativity.
### 807 Physical Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>807-150</td>
<td>Physical Education for Public Safety</td>
<td>2</td>
</tr>
<tr>
<td>807-183</td>
<td>Aerobic Exercise</td>
<td>1</td>
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<tr>
<td>807-184</td>
<td>Group Exercise/Aerobic Leadership</td>
<td>1</td>
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<tr>
<td>807-207</td>
<td>Introduction to Triathlon</td>
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<tr>
<td>807-209</td>
<td>Baseball/Conditioning</td>
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<tr>
<td>807-210</td>
<td>Conditioning/Weight Training</td>
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<tr>
<td>807-212</td>
<td>Advanced Weight Training</td>
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<tr>
<td>807-223</td>
<td>Volleyball 1</td>
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<td>807-224</td>
<td>Volleyball 2</td>
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<tr>
<td>807-225</td>
<td>Softball/Conditioning</td>
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<tr>
<td>807-229</td>
<td>Aquatic Conditioning</td>
<td>1</td>
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<tr>
<td>807-230</td>
<td>Swim 1</td>
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<tr>
<td>807-231</td>
<td>Swim 2</td>
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<tr>
<td>807-232</td>
<td>Water Aerobics</td>
<td>1</td>
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<tr>
<td>807-233</td>
<td>Lifeguard Training</td>
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<tr>
<td>807-234</td>
<td>Scuba Diving</td>
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<tr>
<td>807-235</td>
<td>Raquetball 2</td>
<td>1</td>
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<tr>
<td>807-236</td>
<td>Tennis 1</td>
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<tr>
<td>807-237</td>
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<td>807-238</td>
<td>Racquetball 1</td>
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<tr>
<td>807-239</td>
<td>Golf 1</td>
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<td>807-240</td>
<td>Golf 2</td>
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<tr>
<td>807-241</td>
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<tr>
<td>807-242</td>
<td>Bowling 1</td>
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<tr>
<td>807-243</td>
<td>Dance 1</td>
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<tr>
<td>807-244</td>
<td>Dance 2</td>
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<tr>
<td>807-245</td>
<td>Social Dance</td>
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<tr>
<td>807-246</td>
<td>Modern Dance</td>
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<td>807-247</td>
<td>Jazz 1</td>
<td>1</td>
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<tr>
<td>807-248</td>
<td>Contemporary Dance</td>
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</tbody>
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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.

One-semester course for students who have not been exposed to chemistry at the high school or post-high school levels. Lectures and laboratory experiences cover some of the fundamental aspects of inorganic chemistry. Introduces relevant mathematical manipulations. Excellent preparation 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.

Involves conditioning techniques, strength training and assessment of physical fitness pools. Covers apprehension holds and self-defense.

Focuses on an aerobic approach to fitness. Activities such as walking, running, group aerobics and water exercise are highlighted.

Consists of group exercise techniques and emphasizes a variety of teaching methods directed at training individuals interested in a career in the fitness industry. Prerequisite: 807-183 or 807-283.

Develops an understanding of the principles of conditioning and exercise with specific application to triathlon training.

Covers basic baseball skills, rules, strategy and play. Fitness methods and concepts are applied to the activity of baseball.

Techniques and methods for body development, conditioning, nutrition and safety. It is a personal program tailored to individual objectives.

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.

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.

Covers advanced skills and team strategies for the serious power volleyball player. Includes conditioning appropriate to advanced techniques.

Introductory course covers basic softball skills, rules and strategy. Fitness methods and concepts are applied to the activity of softball.

Swimming workouts which gradually increase fitness levels. Students should be able to perform the front crawl, back crawl and breaststroke.

For non-swimmers or swimmers with limited water skills. Emphasizes floating, kicking and basic strokes.

Covers stroke improvement for the front crawl, back crawl, elementary backstroke and the breaststroke while building endurance.

Covers principles and experiences in aerobic conditioning. Advantages of water as the medium for conditioning the body's cardio-respiratory endurance and muscle toning is the focus.

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.

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.

Reviews the basics of racquetball, continuing on into advanced skills and strategies of game play.

Focuses on basic stroke development. Rules and strategy of singles and doubles games are included.

Covers intermediate and advanced stroking and shot-making, racket, control and footwork. Game play includes advanced strategies in singles and doubles.

Fundamentals of racquetball emphasizing skills and strategy for the beginner and intermediate player.

For serious intermediate and advanced golfers who want to improve their game. Emphasizes practice routines, actual play and strategies for special shot making techniques.

Basic bowling techniques for beginners and advanced beginners. Includes the principles and development of the approach and delivery, rules and competition.

Covers basic techniques and creative experiences in dance movement.

Covers intermediate and advanced techniques, creative activities and composition in dance dynamics. Experiences in special dance forms such as ballet, jazz and modern are offered.

Introductory class in contemporary ballroom dance styles including the waltz, polka, foxtrot, swing, tango and the cha-cha.

Introductory course in modern dance techniques using the Cunningham Method. Emphasizes development of axial and locomotor dance movement, short compositions, and improvisation.

Introductory course in contemporary jazz dance technique. Emphasizes the development of warm-up sequences, isolations, contractions, jazz walks, progressions, turns, combinations and improvisation.
807-248 Ballet I 1 credit
Introduces classical ballet technique. Emphasizes the acquisition of proper ballet technique, postural alignment and increased flexibility.

807-249 Tap Dance I 1 credit
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.

807-250 Badminton 1 credit
Develops basic skills, strategy and knowledge of the rules of the game.

807-253 Archery 1 credit
Stresses shooting techniques, equipment and safety, competitions and their rules. For all ability levels.

807-265 Soccer 1 credit
Incorporates basic playing skills and fundamentals into a team game.

807-266 Wellness Today 2 credits
Contemporary approach to the total wellness concept. Covers fitness and exercise, nutrition and stress management culminating with a personal planning toward lifetime wellness.

807-270 Bicycle Conditioning/Maintenance 1 credit
Covers basic conditioning concepts. Includes discussions of long distance bicycle touring and preventive maintenance for the bicycle.

807-279 Cross Country Skiing 1 credit
Emphasizes techniques and safety in skiing, trail selection, and the planning, selection, care and maintenance of equipment.

807-283 Aerobic Dance 1 credit
Focuses on an aerobic approach to fitness utilizing activities such as aerobic dance, step aerobics, interval training and body sculpting.

807-285 Fall Sports Officiating 1 credit
Develops skills in officiating volleyball and basketball (men and women). These skills may lead to WIAA certification.

807-286 Spring Sports Officiating 1 credit
Develops skills in officiating softball and baseball. These skills may lead to WIAA certification.

807-289 Aerobics/Weight Training 1 credit
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
Teaches college textbook reading — reading for understanding, text preparation and application in the world of work. After completing this course students are able to reprocess writing to independently learn an introductory college textbook and job-related written information. As world knowledge (cultural literacy) is critical for adult learning and success in the work world, students are encouraged to read a weekly news magazine and regularly listen to news coverage and discussions in the mass media.

808-107 College Vocabulary 2 credits
Teaches basic logic of commonly used adult vocabulary. Around a knowledge of frequently utilized 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.

808-120 Speed Reading 2 credits
For average readers who want to motivate themselves to read faster. Through demonstration and discussion (with some pacing devices), students learn to use speed of thinking as the key to better understanding. Vocabulary is incidentally taught.

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 Reading 1 credit
Three hour per week short course offered three times a semester. Lecture and discussion are used to instruct students in selecting 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, study for the busy person, being an independent learner while utilizing campus resources, mapping, preparing for and taking tests. Emphasizes the application of basic learning theory for efficient study and understanding.

808-307 Occupational Reading 2 credits
For vocational-technical students who will be required to read technical reading matter in their textbooks or on-the-job manuals. Focuses on vocational vocabulary, interpretation of illustrations and graphics found in textbooks, and comprehension of technical reading.

808-310 Intermediate Reading 3 credits
For students reading at the high school level who need to develop and improve basic reading skills needed for college textbook reading. Develops vocabulary and comprehension skills and some study strategies which are used in reading content textbook material. Critical reading and the ability to draw correct inferences are also discussed.

808-315 Reading Vocabulary: Intermediate 1 credit
For students who want to learn a general adult vocabulary. The words are commonly used in social interaction, the mass media and college study, yet are frequently unknown to beginning post-secondary students.

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 role of parents, peers and environmental factors on development and behavior is 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 Social Problems 3 credits
Aging is a dynamic process which includes physical, social and psychological changes. This course addresses both the problems and the challenges of aging and individual responses to them.

809-195 Economics 3 credits
Overview of how a market-oriented economic system operates. Surveys the factors that 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 which covers issues that illustrate how our traditional institutions (such as family, education, media, the workplace, the economy and government) are being shaped 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.

809-207 Criminology 3 credits
Analyzes the social and political realities of crime, and social and economic class, crime and justice, health and education, and family life. Causes, effects, possible solutions and future trends are discussed.

809-202 Social Disorganization 3 credits
Examines the major issues confronting society: economic and political change, nationalism, racial and ethnic relations, sexism, social and economic class, crime and justice, health and education, and family life. Causes, effects, possible solutions and future trends are discussed.

809-201 Introduction to Sociology 3 credits
Defines and examines the concepts and realities of social structure, culture, socialization, complex organizations, social groups and social change. Examines institutions such as the family, religion and education.

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. Examines the tension between American ideals of individual freedom and equality, and social and political realities of class, racial and gender inequality. 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
Examines the relationship between crime and society. Describes and analyzes the social nature and causes of crime, the formulation, administration and enforcement of criminal laws, the prison system and treatment and rehabilitation programs in American society.

809-208 Contemporary African-American Society 3 credits
Analyzes forces which have been 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 rule of paid and unpaid work in the lives of women. Using an inter-disciplinary approach, specific occupational areas are analyzed from an historical, economic and sociological perspective. Current issues that impact on the women's labor force, and work performed by women-traditional and non-traditional-are presented and discussed.

809-210 Men: Social and Psychological Perspectives 3 credits
Examines and analyzes ways biology, culture and society shape identity and life experiences of the American male. Includes historical views; socialization; manliness; competitiveness and sports; violence and war; work and success; sexuality; relations with other men, women and children; health; and alternatives for men.

809-211 Macro-Economics 3 credits
Introductory course describes and analyzes factors which influence the overall performance of the economic system. Includes 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. Description, analysis and critique of the economy's performance are included among various approaches to course content.

809-212 Micro-Economics 3 credits
Introductory course examines economic concepts influencing the allocation of resources, production and distribution of final product in the U.S. economy. Includes supply-demand analysis, the implications of various market structures, determination of payment to economic resources, income distribution, and government participation in economic activity. 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 economic goods and services. Discusses classical capitalism, managed capitalism, socialism and democratic socialism. Systems are contrasted and evaluated in terms of such criteria as growth, efficiency, stability and equity. Covers various systems' historical development, institutional characteristics, and application to contemporary functioning economies. Prerequisite: 809-211, Microeconomics; or 809-212, Microeconomics; 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 actually practiced, implications of trade restrictions, mechanics of foreign exchange markets, balance of payments accounts, balance of payments adjustments, and macro economic policy in an open economy. Includes history of international payments systems and selected topics in international economics (e.g. multinational corporations, European Economic Community). Prerequisite: 809-211, Microeconomics; Microeconomics, 809-212; or consent of instructor.

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 forces influencing the nature of interaction. Includes institutions that have been erected in nation states' quest for power, peace and security. Emphasizes nationalism, ideology, regional integration and trade.
809-224 Government Practicum 3 credits
May be taken by people who have received credit for State and Local Government or Government Process and Practice or those currently taking either course. Students are assigned approximately 10 hours a week to work for a 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 and violence, sex roles, attraction, altruism, obedience, conformity, attitude change and others. Prerequisite: 809-231, 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 is a prerequisite to 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 adjustive and maladjustive behaviors. Explores psychological theories and concepts, such as stress and self. Tactics and strategies of adjustment, non-verbal behaviors, adjustment to changing sex roles and behavioral learning techniques are covered.

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 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 in particular: historical legacies which shape Latin American life; the experience of revolution and counter-revolution; various economic development strategies; contemporary 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, style 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 induction 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 value systems, both traditional and current as theories and as they affect decisions regarding pornography, 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 characterized by its rituals and symbols. The course focuses on the religions originating 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 religion 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 comprehending, evaluating and engaging in contemporary forms of reasoning, 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
Behavior within the health care system, whether as a patient or as a health care worker, presents challenges that differ from the typical consumer environment or the typical workplace. This course explores these differences and presents and discusses ethical issues particular to medicine. Highlights awareness and examines ways to conduct one's self within this health care environment.

809-269 Energy and Society 3 credits
Emphasizes the complex interrelationship between energy, economy and political process, and environmental consequences of energy production and use. Explores sources and avallability of fuels, analyzes the substantive choices among energy alternatives and their social, political and economic ramifications, and scrutinizes the structure of power in the socioeconomic system that constraints energy policy making and implementation decisions.

809-271 Families in Transition 3 credits
Includes 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 different types of contemporary family structure.

809-272 The Nation's Health 3 credits
Explores the health care system and role of medical care in relationship to the health of Americans from historical, ethical, political, economic, social and personal points of view. Issues about drugs, medical technology and biomedical research are considered.

809-280 Anthropology 3 credits
Anthropology is the study of humans and their culture. Introduces a survey of three major sub-disciplines of anthropology: physical anthropology, which explores human biology, evolution and the emergence of cul-
810-230 Introduction to Drama 3 credits

810-242 Public Speaking 3 credits

810-250 Introduction to Film 3 credits

810-260 Basic Drama Production 1 credit

815-200 Introduction to Art History 3 credits

815-201 Design Fundamentals 3 credits

815-202 Color and Design 3 credits

815-203 Three-Dimensional Design 3 credits

815-205 Drawing Fundamentals 3 credits

815-206 Cartooning 3 credits

815-207 Cartooning Seminar 3 credits

815-209 History of Cartooning 3 credits

815-210 Art History: The Modern Era 3 credits

815-211 Fundamentals of Oral Interpretation 3 credits

815-212 First-Year Acting 3 credits

815-213 Acting 3 credits

815-214 Art History: The Renaissance 3 credits

815-216 Art History: The Baroque Era 3 credits

815-217 Art History: The Romantic Era 3 credits

815-219 Art History: The 19th Century 3 credits

815-220 Art History: The 20th Century 3 credits

815-221 Art History: The 21st Century 3 credits
problems stressing personal vision and mastery of the photographic medium. Recommended prerequisite: Photograpy, 815-234.

815-241 Painting 1  
Introduction to basic painting techniques. Covers laying out the palette, preparing painting backgrounds, and the use of oil or acrylic media. 3 credits

815-242 Painting 2  
Intermediate-level course emphasizing picture making, composition, personal expression in still life, landscape and figure painting. Prerequisite: 815-241. 3 credits

815-253 Jewelry 1-Art Metal  
Basic introduction in designing and fabricating jewelry. Covers flat work in copper, brass, silver and casting. Some of the various processes covered are piercing, repousse, casting, bezel setting, enameling, etc. 3 credits

815-254 Jewelry 2-Art Metal  
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 mixing of settings is also covered. Prerequisite: 815-253, Jewelry 1. 3 credits

815-290 Ceramics 1  
Introduces clay as an art medium through demonstration and experimentation with basic hand building methods. Encourages individual involvement with the media and personal expression. Emphasizes exploration of texture, form and surface decoration. Covers electric and raku firing, relevant vocabulary, and some of the technical aspects of clay. 3 credits

815-291 Ceramics 2  
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. 3 credits

Alternative Learning

851-410 Communication 1  
Introduces students reading at a 0 through 5th grade level 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. 3 credits

851-440 Communications 2  
Develops general reading, writing, vocabulary and comprehension skills at the 6th through 8th 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 topic 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. 3 credits

851-470 Communications 3  
Covers the transition from sentence level writing to paragraph/theme development for students at the 9th through 12th grade reading level. Students are introduced to classical literature and read a novel, short stories, plays and poems. 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. 3 credits

851-494 Communications GED  
Basic concepts of behavioral science at the 9th 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/hypotheses and prepares for the Writing Skills, Social Studies and Literature GED tests. 3 credits

854-410 Math 1  
Basic concepts of addition, subtraction, multiplication and division at the 0 through 5th 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 of applied mathematics is shared through the use of physical measurements such as weight, length and time. 3 credits

854-440 Math 2  
An empirical approach to mathematics at the 6th through 8th grade level. Includes fractions, ratio and proportion, decimals, percents, measurement, statistics, geometry, graphs and integer arithmetic. Emphasizes critical thinking, problem-solving and writing activities. 3 credits

854-470 Math 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 non-credit math courses offered at MATC. 3 credits

854-494 Math GED  
Basic concepts of Math and Science at the 9th through 12th grade level, preparing students for Math and Science GED tests. 3 credits

851-490 Communication And Math 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. 3 credits

851-499 Communication And Math 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. 3 credits

856-440 Science 2  
Basic concepts of science at the 6th through 8th 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, library research and writing-to-learn activities.

861-470 English As A Second Language 3
Basic concepts of sciences at the 9 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. Emphasizes critical thinking, problem solving, and reading and writing skills needed to pass the science portion of the GED/HSED exam.

858-410 Reading 1
For the adult who reads at the 0 through 5th 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 6-8th 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 9-12th 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/pair interaction are also emphasized. Prepares students for college by developing independent study capabilities, time management techniques, test-taking methods, and basic library research skills.

859-440 Social Studies 2
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 6 through 8th 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.

859-470 Social Studies 3
Individualized instruction offered at the 9 through 12+ grade level at District Learning Centers to students who need assistance in any credit or non-credit social studies courses offered at MATC.

861-410 English As A Second Language 1
Beginning course for preliterate adult speakers of English as a second language. Class activities include about 80 percent oral/aural skills and 20 percent literacy skills.

861-420 English As A Second Language 2
Intermediate beginning course for adult speakers of English as a second language. Class activities consist of 75 percent oral/aural skills and 25 percent literacy skills.

861-430 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 adult speakers 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.

861-469 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.

861-480 VESL 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.

861-485 VESL 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 3
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.
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:

### Employer Members
- Raymond Allen
- Leslie Ann Howard

### Employee Members
- Linda Christman
- Gary L. Clever

### Members-at-Large
- James Roth
- Helen Henry
- Manuel Lugo

### Elected Officials
- Judy Rendall
- School District Administrator
- Richard Magnuson, Ed.D.
- Sauk Prairie School District

### Administration & Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
</tr>
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<tbody>
<tr>
<td>Beverley S. Simone</td>
<td>President</td>
<td>Butler University, Indiana</td>
</tr>
<tr>
<td>Carol Holmes</td>
<td>Executive Assistant to President</td>
<td>University of Illinois, M.S., University of Wisconsin-Madison, O.T.R., American Occupational Therapy Association</td>
</tr>
<tr>
<td>Edward G. Clarke</td>
<td>Vice President-Instructional Services</td>
<td>Iona College, New Rochelle, NY, M.S., Clarkson University, Potsdam, NY, M.Ed., University of Ottawa, Canada, Ph.D., Clarkson University</td>
</tr>
<tr>
<td>Jerry L. Collingwood</td>
<td>Vice President - Administration</td>
<td>B.S., Business Administration-Upper Iowa University, Fayette, Iowa, Additional Study, University of Oklahoma, Norman</td>
</tr>
<tr>
<td>Dari E. Drummond</td>
<td>Vice President-Student Services</td>
<td>B.S., Mt. Sanario College, Ladysmith, WI, M.S., University of Wisconsin-Whitewater</td>
</tr>
<tr>
<td>Kenneth P. Niemeier</td>
<td>Vice President-Human Resources</td>
<td>B.S., University of Wisconsin-Madison, Ph.D., University of Wisconsin-Madison, Labor-Industrial Relations Study, University of Wisconsin-Parkside</td>
</tr>
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</table>

Administrators/Coordinators/Deans/Chairs/Supervisors/Managers

- Steve Acker, Maintenance Supervisor, Apprenticeship Journeyman, Maintenance Mechanic, Additional Courses, University of Wisconsin-Madison
- John W. Alt, Campus Administrator - MATC-Reedsburg, B.S., University of Wisconsin-River Falls, M.S., University of Wisconsin-Platteville
- Kent Anderson, Coordinator, Fire Service, B.S., University of Wisconsin-Platteville, M.S., University of Wisconsin-Milwaukee
- Eduardo Arangua, Dean, Alternative Learning, B.S., Texas A&M, M.S., Corpus Christi State University
- Carol A. Bassett, Employment/Benefits Administrator, B.A., Washington University, St. Louis, M.S.M., Cardinal Stritch, Milwaukee
- Frederick R. Birta, Western Dane Coordinator, B.A., University of Wisconsin-Madison, M.S., University of Wisconsin-Milwaukee, Post-Graduate Study, University of Wisconsin-Milwaukee, University of Wisconsin-Madison; University of Wisconsin-Sinai
- Jerry E. Butler, Chair, Art, B.S., Jackson State University, Jackson, MS, B.F.A., Memphis Academy of Art, M.F.A., University of Wisconsin-Madison, Ph.D., University of Wisconsin-Madison
- Patricia Curtwright, Curriculum Coordinator, B.A., Milwaukee-Downer College (Lawrence University), M.A.T., University of Wisconsin-Racine, Ph.D., University of Wisconsin-Madison, Graduate Study, University of London; University of Wisconsin-Racine
- Catherine Chew, Tech Prep Coordinator, Mediators Certificate, Haynes Mediation Institute, B.A., Tennessee Technological State University, Cookeville, M.A., Virginia Polytechnic Institute and State University-Blackbog, Ed.D., Virginia Polytechnic Institute and State University-Blacksburg
- Ann Clark, Assistant Librarian, B.A., University of Wisconsin-Madison, M.S., University of Wisconsin-Madison
- Debby de Curiso, Public Information Manager, Undergraduate Study, Shimer College, Waukegan, IL, University of Wisconsin-Oshkosh
- Rose Ann Findlen, Dean, General Education, B.S., Northwest Missouri State University, M.A., University of Kansas, Lawrence, Ph.D., University of New Mexico, Albuquerque
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Role</th>
<th>Education/Professional Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>James A. Hood</td>
<td>Chair, Protective Services, A.B., University of Wisconsin-Madison</td>
<td>M.S., University of Wisconsin-Madison; Graduate Study, University of Wisconsin-Madison; Indiana State University, M.S., University of Wisconsin-Stout</td>
</tr>
<tr>
<td>Herb Nelson</td>
<td>Educational Support Services Manager, B.F.A., Northern Illinois University, M.F.A., Southern Illinois University-Carbondale</td>
<td>Diploma, Bethany Hospital School of Nursing, Kansas City, KS, B.S., Fort Hays State University, Hays, KS, M.A., University of Kansas-Lawrence, M.S., University of Missouri-Kansas City, Graduate Studies, University of Wisconsin-Madison, University of Wisconsin-Stout</td>
</tr>
<tr>
<td>John Stransky</td>
<td>Coordinator, Police Science/Police Academy, A.S., Madison Area Technical College, B.S., Mount Sinai College, Graduate Police Operations and Administration Program, University of Wisconsin-Madison, Graduate Study, University of Wisconsin-Stout</td>
<td>M.S., Marquette University, School of Dentistry; University of Wisconsin-Madison, B.S., University of Wisconsin-Stout; University of Wisconsin-Madison, B.S., University of Wisconsin-Stout</td>
</tr>
<tr>
<td>John W. Brenegan</td>
<td>Athletic Director, B.S., University of Wisconsin-Madison</td>
<td>M.A., University of Wisconsin-Madison; University of Wisconsin-Madison, Graduate Study, University of Wisconsin-Stout; University of Wisconsin-Madison, M.A., University of Colorado, Graduate Study, University of Wisconsin-Madison, B.S., University of Wisconsin-Stout</td>
</tr>
<tr>
<td>Sue Carter</td>
<td>Assessment/Orientation Coordinator, B.S., University of Wisconsin-Madison</td>
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</tr>
<tr>
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</tr>
<tr>
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<td>M.S., University of Wisconsin-Madison; University of Wisconsin-Stout</td>
</tr>
<tr>
<td>Rouane Glick-Velum</td>
<td>Student Services Counselor, B.S., University of Wisconsin-Whitewater</td>
<td>M.S., University of Wisconsin-Madison</td>
</tr>
</tbody>
</table>
Karen Irwin, Sign Language Interpreter, Associate Degree, Phoenix Community College, Arizona
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Board, Administration & Faculty

Faculty

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Board, Administration & Faculty
Index

Guide to the catalog

This alphabetical index will help you locate specific topics.

The guide to programs of study begins on page 34. It tells you where to find program descriptions, where programs are offered, and how programs are organized by department and division.

A

Academic appeals, 8
Academic counseling, 20
Academic dismissal, 8
Academic Honor Awards, 5
Academic policies and procedures, 4
Academic programs, 28
Accounting Assistant, 36
Accounting Courses (101), 88
Accounting Program, 36
Accreditation and memberships, 15
Administrative Assistant-Information Processing, 36
Administrative Assistant-Secretarial, 37
Admissions, 16
Adult Basic Education Department, 29
Advance reservation fee, 17
Advanced Auto Body and Paint Technician, 38
Advanced standing, 5
Affirmative Action Committee and Equal Opportunity Policy, 22
Agriculture, Apprenticeship, and Technical and Industrial Division, 34
Agriculture and Technology Department, 34
Agricultural Equipment Technology Courses (107), 83
Agricultural Equipment Technology Program, 38
Alcohol and Other Drug Abuse (AODA), 19, 3
Alternative Learning Division, 28
Alternative Learning Courses, 151
Alumni Association, 14
Anti-Harassment Committee, 9
Appeal from academic actions and re-admittance, 9
Apprenticeship Counseling Service, 31
Apprenticeship Department, 30
Area Board of MATC District, 153
Architectural Technician Courses (614), 136
Architectural Technician Program, 39
Art Courses (815), 150
Art Department, 35
Assessment and Orientation, 19
Associate Degree Nursing Program, 39
Associate Degree Nursing Courses (510), 121
Associate degrees, 5
Associate in Applied Arts, 28
Associate in Arts-Liberal Studies, 28, 62
Associate in Applied Science, 28
Associate in Science-Liberal Studies, 28, 62
Athletics, 26
Attendance, 6
Auditing courses, 6
Auto Body and Paint Technician Courses (405), 111
Auto Body and Paint Technician Program, 40
Auto Parts Sales, 12
Automotive Technician Courses (404), 110
Automotive Technician Program, 40
Automotive Technology Courses (602), 132
Automotive Technology Program, 41

B

Bake Shop, 13
Barber students, physical requirements, 16
Barber/Cosmetologist apprenticeship, 31
Barber/Cosmetologist Courses (502), 117
Barber/Cosmetologist Program, 41
Barber/Cosmetologist services, 12
Basic skills testing, 30
Biotechnology Laboratory Technician Courses (007), 82
Biotechnology Laboratory Technician Program, 41
Bookstores, 12
Bricklaying and Masonry apprenticeship, 31
Business Administration Courses (102), 89
Business and Applied Arts Division, 35
Business Department, 35
Business Machines Courses (103), 90
Business Mid-Management Program, 42

C

Cafeteria, 13
Camps, 12
Career planning resources, 20
Carpentry apprenticeship, 31
Carpentry-see Wood Technology Program, 81
Cement Finishing apprenticeship, 31
Certificates, 5
Child Development Courses (307), 109
Child Care and Development Program, 43
Child Care Centers, 26
Citizenship classes—see civic literacy classes, 29
Civic literacy classes, 29
Civil Engineering Technology Courses (607), 135
Civil Engineering Technology Program, 43
Class size, 2
Classroom attendance and visits, 2
Clinical laboratory, or affiliations, 7
Clubs and student organizations, 26
Co-curricular activities—see Student Life, 24
Code of Conduct, 7
College Transfer course, 62
College Transfer, 28, 17
Commercial Art Courses (201), 103
Commercial Art Program, 44
Community outreach, 14
Community Jazz Band, 27
Community Show Choir, 27
Compulsory Education Program, 30
Computer Information Systems Courses (107), 97
Computer Information Systems-Intermediate Analyst/Programmer Program, 44
Computer Information Systems-Operations Program, 45
Computer Information Systems-Programmer/Analyst Program, 43

D

Data Entry Operations Program, 47
Day care centers, 26
Dean’s List, 5
Degrees, diplomas and graduation, 5
Dental Assisting Courses (508), 119
Dental Assistant Program, 47
Dental Hygiene Clinic, 13
Dental Hygiene Courses (508), 119
Dental Hygienist Program, 48
Diesel and Heavy Equipment Technician Courses (412), 112
Diesel and Heavy Equipment Technician Program, 49
Dietetic Technician Courses (303), 107
Dietetic Technician Program, 50
Diplomas, 5
Disabled Student Services, 20
Discrimination and harassment, 9
Dissatisfaction, 8
Down Town Carroll Street Cafe, 13
Drafting-Architectural Courses (403), 110
Drafting-Architectural Program, 50
Dress code, 2
Drug policy, 3
Due process procedures
  - Academic appeals, 8
  - General due process procedures, 11

E

Electron Microscopy Courses (636), 138
Electron Microscopy Program, 50
Electronic Servicing Courses (414), 113
Electronic Servicing Program, 51
Electronics Technology Courses (605), 133
Electronics Program, 51
Electrician, apprenticeship, 32
Emergency Medical Servicet Courses (331), 131
Emergency Medical Servicet Specialist, 52
Emergency Medical Technician-Basic, 52
Emergency Medical Technician-Intermediate, 52
Emergency Medical Technician-Paramedic, 52
Employment assistance, see Placement, 14
English Courses (801), 138
English as a second language (ESL), 29
Entry placement test, 19
Entertainment and recreation, 25
Equal Opportunity Policy, 22
ESL (English as a second language), 29
Evaluation and assessment, 19

INDEX
F
Faculty and administration, 153
Farm Business Production and Management Courses (090), 84
Farm Business Production and Management Program, 54
Food Service Production, 56
Food Service Aide, 56
Food Service Courses (418), 127
Food Service Production and Management Program, 54
Food Service Production and Meat-SheepProduction Program, 54
Fees, 17
Field trip fees, 17
Finance Program, 55
Financial aid, 21
Application procedures, 21
Conditions for repayment of grants, 25
Disbursement of financial aid funds, 23
Satisfactory progress requirements, 21
Time limits for receiving financial aid, 23
Types of financial aid, 21
Fire Protection Technician Courses (503), 117
Fire Protection Technician Program, 55
Fire Recruit Academy Program, 56
Food Money Coupon Books, 13
Food Service Courses (518), 127
Food Service Aide, 56
Food Service Production, 56
Foreign Language Courses (002), 139
Furnituremaking — see Wood Technology, 81
G
Garage Mechanic, apprenticeship, 31
GED (General Education Development), 29
TV GED, 29
General policies of the college, 2
General Education Division, 35
Geographic area of MATC District, 153
Gourmet Dining Room, 13
Government — see Student Senate, 25
Grade point average (GPA), 4
Grades and grade reports, 4
Graduation, 5
Academic Honor Awards, 5
Graduation fee, 17
Graduation Special Service Awards, 5
Grants, 21
H
Handicapped student services — see Disabled Student Services, 20
Harassment, 9
Health, Human and Protective Services Division, 35
Health insurance plan, 23
Health Occupations Department, 35
Physical requirements, 16
Policy for incompletes, 4
Probation policies, 8
Health Services, 23
Heating, Ventilating and Air Conditioning, apprenticeship, 31
Heating and Air Conditioning Courses (401), 110
High School Equivalency preparation, 29
History Courses (803), 140
Hold for indebtedness, 18
Horticulture Courses (001), 82
Horticulture Program, 57
Hospitality Management Courses (109), 100
Hospitality Management Program, 57
Housing, 24
Human and Protective Services Department, 35
Human Service Associate Courses (520), 128
Human Service Associate Program, 57
I
Incompletes, 4
Indemnity, 30
Industrial Electrician, apprenticeship, 32
Industrial Hydraulics Courses (419), 114
Industrial Maintenance Courses (462), 116
Industrial Maintenance Program, 58
Industrial Welding Technology Courses (621), 137
Industrial Welding Technician Program, 59
Information Resource Centers, 13
Institutionalized Adult Program, 30
Institutional Learning Centers, 13
Institutionalized Adult Program, 30
Instructional Learning Centers, 13
Instrumental Ensemble, 27
Insurance Services, 59
Intercollegiate athletics, 26
Intergenerational literacy program, 29
Interior Design Courses (106), 108
Interior Design Program, 60
International students, 17
Intramural sports, 27
Ironworking, apprenticeship, 32
J
Jazz Ensemble, 27
Job opportunities — see Placement, 14
Joint Apprenticeship Committees, 31
L
Laboratory Animal Technician Courses (091), 86
Laboratory Animal Technician Program, 61
Late registration fee, 18
Legal Transcriptionist Program, 61
Liberal Studies Degrees, 62
Libraries — see Information Resource Centers, 13
Liberal Studies Degrees, 62
Library courses — see Information Resource Centers, 13
Literacy programs, 29
Loans, 22
Lockers, 2
Machine Tooling Techniques Courses (420), 114
Machine Tooling Techniques Program, 64
Machine Tooling Technologies, 32
Magazine, student — see SLANT, 25
Marketing Courses (104), 91
Marketing Department, 35
Marketing-Fashion Merchandising Program, 65
Marketing Programs, 65
MATC Foundation, 22
MATC campuses and centers, 12
Mathematics Courses (804), 141
Mechanical Design Technology Courses (606), 134
Mechanical Design Technician Program, 66
Mechanical Drafting Courses (421), 115
Medical Assistant Courses (509), 120
Medical Assistant Program, 65
Medical Coding Courses (530), 130
Medical Coding Specialist Program, 67
Medical Laboratory Technician Courses (513), 124
Medical Laboratory Technician Program, 67
Medical Office Mid-Management Program, 68
Medical Secretary Program, 68
Medical Transcriptionist Program, 69
Memberships, 15
Metallurgy Course (422), 115
Metallurgy Course (613), 136
Microcomputer labs, 13
Millwright, apprenticeship, 32
Minority recruitment and retention, 24
Mitzvah Statement, ii
Misty Theater, 14
Motorcycle, Marine and Outdoor Power Equipment Courses (461), 116
Motorcycle, Marine and Outdoor Power Equipment Technician Program, 69
Music Courses (805), 142
Music (co-curricular), 27
N
Natural Science Courses (806), 143
New College Singers, 27
Nonacademic probation or dismissal, 8
Nonresident fee, 18
Nursing Assistant Program, 69
Nursing-Associate Degree Courses (510), 121
Nursing-Associate Degree Program, 39
Academic standards, 7
Withdrawals, 7
O
Occupational Therapy Technician Courses (514), 125
Occupational Therapy Technician Program, 70
Office Assistant Program, 70
Office Technology Courses (106), 93
Optical Dispensary, 14
Optometric Technician Courses (516), 127
Optometric Technician Program, 71
Organizations, student, 26
Outreach Services, 14
Outside employment, 6
P
PAC (Programs and Activities Council), 25
Painting and Decorating, apprenticeship, 33
Parking, 3
Payment of fees, 18
Pharmacy Technician Courses (536), 132
Pharmacy Technician Program, 71
Phone directory, 166
Photography Courses (203), 104
<table>
<thead>
<tr>
<th>A</th>
<th>Academy of Health Occupations, 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Bookstore, 12</td>
</tr>
<tr>
<td>C</td>
<td>Career Development, 28</td>
</tr>
<tr>
<td>D</td>
<td>Dental Hygiene Courses (514), 125</td>
</tr>
<tr>
<td>E</td>
<td>English as a Second Language (ESL) Courses (597), 131</td>
</tr>
<tr>
<td>F</td>
<td>Fitness and Wellness Program, 108</td>
</tr>
<tr>
<td>G</td>
<td>Graduation, 98</td>
</tr>
<tr>
<td>H</td>
<td>Human Services Counseling Program, 84</td>
</tr>
<tr>
<td>I</td>
<td>Information Technology Program, 80</td>
</tr>
<tr>
<td>J</td>
<td>Job search, 21</td>
</tr>
<tr>
<td>K</td>
<td>Kinesthetic Program, 106</td>
</tr>
<tr>
<td>L</td>
<td>Language, 147</td>
</tr>
<tr>
<td>M</td>
<td>Leadership Development, 28</td>
</tr>
<tr>
<td>N</td>
<td>Nursing Assistant Program, 74</td>
</tr>
<tr>
<td>O</td>
<td>Ophthalmic Biomedical Technology Program, 79</td>
</tr>
<tr>
<td>P</td>
<td>Police Science Program, 72</td>
</tr>
<tr>
<td>Q</td>
<td>Practice Teaching, 28</td>
</tr>
<tr>
<td>R</td>
<td>Radiography Program, 74</td>
</tr>
<tr>
<td>S</td>
<td>Satellite campuses, 12</td>
</tr>
<tr>
<td>T</td>
<td>Technical and Industrial Department, 34</td>
</tr>
<tr>
<td>U</td>
<td>Used Book Sale, 12</td>
</tr>
<tr>
<td>V</td>
<td>Veterinary Technician Program, 79</td>
</tr>
<tr>
<td>W</td>
<td>Workplace education programs, 29</td>
</tr>
</tbody>
</table>
# PHONE DIRECTORY

## Campuses & Centers

<table>
<thead>
<tr>
<th>Campuses &amp; Centers</th>
<th>Phone Number</th>
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<tr>
<td>Truax Campus</td>
<td>(608)246-6100</td>
<td>(608)246-6880</td>
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<tr>
<td>Downtown Ed. Center</td>
<td>(608)258-2300</td>
<td>(608)258-2415</td>
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<tr>
<td>Commercial Ave. Center</td>
<td>(608)246-5202</td>
<td>(608)246-5203</td>
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<tr>
<td>Fire Service Center</td>
<td>(608)246-6911</td>
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<tr>
<td>South Madison Ed. Center</td>
<td>(608)255-6568</td>
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<tr>
<td>Stoughton Ed. Center</td>
<td>(608)259-2935</td>
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<tr>
<td>MATC-Fort Atkinson</td>
<td>(414)563-6611</td>
<td>(414)563-7059</td>
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<tr>
<td>MATC-Portage</td>
<td>(608)742-2151</td>
<td>(608)742-3386</td>
</tr>
<tr>
<td>MATC-Reedsburg</td>
<td>(608)524-4386</td>
<td>(608)524-8424</td>
</tr>
<tr>
<td>MATC-Watertown</td>
<td>(414)261-3776</td>
<td>(414)261-3768</td>
</tr>
<tr>
<td>Toll Free in Wisconsin</td>
<td>(800)322-6282</td>
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## Toll Free in Wisconsin

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## For information in Madison, call:

| Administration               | 246-6678 |
| Admissions                   | 246-6205 |
| Affirmative Action Officer   | 246-6045 |
| Agriscience & Technology     | 246-6101 |
| Alternative Learning         | 258-2440 |
| Adult Basic Education        | 258-2440 |
| Adult & Continuing Education | 246-6262 |
| Adult & Continuing Education (Dane County) | 258-2459 |
| Alumni Coordinator           | 246-6440 |
| Apprenticeship               | 246-5202 |
| Art                          | 246-6002 |
| Athletic Director            | 246-6099 |
| Bookstore                    | 258-2417 |
| Business                     | 246-6017 |
| Business & Industry Relations| 246-6003 |
| Counseling Center            | 258-2335 |
| Career Planning              | 258-2373 |
| Child & Family Center        | 246-6089 |
| Culinary Trades              | 246-6076 |
| Curriculum                   | 246-2424 |
| English As A Second Language | 246-6369 |
| Financial Aid                | 258-2413 |
| Fire Education Center        | 246-6170 |
| Foundation                   | 246-6911 |
| GED Program                  | 246-6441 |
| Information                  | 258-2440 |
| Testing Records              | 258-2481 |
| General Education            | 246-6246 |
| Gymnasium Ticket Window      | 246-6094 |
| Health Occupations           | 246-6540 |
| Housing Information          | 246-6076 |
| Human & Protective Services  | 246-6661 |
| Human Resources              | 246-6904 |
| Institutional Advancement    | 246-6072 |
| Instructional Services       | 246-6080 |
| JTPA Program                 | 246-6194 |
| Job Opportunities Hotline    | 246-6906 |
| Job Placement                | 246-6401 |
| Library                      | 258-2499 |
| Lost and Found               | 246-6640 |
| Marketing                    | 246-6242 |
| Minority Recruitment         | 246-6551 |
| Music                        | 246-6596 |
| Off-Campus Courses           | 258-2321 |
| Outreach                     | 246-6012 |
| Parking                      | 259-2935 |
| Program Evaluations          | 258-2459 |
| Protective Services          | 246-6031 |
| Public Relations             | 258-2146 |
| Registration                 | 246-6777 |
| School Nurse                 | 246-6027 |
| SLANT                        | 246-6809 |
| Small Business Procurement Center | 258-2330 |
| Special Needs                | 246-6791 |
| Student Activities & Campus Organizations | 258-2965 |
|                      | 246-6228 |
| Student Government           | 246-6107 |
| Tech Prep                    | 258-2409 |
| Technical & Industrial       | 246-6802 |
| Telecommunications           | 246-6050 |
| Teleconferences              | 246-6152 |
| Telecourses                  | 246-6288 |
| Theater Box Office           | 246-6006 |
| TDD (Hearing Impaired)       | 246-6663 |
| Tours                        | 246-6076 |
| Transcript Requests          | 246-6214 |
| Veterans Assistance          | 246-6038 |
| Wellness-Intramural Supervisor| 246-6093 |