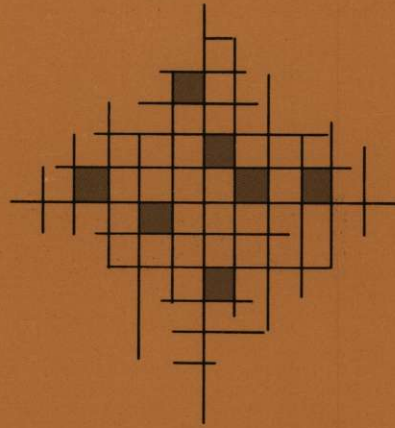


YOUR · COLLEGE · FOR · CAREERS

N · T · I · D

COURSES



1989-90

*National Technical Institute for the Deaf  
A College of Rochester Institute of Technology*

# Quick Reference Telephone Directory

|  | Voice    | TDD  |
|--|----------|------|
| Career Development Programs Administration . . . . .   | 475-6317 | 6317 |
| Career Outreach and Admissions . . . . .               | 6700     | 6173 |
| Communication Programs . . . . .                       | 6300     | 6300 |
| Educational Support Services Programs . . . . .        | 6433     | 6433 |
| Financial Aid - RIT . . . . .                          | 2186     | 6909 |
| General Education Programs . . . . .                   | 6297     | 6297 |
| Housing-RIT . . . . .                                  | 2572     | 2113 |
| Institute Director . . . . .                           | 6419     | 6419 |
| Intercom Office . . . . .                              | 4065     | 4591 |
| NTID Main Phone . . . . .                              | 6400     | 2181 |
| NTID Dean . . . . .                                    | 6314     | 6314 |
| Public Affairs . . . . .                               | 6824     | 6824 |
| Residence Halls 24-Hour Desk . . . . .                 | 6149     | 2894 |
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| School of Visual Communication Careers . . . . .       | 6468     | 6468 |
| Technical Assistance Programs Administration . . . . . | 6302     | 6302 |
| Visitors:  |          |      |
| Prospective Students . . . . .                         | 6318     | 6318 |
| All Others . . . . .                                   | 6405     | 2181 |
| VR Billing Coordinator . . . . .                       | 2080     | 2960 |

## Accreditation

The Institute is chartered by the legislature of the State of New York and accredited by the Middle States Association of Colleges and Schools. In addition to institutional accreditation, some curricula are accredited by appropriate professional accreditation bodies.

This bulletin was produced by the National Technical Institute for the Deaf (NTID), a college of Rochester Institute of Technology (RIT), through an agreement between RIT and the U.S. Department of Education.

RIT admits and hires men and women, veterans, and disabled individuals of any race, color, national or ethnic origin, or marital status, in compliance with all appropriate legislation, including the Age Discrimination Act.

## Academic Calendar 1989-90

|                | Day<br>College-<br>Open<br>Registration       | Classes<br>Begin | Last Day<br>of Classes | Exam<br>Week | No<br>Classes                         |
|----------------|---|------------------|------------------------|--------------|---------------------------------------|
| SVP            | Aug. 3-5<br>(move-in and<br>orientation)      | Aug. 7           | Aug. 31                |              |                                       |
| Fall Quarter   | Sept. 6<br>(new and<br>returning<br>students) | Sept. 7          | Nov. 15                | Nov. 17-21   | Nov. 22-30                            |
| Winter Quarter | Dec. 1  | Dec. 4           | Feb. 20                | Feb. 21-24   | Dec. 23-<br>Jan. 2<br>Feb. 28-March 4 |
| Spring Quarter | March 5                                       | March 6          | May 14                 | May 15-18*   | May 20-29                             |
| Summer Quarter |   | May 30           | Aug. 8                 | Aug. 9-11    | July 4                                |

\*Commencement - May 19, 1990

## Introduction

This course bulletin provides course listings and examples of typical course sequences for students enrolled in programs at the National Technical Institute for the Deaf, a college of Rochester Institute of Technology. It is meant to be used in conjunction with the *1988-90 NTID Catalog*. For more detailed information about academic policies/rules, financial aid, placement statistics, and academic programs, consult the *Catalog*.

## About This Bulletin

This course bulletin does not constitute a contract between Rochester Institute of Technology (RIT) and students who are admitted to the National Technical Institute for the Deaf (NTID) on either a collective or individual basis. It represents RIT's best academic, social, and financial planning for NTID at the time of publication. In order to keep programs current and relevant, course and curriculum changes; modifications of tuition, fees, dormitory, meals, and other charges; plus unforeseen changes in other aspects of RIT life sometimes occur after the bulletin has been printed, and before changes can be incorporated in a later edition of the same publication. Because of this, RIT does not assume a contractual obligation with NTID students for the content of this bulletin.

For more information concerning other programs of study at RIT, write or phone:

### **Rochester Institute of Technology**

National Technical Institute  
for the Deaf  
Department of Career Outreach  
and Admissions  
One Lomb Memorial Drive  
Post Office Box 9887  
Rochester, New York 14623-0887

(716) 475-6700 (Voice)  
475-6173 (TDD)

### **Placement**

Historically, more than 95 percent of NTID's graduates entering the labor force have found jobs. Eighty percent work in business and industry; 15 percent in government; and five percent in education. Of those who were not seeking employment, more than 75 percent continued their education. The rest are homemakers, permanently not looking for employment, or temporarily not looking for employment. Graduates are employed nationwide in a variety of positions. For more information about NTID's placement statistics, consult the *1988-90 NTID Catalog* or contact the Division of Career Opportunities, (716) 475-6464 (Voice/TDD).

### **Attrition**

Attrition is that percentage of a class that withdraws from a college within five years from entering without receiving any degree. When compared with a national sample of two- and four-year public and private institutions with varying selectivity criteria, NTID's attrition rate of 47 percent emerges in a relatively average position.

### **Financial Aid**

NTID students received nearly \$4.5 million in financial aid in FY88. The average award per student was \$2,298. The types of aid received include the NTID Grant-in-Aid, Vocational Rehabilitation Assistance, Pell Grants, state grants, state loans, National Direct Student Loans, private scholarships, NTID Alumni Scholarships, and College Work-Study Programs. For more detailed information about financial aid, contact the RIT Financial Aid Office.

### **Rochester Institute of Technology**

Student Financial Aid Office  
RIT/NTID Financial Aid Counselor  
One Lomb Memorial Drive  
Post Office Box 9887  
Rochester, New York 14623-0887  
(716) 475-2186 (Voice)  
475-6909 (TDD)

# Course Descriptions

## School of Business Careers

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# Course Numbering

Each course is identified by its title and two numbers.

The **alpha-numeric course number** that appears before the course descriptions in each discipline in other RIT course bulletins is the official RIT course number. This number will appear on grade reports, transcripts, and other official correspondence. It means:

**First letter:** College offering the course

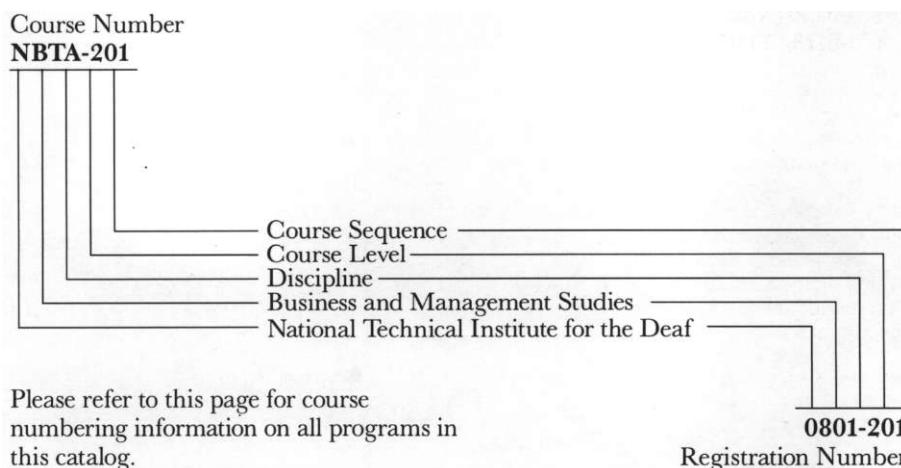
**Second and third letters:** School or department of that college

**Fourth letter:** Discipline of interest

**First number:** Course level: 0 = Non-credit; 1 = Diploma; 2 or 3 = Lower level degree courses

**Second and third numbers:** Course differentiation and sequencing

Directly below the course title in the course description in this catalog is the **registration number**. You must use this number when you register for a course because the Institute's computer cannot read the alpha-numeric number.



Please refer to this page for course numbering information on all programs in this catalog.

# School of Business Careers

## Applied Accounting

### Career Exploration: Accounting Registration #0801-100

This course is designed to help students collect the information necessary to make an appropriate decision regarding a career in accounting. Students learn about the nature of accounting jobs, work environments, career options, and program requirements through a combination of group and individual activities that include presentations by faculty and related professionals, panel discussions, field trips, class observations, and student interviews.

CLASS 1, CREDIT 1 (F, W, S)

### General Accounting I

#### Registration #0801-201

This course is an introduction to accounting for both accounting and non-accounting students. Topics covered are the basic accounting equation; the recording of transactions using debits and credits; general and subsidiary ledgers; and the accounting cycle, including recording transactions for service and merchandising enterprises, preparing trial balances, adjusting and closing processes, and preparing basic financial statements. Spreadsheet applications are used on microcomputers.

CLASS 6, CREDIT 3(F)

### General Accounting II

#### Registration #0801-202

This course is a continuation of General Accounting I for both accounting and non-accounting students. Topics covered include the calculation of interest on notes and the discounting of notes, adjustment for uncollectable accounts, merchandise inventory systems and calculations, the recording of transactions in special journals, internal control, and the voucher system. Coursework includes a practice set that applies accounting concepts in a simulated business situation. Spreadsheet applications are used on microcomputers.

CLASS 6, CREDIT 3 (W)

PREREQUISITE: Grade of C or better in 0801-201

### Fundamentals of Economics I, II

#### Registration #0801-231, 232

This two-course sequence gives an overview of micro- and macroeconomic concepts. Students examine economic problems in a rational manner by learning the fundamental processes of economic analysis and the skills of economic reasoning. These courses include selected knowledge and skills from the economic discipline presented in the form of concepts and understandings deemed most important to economic literacy for students.

CLASS 3, CREDIT 3 (0801-231-W, 0801-232-S)

PREREQUISITES: Applied accounting associate degree status, 0804-101

## Applied Accounting: Diploma

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                         | Cr. Hrs. |
|----------|-------------------------|----------|
| 0804-101 | Orientation to Business | 3        |
| 0804-111 | Beginning Typing I      | 2        |
| 0804-211 | Business Procedures I   | 3        |
| 0817-120 | Basic Mathematics       | 3        |
| 0847-101 | Job Search Process      | 1        |
|          | Communication           | 2        |
|          | English                 | 4        |
|          |                         | 18       |

#### Winter Term

|          |                        | Cr. Hrs. |
|----------|------------------------|----------|
| 0804-110 | Business English       | 3        |
| 0804-112 | Beginning Typing II    | 2        |
| 0804-212 | Business Procedures II | 3        |
| 0847-100 | Freshman Seminar       | 2        |
|          | Communication          | 2        |
|          | English                | 4        |
|          | Physical Education     | 0        |
|          |                        | 16       |

#### Spring Term

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0804-113 | Beginning Typing III                  | 2        |
| 0804-213 | Business Procedures III               | 3        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | Physical Education                    | 0        |
|          |                                       | 14       |

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0801-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

##### Second Year

|          |  |    |
|----------|--|----|
| 0801-201 | General Accounting I                   | 3  |
| 0804-221 | Advanced Typing I                      | 3  |
| 0804-284 | Fundamentals of Management             | 3  |
| 0817-141 | Fundamentals of College Mathematics II | 3  |
|          | Communication                          | 2  |
|          | English                                | 4  |
|          | Physical Education                     | 0  |
|          |  | 18 |

|          |   |    |
|----------|---|----|
| 0801-202 | General Accounting II                                 | 3  |
| 0802-210 | Data Processing for Business Occupations (Accounting) | 3  |
|          | General Education Course Elective                     | 2  |
|          | Communication   | 2  |
|          | English   | 4  |
|          |   | 14 |

|          |  |   |
|----------|--|---|
| 0801-251 | Applied Accounting I                         | 4 |
| 0804-286 | Fundamentals of Marketing                    | 3 |
|          | or   |   |
| 0847-147 | Law and Society                              | 2 |
| 0847-102 | Life After College                           | 1 |
|          | General Education Course Elective (optional) | 2 |
|          | Communication                                | 2 |
|          | English Elective                             | 4 |

13-16

**Applied Accounting I  
Registration #0801-251**

This course for accounting students is a continuation of General Accounting I and II. Topics covered include a computerized review of the accounting cycle and financial reports, the components of a payroll system, the calculation and recording of employee earnings and employer payroll taxes, and the recording and adjusting of deferrals and accruals, partnerships, and depreciation or amortization of assets. Coursework includes a computerized practice set designed to summarize General Accounting I and II and Applied Accounting I in a simulated business situation.

CLASS 6, CREDIT 4 (S)

PREREQUISITE: Grade of C or better in 0801-202

**Applied Accounting II  
Registration #0801-252**

This course introduces students to cost accounting with an emphasis on job order costing. Topics covered include manufacturing statements; cost theory; and integration of materials, labor, and overhead to the computerized job cost situation. The course culminates with practical application of course content through a practice set. Computer applications include spreadsheets.

CLASS 6, CREDIT 4 (F)

PREREQUISITE: Grade of C or better in 0801-251

**Applied Accounting III  
Registration #0801-253**

This course is a continuation of cost accounting, with particular concentration on process and managerial aspects of cost accounting. Topics covered include average and FIFO process costing methods, equivalent units, multiple products, changes in units, budgeting, cost classification, and computerized applications. Computer applications include spreadsheets, graphics, and data base.

CLASS 6, CREDIT 4 (W)

PREREQUISITE: Grade of C or better in 0801-252

**Applied Accounting IV  
Registration #0801-254**

This course consists of managerial accounting topics and concepts. Topics covered include financial analysis, accounting concepts and principles, statement of cash flow, and corporate accounting. Computer applications include spreadsheets.

CLASS 6, CREDIT 4 (S)

PREREQUISITE: Grade of C or better in 0801-253

**Applied Accounting Techniques  
Registration #0801-260**

This course gives students an opportunity to reinforce and apply accounting topics and skills previously studied. Students work in a simulated accounting office as accounting clerks and perform a variety of general and process costing duties. Computer applications include cost accounting, general ledger, spreadsheets, graphics, and data base.

CLASS 6, CREDIT 2 (S)

PREREQUISITE: Grade of C or better in 0801-253

**Applied Accounting: A.A.S. Degree**

**Typical Course Sequence**

**Fall Term**

| First Year |                         | Cr. Hrs. |
|------------|-------------------------|----------|
| 0804-101   | Orientation to Business | 3        |
| 0804-111   | Beginning Typing I      | 2        |
| 0804-211   | Business Procedures I   | 3        |
| 0817-120   | Basic Mathematics       | 3        |
| 0847-101   | Job Search Process      | 1        |
|            | Communication           | 2        |
|            | English                 | 4        |
|            |                         | 18       |

**Winter Term**

| Winter Term |                        | Cr. Hrs. |
|-------------|------------------------|----------|
| 0804-110    | Business English       | 3        |
| 0804-112    | Beginning Typing II    | 2        |
| 0804-212    | Business Procedures II | 3        |
| 0847-100    | Freshman Seminar       | 2        |
|             | Communication          | 2        |
|             | English                | 4        |
|             | Physical Education     | 0        |
|             |                        | 16       |

**Spring Term**

| Spring Term |                         | Cr. Hrs. |
|-------------|-------------------------|----------|
| 0804-113    | Beginning Typing III    | 2        |
| 0804-213    | Business Procedures III | 3        |
| 0817-140    | Fundamentals of College |          |
|             | Mathematics I           | 3        |
|             | Communication           | 2        |
|             | English                 | 4        |
|             | Physical Education      | 0        |
|             |                         | 14       |

**Summer**

0801-299 Co-op Work Experience

**Second Year**

|          |                         |    |
|----------|-------------------------|----|
| 0801-201 | General Accounting I    | 3  |
| 0804-221 | Advanced Typing I       | 3  |
| 0804-284 | Fundamentals of         |    |
|          | Management              | 3  |
| 0817-141 | Fundamentals of College |    |
|          | Mathematics II          | 3  |
|          | Communication           | 2  |
|          | English                 | 4  |
|          | Physical Education      | 0  |
|          |                         | 18 |

|          |                       |    |
|----------|-----------------------|----|
| 0801-202 | General Accounting II | 3  |
| 0802-210 | Data Processing for   |    |
|          | Business Occupations  | 3  |
|          | (Accounting)          |    |
|          | General Education     |    |
|          | Course Elective       | 2  |
|          | Communication         | 2  |
|          | English               | 4  |
|          |                       | 14 |

|          |                         |    |
|----------|-------------------------|----|
| 0801-251 | Applied Accounting I    | 4  |
| 0804-286 | Fundamentals of         |    |
|          | Marketing               | 3  |
| 0817-142 | Fundamentals of College |    |
|          | Mathematics III         | 3  |
|          | Liberal Arts            | 4  |
|          | Communication           | 2  |
|          |                         | 16 |

**Summer**

0801-299 Co-op Work Experience

**Third Year**

|          |                       |    |
|----------|-----------------------|----|
| 0801-252 | Applied Accounting II | 4  |
|          | Liberal Arts          | 4  |
|          | Liberal Arts          | 4  |
|          |                       | 12 |

|          |                        |    |
|----------|------------------------|----|
| 0801-231 | Economics I            | 3  |
| 0801-253 | Applied Accounting III | 4  |
| 0847-147 | Law and Society        | 2  |
|          | Liberal Arts           | 4  |
|          |                        | 13 |

|          |                       |    |
|----------|-----------------------|----|
| 0801-232 | Economics II          | 3  |
| 0801-254 | Applied Accounting IV | 4  |
| 0801-260 | Applied Accounting    |    |
|          | Techniques            | 2  |
| 0847-102 | Life After College    | 1  |
|          | Liberal Arts          | 4  |
|          | Genera] Education     |    |
|          | Course Elective       | 2  |
|          |                       | 16 |

**Co-op Work Experience  
Registration #0801-299  
CREDIT 0 (Su)**

**Independent Study  
Registration #0801-399  
CREDIT Variable**

# Business Occupations/ Business Technology/Office Technologies

## Career Exploration: Office Technologies Registration #0804-100

This course is designed to help students collect information necessary to make an appropriate decision regarding a career in office technologies. Students learn about the nature of office practice and procedures, work environments, career options, and program requirements through a combination of group and individual activities that include presentations by faculty members and related professionals, panel discussions, field trips, class observations, and student interviews.  
CLASS 1, CREDIT 1 (F, W, S)

## Orientation to Business Registration #0804-101

This course is a broad overview of the form and structure of American business. It provides students with a basic knowledge of the history, organization, and operation of business and its particular vocabulary. Students use a microcomputer in a market simulation.  
CLASS 3, CREDIT 3 (F, W, S)

## Payroll Records Management Registration #0804-108

This course provides practical working knowledge and skills necessary to perform the various recordkeeping, calculating, and reporting activities associated with payroll systems. Students perform both manual and automated (using microcomputers) payroll recordkeeping procedures.  
CLASS 4, CREDIT 2 (F, S)  
PREREQUISITE: Data processing diploma status

## Business English Registration #0804-110

This self-paced course provides proofreading and editing skills as they relate to typewritten communications. Course content includes rules for word division, capitalization, numbers, abbreviation style, spelling, and personal business letter writing. This course is designed specifically for students enrolled in courses in the business occupations department.  
CLASS 3, CREDIT 3 (W, S)

## C.O.R.E. Certificate Program — Business Occupations

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                       | Cr. Hrs. |
|----------|-----------------------|----------|
| 0804-111 | Beginning Typing I    | 2        |
| 0804-211 | Business Procedures I | 3        |
| 0817-120 | Basic Mathematics     | 3        |
| 0847-101 | Job Search Process    | 1        |
|          | Communication         | 2        |
|          | English               | 4        |
|          |                       | 15       |

##### Second Year

|          |                     |    |
|----------|---------------------|----|
| 0804-221 | Advanced Typing I   | 3  |
| 0847-147 | Law and Society     | 2  |
|          | Communication       | 2  |
|          | English             | 4  |
|          | General Education   |    |
|          | Course Elective* or |    |
|          | Business Elective"  | 2  |
|          |                     | 13 |

\*Recommended General Education Courses for Business Majors

|          |  |   |
|----------|--|---|
| 0847-106 | Personal Finance                       | 2 |
| 0847-110 | Personal Development                   | 2 |
| 0847-126 | Leadership                             |   |
|          | Development                            | 2 |
| 0847-129 | Assertiveness Training                 | 2 |
| 0847-162 | The World of Work                      | 1 |
| 0847-163 | Interpersonal Relationships on the Job | 2 |

#### Winter Term

|          |                         | Cr. Hrs. |
|----------|-------------------------|----------|
| 0804-101 | Orientation to Business | 3        |
| 0804-112 | Beginning Typing II     | 2        |
| 0804-212 | Business Procedures II  | 3        |
| 0847-100 | Freshman Seminar        | 2        |
|          | Communication           | 2        |
|          | English                 | 4        |
|          |                         | 16       |

#### Summer

0804-299 Co-op Work Experience

|          |                    |    |
|----------|--------------------|----|
| 0804-222 | Advanced Typing II | 3  |
| 0847-102 | Life After College | 1  |
|          | Communication      | 2  |
|          | English            | 4  |
|          | General Education  |    |
|          | Course Elective*   | 2  |
|          |                    | 12 |

\*\*Recommended Business Electives

|          |                            |   |
|----------|----------------------------|---|
| 0801-201 | General Accounting         | 3 |
| 0804-284 | Fundamentals of Management | 3 |
| 0804-286 | Fundamentals of Marketing  | 3 |

#### Spring Term

|          |                         | Cr. Hrs. |
|----------|-------------------------|----------|
| 0804-110 | Business English        | 3        |
| 0804-113 | Beginning Typing III    | 2        |
| 0804-213 | Business Procedures III | 3        |
|          | Communication           | 2        |
|          | English                 | 4        |
|          | Physical Education      | 0        |
|          |                         | 14       |

**Beginning Typing I, II, III**  
**Registration #0804-111, 112, 113**

These courses are for students with limited typing experience and for those who type below 30 net words per minute. The courses focus on keyboard training, skill development, and basic formatting. Business correspondence, reports, and tables are produced on electronic typewriters and microcomputers using WordPerfect software. Students are expected to exit Beginning Typing II with a net speed of 20 words per minute for five minutes and to exit Beginning Typing III with a net speed of 30 words per minute for five minutes.

CLASS 5, CREDIT 2 (F, W, S)  
 PREREQUISITES: Grade of C or better in 0804-111 for 0804-112  
 0804-112 for 0804-113

**Key boarding**  
**Registration #0804-114**

This course is offered to students who possess 0-20 words per minute keyboarding speed. The focus of the course is to facilitate inputting of alphabetic, numeric, and other character information on a microcomputer and on an electric typewriter using a standard keyboard. Students are expected to exit this course with a keyboarding speed of 25 words per minute for three minutes. This course is open to all NTID students.

CLASS 4, CREDIT 2 (F, W, S)

**Introduction to Data Processing**  
**Registration #0804-124**

This course gives students a background in data processing. It presents the concepts and techniques in the processing of data, and is directed to the needs and requirements of students.

CLASS 2, CREDIT 2 (F, W, S)

**Business Procedures I, II, III**  
**Registration #0804-211, 212, 213**

This sequence of courses develops basic skills in current business procedures related to the general office function. Skills include the use of electronic mail; current records management systems; the correct use of business machines; introduction of the accounting equation; and the manual and automated computerized keeping of payroll records, accounts receivable, and accounts payable records using Lotus 1, 2, 3 software. Students develop skills that are applicable to a variety of office settings.

CLASS 5, CREDIT 3 (0804-211-F, 0804-212-W, 0804-213-S)

**Business Technology: A.O.S. Degree**  
**Typical Course Sequence**

**Fall Term**

**Winter Term**

**Spring Term**

First Year

|          |                         | Cr. Hrs. |          |                        | Cr. Hrs. |          |                                       | Cr. Hrs. |
|----------|-------------------------|----------|----------|------------------------|----------|----------|---------------------------------------|----------|
| 0804-101 | Orientation to Business | 3        | 0804-110 | Business English       | 3        | 0804-113 | Beginning Typing III                  | 2        |
| 0804-111 | Beginning Typing I      | 2        | 0804-112 | Beginning Typing II    | 2        | 0804-213 | Business Procedures III               | 3        |
| 0804-211 | Business Procedures I   | 3        | 0804-212 | Business Procedures II | 3        | 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0817-120 | Basic Mathematics       | 3        | 0847-100 | Freshman Experience    | 2        |          | Communication                         | 2        |
| 0847-101 | Job Search Process      | 1        |          | English                | 4        |          | English                               | 4        |
|          | Communication           | 2        |          | Physical Education     | 0        |          | Physical Education                    | 0        |
|          | English                 | 4        |          |                        | 16       |          |                                       | 14       |
|          |                         | 18       |          |                        |          |          |                                       |          |

**Summer**

0801-299 Co-op Work Experience

**Fall Term**

**Winter Term**

**Spring Term**

Second Year

|          |  |   |          |  |    |          |                      |    |
|----------|--|---|----------|--|----|----------|----------------------|----|
| 0801-201 | General Accounting I                   | 3 | 0801-202 | General Accounting II                    | 3  | 0801-251 | Applied Accounting I | 4  |
| 0804-221 | Advanced Typing I                      | 3 | 0802-210 | Data Processing for Business Occupations | 3  | 0804-301 | Word Processing I    | 4  |
| 0804-284 | Fundamentals of Management             | 3 | 0862-144 | Clear Thinking and Writing               | 4  | 0862-189 | Professional Writing | 3  |
| 0817-141 | Fundamentals of College Mathematics II | 3 |          | Communication                            | 2  |          | General Education    | 3  |
|          | English                                |   |          |  | 12 |          |                      | 14 |

**Summer**

0801-299 Co-op Work Experience

Third Year

|          |  |    |          |  |    |          |   |    |
|----------|--|----|----------|--|----|----------|---|----|
| 0801-252 | Applied Accounting II                    | 4  | 0801-253 | Applied Accounting III                           | 4  | 0801-260 | Applied Accounting Techniques                       | 2  |
| 0804-302 | Word Processing II                       | 4  | 0804-291 | Applied Business Techniques                      | 2  | 0804-286 | Fundamentals of Marketing                           | 3  |
| 0847-147 | Law and Society                          | 3  | 0847-167 | The Human Experience: The Individual and Society | 4  | 0847-102 | Life After College                                  | 1  |
| 0847-166 | The Human Experience: An Individual Life | 4  |          | Communication                                    | 2  | 0847-168 | The Human Experience: The Individual and Technology | 4  |
|          |  | 15 |          |  | 12 |          | Communication                                       | 2  |
|          |  |    |          |  |    |          |   | 12 |

**Advanced Typing I**  
**Registration #0804-221**

The emphasis of this course is on the improvement of basic skills and their application to a variety of realistic office projects. Students type correspondence, reports, manuscripts, business forms, and tabulations on a microcomputer using WordPerfect software. Applied accounting and office technologies students are expected to exit with a net speed of 40 words per minute for five minutes.

CLASS 5, CREDIT 3 (F, W, S)  
 PREREQUISITE: Grade of C or better in 0804-113

**Advanced Typing II**  
**Registration #0804-222**

This course emphasizes advanced typing skills and their application on a microcomputer using WordPerfect software. Students complete several projects related to areas such as sales, government, executive, general, and word processing. Students must exit with a net speed of 50 words per minute for five minutes.

CLASS 5, CREDIT 3 (F, W, S)  
 PREREQUISITE: Grade of C or better in 0804-221



### Office Technologies Seminar Registration #0804-230

This course gives students an opportunity to prepare for employment through field trips, mentoring, and guest lectures. Topics for discussion are identified by students enrolled in the seminar. Topics covered may include time management, career development, and personal/social development skills necessary for job success. Students are expected to participate in planning class sessions.  
CLASS 4, CREDIT 2 (S)  
PREREQUISITE: Office technology diploma status

### Fundamentals of Management Registration #0804-284

This course focuses on theory and practice basic to the management process. Students use case studies, lectures, and simulations to study planning, organizing, directing, staffing, and controlling functions. The course also introduces students to motivation and leadership theory as it relates to the role of a manager.

CLASS 3, CREDIT 3 (F, W)  
PREREQUISITE: 0804-101

### Fundamentals of Marketing Registration #0804-286

This course is an introduction to the field of marketing and its strategies. Topics include consumer behavior and its effect in the marketplace, product research and planning, pricing, distribution channels, marketing institutions, advertising and promotion, and organization.

CLASS 3, CREDIT 3 (S)  
PREREQUISITE: 0804-101

### Small Business Organization and Management

#### Registration #0804-290

This is an elective course designed for business students but available to students from another technical program who have completed the prerequisites and who have a desire to learn entrepreneurial skills for starting a business. Each student will write a business plan describing a selected business.  
CLASS 4, CREDIT 3 (S)  
PREREQUISITES: 0801-201, 0804-284 or 0804-286

### Applied Business Techniques Registration #0804-291

This course gives students an opportunity to review skill-oriented coursework on a micro-computer and electric typewriter prior to graduation and job entry. Skill review includes production and speed typing, business machines, payroll procedures, records-management techniques, and word processing operations and applications using various word processing software packages.  
CLASS 3, CREDIT 2 (S)  
PREREQUISITE: 0804-302

### Co-op Work Experience Registration #0804-299 CREDIT 0 (Su)

## Office Technologies: Diploma

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                         | Cr. Hrs. |
|----------|-------------------------|----------|
| 0804-101 | Orientation to Business | 3        |
| 0804-111 | Beginning Typing I      | 2        |
| 0804-211 | Business Procedures I   | 3        |
| 0817-120 | Basic Mathematics       | 3        |
| 0847-101 | Job Search Process      | 1        |
|          | Communication           | 2        |
|          | English                 | 4        |
|          |                         | 18       |

##### Second Year

|          |                            |    |
|----------|----------------------------|----|
| 0801-201 | General Accounting I       | 3  |
| 0804-221 | Advanced Typing I          | 3  |
| 0804-284 | Fundamentals of Management | 3  |
|          | Communication              | 2  |
|          | English                    | 4  |
|          |                            | 15 |

#### Winter Term

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0804-112 | Beginning Typing II                   | 2        |
| 0804-212 | Business Procedures II                | 3        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0847-100 | Freshman Seminar                      | 2        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | Physical Education                    | 0        |
|          |                                       | 16       |

#### Summer

0804-299 Co-op Work Experience

#### Spring Term

|          |                         | Cr. Hrs. |
|----------|-------------------------|----------|
| 0804-110 | Business English        | 3        |
| 0804-113 | Beginning Typing III    | 2        |
| 0804-213 | Business Procedures III | 3        |
|          | Communication           | 2        |
|          | English                 | 4        |
|          | Physical Education      | 0        |
|          |                         | 14       |

### Word Processing I Registration #0804-301

This self-paced course provides an introduction to basic word processing concepts and a discussion of various types of word processing office systems and procedures. Students learn basic documentation capabilities of the Xerox 6085 Professional Computer system.  
CLASS 4, CREDIT 4 (F, W, S)  
PREREQUISITE: 0804-222

### Word Processing II Registration #0804-302

This self-paced course provides a continuation of the word processing concepts and applications presented in Word Processing I. Using the Xerox 6085 Professional Computer system, students learn applications, including creation of fill-in forms and tables and introduction to basic graphics.  
CLASS 4, CREDIT 4 (F, W, S)  
PREREQUISITE: 0804-301

**Word Processing III**  
**Registration #0804-303**

This self-paced course provides a continuation of the word processing concepts and applications presented in Word Processing II. Using the Xerox 6085 Professional Computer system, students learn procedures for creating basic business and data-driven graphics that are prepared in the office environment.

CLASS 4, CREDIT 4 (F, W, S)  
 PREREQUISITE: 0804-302

**Word Processing IV**  
**Registration #0804-304**

This self-paced course contains the concepts and applications for creating, maintaining, and printing files. Using the Xerox 6085 Professional Computer system and microcomputers, students will use files to create repetitive letters, lists, and reports. Students also will be exposed to advanced files.

CLASS 4, CREDIT 4 (F, W, S)  
 PREREQUISITE: 0804-303

**Office Typesetting Methods**  
**Registration #0804-310**

This elective course for students specializing in office technologies provides an introduction to the field of typesetting and telecommunications, utilizing word processing, phototypesetting, and microcomputer equipment. Students create documents on word processing equipment and electronically transmit them for typeset output on phototypesetting equipment. Current typesetting software programs that provide a working knowledge of microcomputer-based desktop typesetting also are introduced. In addition to required projects, students select and design documents of their choice.

CLASS 4, CREDIT 3 (F, S)  
 PREREQUISITES: 0804-303, English Composition

**Independent Study**  
**Registration #0804-399**  
 CREDIT Variable

**Office Technologies: A.A.S. Degree**

**Typical Course Sequence**

**Fall Term**

First Year

|          |                         | Cr. Hrs. |
|----------|-------------------------|----------|
| 0804-101 | Orientation to Business | 3        |
| 0804-111 | Beginning Typing I      | 2        |
| 0804-211 | Business Procedures I   | 3        |
| 0817-120 | Basic Mathematics       | 3        |
| 0847-101 | Job Search Process      | 1        |
|          | Communication           | 2        |
|          | English                 | 4        |
|          |                         | 18       |

Second Year

|          |                            |    |
|----------|----------------------------|----|
| 0804-201 | General Accounting I       | 3  |
| 0804-221 | Advanced Typing I          | 3  |
| 0804-284 | Fundamentals of Management | 3  |
|          | Communication              | 2  |
|          | English                    | 4  |
|          |                            | 15 |

Third Year

|          |                    |    |
|----------|--------------------|----|
| 0804-302 | Word Processing II | 4  |
| 0847-147 | Law and Society    | 2  |
|          | General Education  |    |
|          | Course Elective    | 2  |
|          | Liberal Arts       | 4  |
|          |                    | 12 |

**Winter Term**

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0804-112 | Beginning Typing II                   | 2        |
| 0804-212 | Business Procedures II                | 3        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0847-100 | Freshman Seminar                      | 2        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | Physical Education                    | 0        |
|          |                                       | 16       |

**Summer**

0804-299 Co-op Work Experience

|          |  |    |
|----------|--|----|
| 0801-202 | General Accounting II                    | 3  |
| 0802-210 | Data Processing for Business Occupations | 3  |
| 0804-222 | Advanced Typing II                       | 3  |
|          | Communication                            | 2  |
|          | English                                  | 4  |
|          | Physical Education                       | 0  |
|          |  | 15 |

**Summer**

0804-299 Co-op Work Experience

**Spring Term**

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0804-110 | Business English                       | 3        |
| 0804-113 | Beginning Typing III                   | 2        |
| 0804-213 | Business Procedures III                | 3        |
| 0817-141 | Fundamentals of College Mathematics II | 3        |
|          | Communication                          | 2        |
|          | English                                | 4        |
|          | Physical Education                     | 0        |
|          |  | 17       |

|          |                             |    |
|----------|-----------------------------|----|
| 0804-230 | Office Technologies Seminar | 2  |
| 0804-286 | Fundamentals of Marketing   | 3  |
| 0804-301 | Word Processing I           | 4  |
|          | Communication               | 2  |
|          | Liberal Arts                | 4  |
|          |                             | 15 |

|          |                             |    |
|----------|-----------------------------|----|
| 0804-291 | Applied Business Techniques | 2  |
| 0804-304 | Word Processing IV          | 4  |
| 0847-102 | Life After College          | 1  |
|          | General Education           |    |
|          | Course Elective             | 2  |
|          | Liberal Arts                | 4  |
|          |                             | 13 |

# Data Processing

**Note:** Required laboratories may take place during evening hours or on Saturdays.

## Introduction to Data Processing

### Registration #0802-100

This course provides an overview of the fields of business data processing and computer science. It is intended for students who need skill development prior to full entry into the in-depth data processing program courses. Logic skill development and the use of microcomputers are emphasized.

CLASS 3, CREDIT 2 (F)

## Introduction to Business Programming

### Registration #0802-101

This course introduces students to the function of programming the computer. Using microcomputers, students learn to read, analyze, flowchart, and program various business applications. The course is the foundation for future programming courses and has a strong emphasis on developing logic skills.

CLASS 4, CREDIT 3 (F, W, S)

PREREQUISITES: Michigan Test score higher than 55 or California Reading Test score higher than 7.5, 0817-122

## Career Exploration — Data Processing

### Registration #0802-105

This course is designed to help students collect the information necessary to make appropriate decisions about possible careers in data processing. Students are given opportunities to explore their interest in data processing through a combination of hands-on experiences with computers, presentations by faculty members and outside professionals, field trips, class observations, and student/faculty interviews. The course offers a unique integration of technical instruction and career counseling that enhances students' decision-making and career-planning abilities.

CLASS 3, CREDIT 2 (F, W, S)

## On-Line Processing/Programming

### Registration #0802-120

In this course, students learn to build, edit, and list fields on computer terminals. Other topics include types of files, compiling, linking, and running programs on-line. This course is required for most programming courses that use the RIT computer system.

CLASS 2, CREDIT 2 (F)

PREREQUISITE: 0802-101

## Data Processing Technical

### Communications

### Registration #0802-125

In this course, students learn to read and write technical manuals, forms, instructions, and other types of communication used in the field of data processing.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES: California Reading Test score higher than 7.5, 0802-157

## Data Processing: Certificate

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0802-100 | Introduction to Data Processing       | 2        |
| 0802-157 | Beginning Computer Operations         | 1        |
| 0802-158 | Laboratory                            | 1        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0847-101 | Job Search Process Communication      | 2        |
|          | English                               | 4        |
|          |                                       | 14       |

##### Second Year

|          |  |    |
|----------|--|----|
| 0802-125 | Data Processing Technical Communications | 2  |
| 0802-162 | Computer Console Operations              | 1  |
| 0817-142 | Fundamentals of College Mathematics III  | 3  |
|          | Business Elective                        | 2  |
|          | Communication                            | 2  |
|          | English                                  | 4  |
|          | Physical Education                       | 0  |
|          |  | 14 |

#### Winter Term

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0802-170 | Utilities/JCL for Computers            | 2        |
| 0804-101 | Orientation to Business                | 3        |
| 0817-141 | Fundamentals of College Mathematics II | 3        |
| 0847-100 | Freshman Seminar                       | 2        |
|          | English                                | 4        |
|          |  | 14       |

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0802-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

#### Spring Term

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0802-101 | Introduction to Business Programming  | 3        |
| 0802-161 | Business Computers Systems Facilities | 2        |
| 0847-102 | Life After College                    | 1        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          |                                       | 12       |

**Beginning Computer Operations  
Registration #0802-157**

This course provides students with an understanding of the operation of modern computers. Peripheral devices, such as the CPU and off-line equipment, are introduced. CLASS 1, CREDIT 1 (F, W)  
COREQUISITE: 0802-158

**Beginning Computer Operations  
Laboratory  
Registration #0802-158**

Students are given hands-on experience with one or more computer systems. LAB 2, CREDIT 1 (F, W)  
COREQUISITE: 0802-157

**Business Computer Systems Facilities  
Registration #0802-161**

In this course, students study business computer systems. Topics covered include terminology used for hardware and software components and an introduction to concepts such as systems control programs, multi-programming, storage management, and library support. Initial discussions also are conducted on spooling and software creation. CLASS 2, LAB 1, CREDIT 2 (S)  
PREREQUISITE: 0802-101 or concurrent, 0802-157

**Computer Console Operations  
Registration #0802-162**

This course is designed to acquaint students with the operator's work area and initial functions. Indicator lights, the console control panel, and the keyboard are discussed. Course content covers the start-up of the computer (from power on) to the point where the operating system takes over. CLASS 1, LAB 1, CREDIT 1 (F)  
PREREQUISITE: 0802-161

**Utilities/JCL for Computers  
Registration #0802-170**

In this course, students learn the use of utilities as applicable to the operations environment. The writing of JCL for operations and for the production system is presented. Each student writes and submits a variety of JCLs for operation of utilities as well as for some production work. CLASS 2, LAB 1, CREDIT 2 (W, S)  
PREREQUISITE: 0802-157

**Computer Architecture  
Registration #0802-171**

In this course, students learn the hardware that makes up computer systems. Topics include channels, buses, transmission over lines, modems, and general hardware. CLASS 1, CREDIT 1 (F, W, S)  
PREREQUISITES: 0802-157, 0802-158

**Data Processing: Diploma  
Typical Course Sequence**

**Fall Term**

**First Year**

|          |  | Cr. Hrs.          |
|----------|--|-------------------|
| 0802-100 | Introduction to Data Processing          | 2                 |
| 0802-157 | Beginning Computer Operations            | 1                 |
| 0802-158 | Laboratory                               | 1                 |
| 0817-140 | Fundamentals of College Mathematics I    | 3                 |
| 0847-101 | Job Search Process Communication English | 1<br>2<br>4<br>14 |

**Second Year**

|          |  |                        |
|----------|--|------------------------|
| 0802-120 | On-Line Processing/ Programming  | 2                      |
| 0802-162 | Computer Console Operations  | 1                      |
| 0817-142 | Fundamentals of College Mathematics III Business Elective English Physical Education | 3<br>3<br>4<br>0<br>13 |

**Winter Term**

|          |  | Cr. Hrs.          |
|----------|--|-------------------|
| 0802-125 | Data Processing Technical Communications | 2                 |
| 0802-170 | Utilities/JCL for Computers              | 2                 |
| 0804-101 | Orientation to Business                  | 3                 |
| 0847-100 | Freshman Seminar Communication English   | 2<br>2<br>4<br>15 |

**Summer**

0802-299 Co-op Work Experience

**Spring Term**

|          |  | Cr. Hrs.          |
|----------|--|-------------------|
| 0802-101 | Introduction to Business Programming                         | 3                 |
| 0802-161 | Business Computer Systems Facilities                         | 2                 |
| 0802-171 | Computer Architecture  | 1                 |
| 0817-141 | Fundamentals of College Mathematics II Communication English | 3<br>2<br>4<br>15 |

|          |   |                        |
|----------|---|------------------------|
| 0802-231 | Business COBOL II   | 3                      |
| 0802-250 | Multiprogramming/ Spooling for Operators                                | 2                      |
| 0802-251 | Laboratory  | 1                      |
| 0847-102 | Life After College Business Elective Communication Mathematics Elective | 1<br>2<br>2<br>3<br>14 |

**Data Processing for Business Occupations**

**Registration #0802-210**

This course is an introduction to the use of computers in business-related applications. Concepts of interacting with the computer function of a business as well as hands-on use of computers are presented.  
 CLASS 3, CREDIT 3 (W)  
 PREREQUISITE: Second-year status in the business occupations department

**Applications Software**

**Registration #0802-213**

This course is an introduction to the use of computer application software in a variety of work settings. Students work on computers to solve a variety of problems.  
 CLASS 3, CREDIT 3 (F, W, S)

**Business Programming in**

**COBOL I, II**

**Registration #0802-230, 231**

This is a two-quarter sequence in COBOL programming. Students learn print reports, general processing of files, and the updating of random access files. The two-course sequence is intended to give students beginning skills in COBOL programming.  
 CLASS 4, CREDIT 3 (W, S)  
 PREREQUISITES:  
 0802-120, 0817-123 for 0802-230  
 0802-230 for 0802-231

**Programming for Computer Science Students I, II**

**Registration #0802-235, 236**

This two-quarter sequence in programming teaches the language currently used by RIT's School of Computer Science. Emphasis is placed on the use of tables/arrays and sorting. These courses are intended for students who plan to pursue a baccalaureate degree in computer science.  
 CLASS 4, CREDIT 3 (W, S)  
 PREREQUISITES:

Michigan Test score higher than 70,  
 California Reading Test score higher than 9.0, 0802-120, 0817-123 for 0802-235  
 0802-235 for 0802-236

**Assembler Language Programming**

**Registration #0802-240**

In this course, students learn to use assembler language to program the computer on a low-level basis. The major emphasis of the course is on the actual machine language of the computer and how the CPU works. The language taught (BAL) is not intended for use as a business programming language.  
 CLASS 4, CREDIT 3 (F, W)  
 PREREQUISITES: 0802-101, 0817-163

**Advanced Assembler Programming**

**Registration #0802-241**

Designed as a sequence to Assembler Language Programming, this course teaches students how to use assembler language as a programming language for business applications.  
 CLASS 4, CREDIT 3 (W, S)  
 PREREQUISITE: 0802-240

**Data Processing: A.A.S. Degree**

**Typical Course Sequence**

**Fall Term**

**Winter Term**

**Spring Term**

**First Year**

|          | Cr. Hrs. |          | Cr. Hrs. |          | Cr. Hrs. |
|----------|----------|----------|----------|----------|----------|
| 0802-100 | 2        | 0802-125 | 2        | 0802-101 | 3        |
| 0802-157 | 1        | 0802-170 | 2        | 0802-161 | 2        |
| 0802-158 | 1        | 0817-141 | 3        | 0804-101 | 3        |
| 0817-140 | 3        | 0847-100 | 2        | 0817-142 | 3        |
| 0847-101 | 1        |          | 4        |          | 3        |
|          | 2        |          | 0        |          | 2        |
|          | 4        |          | 13       |          | 4        |
|          | 14       |          |          |          | 17       |

**Summer**

0802-299 Co-op Work Experience

**Second Year**

|          |    |          |    |          |    |
|----------|----|----------|----|----------|----|
| 0802-120 | 2  | 0802-171 | 1  | 0802-231 | 3  |
| 0802-162 | 1  | 0802-230 | 3  | 0802-250 | 2  |
|          | 3  |          | 3  |          | 1  |
|          | 4  |          | 2  | 0802-251 | 1  |
|          | 4  |          | 4  |          | 2  |
|          | 3  |          | 0  |          | 4  |
|          | 0  |          | 13 |          | 3  |
|          | 13 |          |    |          | 0  |
|          |    |          |    |          | 15 |

**Summer**

0802-299 Co-op Work Experience

**Third Year**

|          |    |          |    |          |    |
|----------|----|----------|----|----------|----|
| 0802-260 | 2  | 0802-240 | 3  | 0847-102 | 1  |
| 0802-261 | 1  | 0802-262 | 2  |          | 2  |
| 0817-163 | 3  | 0802-263 | 1  |          | 4  |
|          | 2  |          | 3  |          | 4  |
|          | 4  |          | 4  |          | 3  |
|          | 3  |          | 13 |          | 14 |
|          | 15 |          |    |          |    |

**Multiprogramming/Spooling for Operators****Registration #0802-250**

This course provides students with an in-depth discussion of computer systems that operate in multiprogramming mode. Queue and general control of a spooling system are the main topics covered.

CLASS 2, CREDIT 2 (F, S)

PREREQUISITES: 0802-101, 0802-162, 0802-170

COREQUISITE: 0802-251

**Multiprogramming/Spooling Laboratory****Registration #0802-251**

This laboratory provides hands-on experience related to Multiprogramming/Spooling for Operators. Students develop skills in working with queues and spooling programs.

LAB 2, CREDIT 1 (F, S)

COREQUISITE: 0802-250

**System Generation for Operators****Registration #0802-260**

Students learn the various parameters as well as the design and actual development of a medium-scale operating system from an operator's viewpoint. Students are required to create their own operating system.

CLASS 2, CREDIT 2 (F, W)

PREREQUISITES: 0802-125, 0802-162

COREQUISITE: 0802-261

**System Generation Laboratory****Registration #0802-261**

Students are led through a complete system creation on a medium-scale computer. Since students do most of the machine operation, they receive hands-on experience in working as members of a team.

LAB 3, CREDIT 1 (F, W)

COREQUISITE: 0802-260

**Advanced Operating Systems****Registration #0802-262**

Designed as a continuation of System Generation for Operators, this course focuses on the software that makes up a total computer system. Installation of compilers, utilities, and related software are major topics covered.

CLASS 2, CREDIT 2 (W, S)

PREREQUISITE: 0802-260

COREQUISITE: 0802-263

**Advanced Operating Systems Laboratory****Registration #0802-263**

Students in this laboratory install the software related to operating systems.

LAB 1, CREDIT 1 (W, S)

COREQUISITE: 0802-262

**Co-op Work Experience****Registration #0802-299**

CREDIT 0 (Su)

All 300 number courses require that the student is enrolled in Written Communication I or higher level course.

**Data Base Systems****Registration #0802-325**

This course introduces students to the use of data base systems on computers. Students design a data base for an information system of their choice.

CLASS 4, CREDIT 4 (W, S)

PREREQUISITES: Two-quarter sequence in programming (language is not important), English Composition Placement Test

**File Management****Registration #0802-330**

In this course, students learn to store and use maintenance information in files. Major topics include the various forms of storage and organization of files as well as backup and restore, and areas such as security and confidentiality.

CLASS 4, CREDIT 3 (F)

PREREQUISITES: 0802-162, one programming course (200 level), English Composition Placement Test

**Data Organization****Registration #0802-335**

This course is a continuation of Programming for Computer Science Students II. The sorting process and the concepts of trees and pointers are discussed and programmed. This course is for students interested in pursuing a baccalaureate degree in computer science.

CLASS 4, CREDIT 4 (F)

PREREQUISITES: 0802-236, 0817-127

**Maintenance Programming****Registration #0802-340**

In this course, students learn the maintenance process of the programming environment and how to recognize other individuals' styles, logic, and standards needed to alter existing programs. Students are given language syntax to correct as well as programs to alter, correct, and revise following a set of standards. This course is for students interested in COBOL business programming.

CLASS 4, CREDIT 3 (F)

PREREQUISITE: 0802-231

**Large-Scale Systems****Registration #0802-350**

In this course, students are introduced to large-scale systems and their operation. The content of this course varies depending on the systems available. The topics are related to the support functions in large computer installations.

CLASS 2, CREDIT 2 (W)

PREREQUISITES: One 200 series programming course, 0801-201, 0802-250

COREQUISITE: 0802-351

**Large-Scale Systems Laboratory****Registration #0802-351**

This laboratory supports the concepts of Large-Scale Systems. Students are assigned to set up and operate a medium- to large-scale system and have the opportunity to work in a large-scale computer installation. Laboratory meetings will be based on availability of systems.

LAB 2, CREDIT 1 (W)

COREQUISITE: 0802-350

**Small Business Systems****Registration #0802-360**

In this course, students learn the use of micro- and minicomputers in the small business environment. Students are assigned to operate a small business computer for a normal business cycle. This course requires extensive laboratory work outside of class.

CLASS 2, CREDIT 2 (F, S)

PREREQUISITES: 0801-201, 0802-162, one 200 series programming course

COREQUISITE: 0802-361

**Small Business Systems****Laboratory****Registration #0802-361**

This is not a structured laboratory. Student projects are done in a combined class and laboratory environment. Students are responsible for successful management of financial work, inventory control, and payroll systems.

LAB 3, CREDIT 1 (F, S)

COREQUISITE: 0802-360

**Data Processing Seminar****Registration #0802-390**

The seminar provides a relevant framework for students' previous data processing courses and, by emphasizing new directions in data processing, also prepares students for continued growth on the job. Students may study independently a topic agreed upon with the instructor.

CLASS 1-3, CREDIT Variable (F, W, S)

**Independent Study****Registration #0802-399**

CREDIT Variable (F, W, S)

# School of Science and Engineering Careers

## Architectural Technology

**Career Exploration: Architectural Technology Registration #0808-100**  
 This course provides students with information regarding careers in architectural technology. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences help students understand work activities, conditions, and settings.  
 CLASS 3, CREDIT 1 (F, W, S)

**Construction Terminology Registration #0808-110**  
 This course introduces students to the basic technical vocabulary for the construction industry. Topics include drafting equipment and procedures, materials, structural components, mechanical and electrical systems, site work, construction equipment, and procedures.  
 CLASS 4, CREDIT 4(F)

**Construction Drafting I Registration #0808-111**  
 This course introduces students to the basic drafting techniques for construction projects. Topics include line quality, lettering, scale measurement, dimensioning, drafting media and equipment, graphic reproduction methods, sheet layout, floor plans, site plans, sections, and isometric views. Students begin to develop a portfolio of their best work.  
 CLASS 6, CREDIT 2 (F)  
 COREQUISITE: 0808-110

**Construction Drafting II Registration #0808-112**  
 In this course, students continue to learn and practice basic drafting techniques for construction projects. Topics include field measurement and measured drawings, preliminary drawings, basic rendering, base maps, perspectives, and site plans. Students also begin learning basic computer-assisted drafting (CAD) skills.  
 CLASS 6, CREDIT 2 (W)  
 PREREQUISITE: 0808-111  
 COREQUISITE: 0808-201

## School of Science and Engineering Careers C.O.R.E. Year Experience

Most students are required to enroll in the C.O.R.E. (Career Orientation and Exploration) year sequence. This experience is three quarters in length and includes an in-depth sampling of program offerings within Engineering Technologies (Architectural Drafting, Architectural Technology, Civil Technology, Electromechanical Technology, Industrial Drafting Technology, Manufacturing Processes), as well as coursework in mathematics, English, communication, and general education.

### Typical Course Sequence

| Fall Term  |                                       | Winter Term |          | Spring Term                            |          |
|------------|---------------------------------------|-------------|----------|--|----------|
| First Year |                                       |             |          |  |          |
|            | Cr. Hrs.                              |             | Cr. Hrs. |  | Cr. Hrs. |
| 0817-140   | Fundamentals of College Mathematics I | 3           | 0817-141 | Fundamentals of College Mathematics II | 3        |
| 0847-100   | Freshman Seminar                      | 2           |          | Career Exploration*                    | 1        |
|            | Career Exploration*                   | 1           |          | Communication                          | 2        |
|            | Communication                         | 2           |          | English*                               | 4        |
|            | English*                              | 4           |          | General Education***                   | 3        |
|            |                                       | 12          |          |  | 13       |

\*Students must choose at least three of the following career exploration courses: 0808-100 (Architectural Technology), 0809-100 (Civil Technology), 0810-100 (Industrial Drafting Technology), 0811-100 (Electromechanical Technology), 0813-100 (Manufacturing Processes). Students must sample a program to be admitted to it.  
 \*\*Students may be required to register for more than one English course per quarter depending on their entry level skills.  
 \*\*\*The departments encourage students to start physics courses after completing Fundamentals of College Mathematics I. Students may register for Technical Physics I instead of General Education.

**Construction Drafting III Registration #0808-113**  
 Students continue to learn and practice basic drafting techniques. They also learn to make three-dimensional models. Topics include building models, topographic models, presentation drawings from sketches, free-hand drawings, measured drawings from field measurements, topographic contour maps from spot elevations, and design development drawings from preliminary drawings. Students also continue CAD skill development.  
 CLASS 6, CREDIT 2 (S)  
 PREREQUISITE: 0808-112  
 COREQUISITE: 0808-202

**Construction Methods and Procedures I Registration #0808-201**  
 This is the first of two courses that orient students to the processes of building project development in design offices and at construction sites. This course concentrates on the processes of preliminary design, design development, production of contract documents, and bidding. Topics include roles of owners, consultants, and contractors; working drawings; specifications; analysis of total project; and bidding.  
 CLASS 3, CREDIT 3 (W)  
 PREREQUISITE: 0808-110  
 COREQUISITE: 0808-112

**Construction Methods and Procedures II Registration #0808-202**  
 This course continues the orientation of students to the total building project development. In this course, students learn about construction processes. Topics include fabrication, placement, support, and fastening of building parts; identification and understanding of construction equipment; and scheduling of construction operations.  
 CLASS 3, CREDIT 3 (S)  
 PREREQUISITE: 0808-201  
 COREQUISITE: 0808-113

**Architectural Materials I Registration #0808-211**  
 This course provides information about materials used in construction. Students learn the characteristics, origins, sources, standard shapes, sizes, and units of measure for materials and manufactured products. Students use the standard referencing and indexing system for materials and products.  
 CLASS 3, CREDIT 3 (F)  
 PREREQUISITE: 0808-202

**Architectural Materials II**  
**Registration #0808-212**

In this course, students apply information from the previous course, Architectural Materials I. Topics include building codes, comparison of materials, selection of materials and products for specific applications, and detailing.

CLASS 3, CREDIT 3 (W)  
 PREREQUISITE: 0808-211

**Principles of Structural Systems**  
**Registration #0808-220**

Students identify and describe the major structural systems and their components. These systems include steel-frame, cast-in-place concrete, pre-cast concrete, masonry, steeljoists, trusses, light frame, and heavy timber. Students read structural framing plans, details, and schedules.

CLASS 4, CREDIT 4 (S)  
 PREREQUISITE: 0808-212

**Architectural Design Drafting I, II, III**  
**Registration #0808-221, 222, 223**

In this sequence of three courses, students learn drafting production techniques, production scheduling, and self-monitoring of progress. Students will produce drawings for one or more building projects during the three courses. The process will include preliminary drawings; design development; architectural working drawings; and working drawings for the mechanical, electrical, or structural elements of the project. Drawings may include cover sheets; site plans; floor plans; interior and exterior elevations; building, wall, and detail sections; interior and exterior perspectives; axonometric views; schedules; and diagrams. Students apply both manual and CAD drafting skills.

LAB 12, CREDIT 4 (0808-221-F,  
 0808-222-W, 0808-223-S)  
 PREREQUISITES:  
 0808-113 for 0808-221  
 0808-221 for 0808-222  
 0808-222 for 0808-223

**Construction Computations**  
**Registration #0808-224**

This course introduces students to the basic techniques for calculating linear area, volume, and angular quantities. Students apply basic math, algebra, geometry, right angle trigonometry, law of sines, and law of cosines.

CLASS 2, CREDIT 2 (W)  
 PREREQUISITES: 0817-124, 0817-127

**Co-op Work Experience**  
**Registration #0808-299**  
 CREDIT 0 (Su)

**Architectural Drafting: Diploma**  
**Typical Course Sequence**

| Fall Term          |                                 | Winter Term |          | Spring Term                           |  |
|--------------------|---------------------------------|-------------|----------|---------------------------------------|--|
| Cr. Hrs.           |                                 | Cr. Hrs.    |          | Cr. Hrs.                              |  |
| <b>First Year</b>  |                                 |             |          |                                       |  |
| 0808-110           | Construction Terminology        | 4           | 0808-112 | Construction Drafting II              | 2                                      |
| 0808-111           | Construction Drafting I         | 2           | 0808-201 | Construction Methods and Procedures I | 3                                      |
| 0817-126           | Algebra IIA                     | 3           | 0817-127 | Algebra IIB or equivalent             | 3                                      |
| 0847-100           | Freshman Seminar                | 2           | 0818-100 | Technical Physics I                   | 3                                      |
|                    | Communication                   | 2           |          | English*                              | 4                                      |
|                    | English                         | 4           |          | Physical Education                    | 0                                      |
|                    | Physical Education              | 0           |          |                                       |  |
|                    |                                 | 17          |          |                                       | 15                                     |
|                    |                                 |             |          |                                       | 0808-113                               |
|                    |                                 |             |          |                                       | Construction Drafting III              |
|                    |                                 |             |          |                                       | 2                                      |
|                    |                                 |             |          |                                       | 0808-202                               |
|                    |                                 |             |          |                                       | Construction Methods and Procedures II |
|                    |                                 |             |          |                                       | 3                                      |
|                    |                                 |             |          |                                       | 0817-124                               |
|                    |                                 |             |          |                                       | Geometry or equivalent                 |
|                    |                                 |             |          |                                       | 3                                      |
|                    |                                 |             |          |                                       | 0818-125                               |
|                    |                                 |             |          |                                       | Construction Technology                |
|                    |                                 |             |          |                                       | Physics II                             |
|                    |                                 |             |          |                                       | 3                                      |
|                    |                                 |             |          |                                       | Communication*                         |
|                    |                                 |             |          |                                       | 2                                      |
|                    |                                 |             |          |                                       | Physical Education                     |
|                    |                                 |             |          |                                       | 0                                      |
|                    |                                 |             |          |                                       | 13                                     |
| <b>Second Year</b> |                                 |             |          |                                       |  |
| 0808-211           | Architectural Materials I       | 3           | 0808-212 | Architectural Materials II            | 3                                      |
| 0808-221           | Architectural Design Drafting I | 4           | 0808-222 | Architectural Design Drafting II      | 4                                      |
| 0808-377           | Building Equipment              | 3           | 0808-224 | Construction Computations             | 2                                      |
| 0818-126           | Construction Technology         | 3           | 0808-390 | Architectural Technology Seminar      | 2                                      |
|                    | Physics III                     | 3           |          | General Education                     | 2                                      |
| 0847-101           | Job Search Process              | 1           |          |                                       |  |
|                    |                                 | 14          |          |                                       | 13                                     |
|                    |                                 |             |          |                                       | 0808-220                               |
|                    |                                 |             |          |                                       | Principles of Structural Systems       |
|                    |                                 |             |          |                                       | 4                                      |
|                    |                                 |             |          |                                       | 0808-223                               |
|                    |                                 |             |          |                                       | Architectural Design Drafting III      |
|                    |                                 |             |          |                                       | 4                                      |
|                    |                                 |             |          |                                       | 0808-375                               |
|                    |                                 |             |          |                                       | Architectural History                  |
|                    |                                 |             |          |                                       | 2                                      |
|                    |                                 |             |          |                                       | 0808-376                               |
|                    |                                 |             |          |                                       | Building Estimating                    |
|                    |                                 |             |          |                                       | 2                                      |
|                    |                                 |             |          |                                       | 0809-241                               |
|                    |                                 |             |          |                                       | Mapping I                              |
|                    |                                 |             |          |                                       | 2                                      |
|                    |                                 |             |          |                                       | 0847-102                               |
|                    |                                 |             |          |                                       | Life After College                     |
|                    |                                 |             |          |                                       | 1                                      |
|                    |                                 |             |          |                                       | 15                                     |

\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

**Planning Project**  
**Registration #0808-340**

This course introduces students to the basic techniques for planning surveys. These include base map preparation, data collection from field surveys and public records, data base management, data analysis, graphic presentation of data, project organization, and work discipline skills. Students work as a team to perform an original planning survey. The team cooperates with a local planning agency. Students work in the field and in the laboratory.

LAB 15, CREDIT 5 (F)  
 PREREQUISITE: 0808-223

**Architectural Projects I, II**  
**Registration #0808-351, 352**

In this sequence of two courses, students complete one or more building design projects. Activities may include field inspection and measurement, measured drawings, preliminary design, presentation drawings, design development, models, and working drawings. The courses simulate the environment of an architectural office.

LAB 15, CREDIT 5 (0808-351-W,  
 0808-352-S)  
 PREREQUISITES:  
 0808-340 for 0808-351  
 0808-351 for 0808-352



Architectural Technology: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

|                                    | Cr. Hrs. |
|------------------------------------|----------|
| 0808-110 Construction Terminology  | 4        |
| 0808-111 Construction Drafting I   | 2        |
| 0817-127 Algebra IIB or equivalent | 3        |
| 0847-100 Freshman Seminar          | 2        |
| Communication                      | 2        |
| English                            | 4        |
| Physical Education                 | 0        |
|                                    | 17       |

|                                   | Cr. Hrs. |
|-----------------------------------|----------|
| 0808-112 Construction Drafting II | 2        |
| 0808-201 Construction Methods I   | 3        |
| 0817-124 Geometry or equivalent   | 3        |
| 0818-100 Technical Physics I      | 3        |
| English*                          | 4        |
| Physical Education                | 0        |
|                                   | 15       |

|                                     | Cr. Hrs. |
|-------------------------------------|----------|
| 0808-113 Construction Drafting III  | 2        |
| 0808-202 Construction Methods II    | 3        |
| 0817-128 Trigonometry or equivalent | 3        |
| 0818-125 Construction Technology    |          |
| Physics II                          | 3        |
| Communication*                      | 2        |
| Physical Education                  | 0        |
|                                     | 13       |

Second Year

|   |    |
|---|----|
| 0808-211 Architectural Materials I                              | 3  |
| 0808-221 Architectural Design Drafting I                        | 4  |
| 0817-201 College Algebra, Trigonometry, and Analytic Geometry I | 3  |
| 0818-126 Construction Technology Physics III                    | 3  |
| 0847-101 Job Search Process                                     | 1  |
|   | 14 |

|  |    |
|--|----|
| 0808-212 Architectural Materials II                              | 3  |
| 0808-222 Architectural Design Drafting II                        | 4  |
| 0808-390 Architectural Technology Seminar                        | 2  |
| 0817-202 College Algebra, Trigonometry, and Analytic Geometry II | 3  |
| Liberal Arts   | 4  |
|  | 16 |

|  |    |
|--|----|
| 0808-220 Principles of Structural Systems  | 4  |
| 0808-223 Architectural Design Drafting III | 4  |
| 0809-241 Mapping I                         | 2  |
| Liberal Arts                               | 4  |
|  | 14 |

Summer

|                                |  |
|--------------------------------|--|
| 0808-299 Co-op Work Experience |  |
|--------------------------------|--|

Third Year

|                             |    |
|-----------------------------|----|
| 0808-340 Planning Project   | 5  |
| 0808-377 Building Equipment | 3  |
| 0809-250 Statics            | 4  |
| Liberal Arts                | 4  |
|                             | 16 |

|                                  |    |
|----------------------------------|----|
| 0808-351 Architectural Project I | 5  |
| 0809-260 Strength of Materials   | 4  |
| 0847-102 Life After College      | 1  |
| Liberal Arts                     | 4  |
|                                  | 14 |

|                                   |       |
|-----------------------------------|-------|
| 0808-352 Architectural Project II | 5     |
| 0808-375 Architectural History    | 2     |
| 0808-376 Building Estimating      | 2     |
| Liberal Arts                      | 4     |
| Technical Elective                | 1-3   |
|                                   | 14-16 |

\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

**Architectural History**  
Registration #0808-375

Students learn the major elements of architectural styles and building technologies throughout the history of Western architecture. This provides a background for discussion of current topics in the field of building design and construction.  
CLASS 2, CREDIT 2 (S)

**Building Estimating**  
Registration #0808-376

Students learn and apply basic concepts and skills for calculating the cost of a building project. Topics include elements of project cost, quantity survey techniques, material costs, installation costs, unit cost information sources, cost analysis, adjustments for locality, historical cost indexes, contingencies, overhead, and profit.  
CLASS 2, CREDIT 2 (S)  
PREREQUISITE: 0808-224 or 0817-128

**Building Equipment**  
Registration #0808-377

Students learn to identify and understand the basic equipment and operation of mechanical and electrical systems in a building. These systems include water supply, drainage, fire protection, heating, ventilating, air conditioning, power, lighting, and conveying systems. Students become acquainted with the graphic representation for these systems in working drawings.  
CLASS 3, CREDIT 3 (F)  
PREREQUISITE: 0808-202

**Architectural Technology Seminar**  
Registration #0808-390

This course helps students prepare for the job search and for employment. Topics related to job search include applications, resumes, interviews, and use of a portfolio. Topics related to the world of work include taxes, insurance, employee benefits, credit ratings, marriage, and deaf professionals.  
CLASS 1, LAB 3, CREDIT 2 (W)

**Independent Study**  
Registration #0808-399  
CREDIT Variable

**MLT Biology I****Registration #0814-107**

This course is a preparatory program for students interested in pursuing the medical laboratory technology program. Principles of inorganic and organic chemistry are studied as they relate to biology. The metric system, cell theory, cellular transport mechanisms, mitosis, meiosis, and nucleotides are among the topics treated. Laboratory activities include the microscopic study of plant and animal cells, the performance of experiments related to concepts learned during class sessions, and additional activities that emphasize the application of the scientific method.

CLASS 4, LAB 4, CREDIT 4 (F)

**MLT Biology II****Registration #0814-108**

This course is a continuation of MLT Biology I. It is designed to introduce students to principles of biochemistry: the synthesis and metabolism of carbohydrates, proteins, and lipids; DNA; and ATP. The laboratory program is designed to reinforce principles and concepts learned during class sessions.

CLASS 4, LAB 4, CREDIT 4 (W)

PREREQUISITE: 0814-107

**MLT Biology III****Registration #0814-109**

This course is a continuation of MLT Biology II. The principles of general genetics, anatomy, physiology, histology, hematology, and microbiology are studied in this segment of the biology program. Laboratory activities provide students with opportunities to apply principles learned in class and to acquire the basic and transitional skills needed for the medical laboratory technology program.

CLASS 4, LAB 4, CREDIT 4 (S)

PREREQUISITE: 0814-108

**MLT Chemistry I****Registration #0815-115**

This course is for students preparing to pursue the medical laboratory technology program. The course includes an introduction to exponential notation, measurement, the fundamental laws and concepts of matter and energy, formula writing, chemical bonding, and the mole concept. Laboratory work includes general techniques of metric measurement, density, physical properties, and evidence of chemical reactions. Introduction to radiochemistry, volume, temperature-pressure relationships of gases, reactivity of metals, and factors that affect reaction rates are measured qualitatively.

CLASS 4, LAB 4, CREDIT 4 (F)

**MLT Chemistry II****Registration #0815-116**

This is a continuation of MLT Chemistry I. Solubility, concentration of solutions, calculations involving acid-base titrations, and pH are covered. Introduction to organic chemistry begins with hydrocarbon nomenclature. Discussion of the alcohols, phenols, ethers, aldehydes, and ketones as well as organic acids and their derivatives are included. Laboratory experiences related to these topics focus on the various methods of pH measurement and the use of indicators, including control of acidity through use of buffers and analysis of the acid and alkali content of some consumer products. Chemical and physical properties of some organic compounds are examined, including alcohols, phenols, mercaptans, aldehydes, ketones, carboxylic acids, and esters.

CLASS 4, LAB 4, CREDIT 4 (W)

PREREQUISITE: 0815-115

**MLT Chemistry III****Registration #0815-117**

This is a continuation of MLT Chemistry II. This part of the chemistry program lays the foundation for the relationship between chemistry and living organisms. Topics include the amines, carbohydrates, and lipids as well as amino acids and proteins. Description of the structure and function of nucleic acids, vitamins, and hormones bring together the interrelationships of biochemical reactions. Laboratory procedures include preparation, identification, and qualitative tests for the amines, amides, carbohydrates, triglycerides, and amino acids. Preparation and examination of aspirin, nylon, and soaps, and analysis of a peanut conclude this portion of the course. If time permits, students may explore instrumental analysis involving use of spectrophotometers and gas chromatography.

CLASS 4, LAB 4, CREDIT 4 (S)

PREREQUISITE: 0815-116

**Introduction to College Chemistry I****Registration #0815-215**

This course is for students enrolled in programs requiring review or preparation for College of Science chemistry courses. The course includes principles of measurement, composition of matter, energy changes, behavior of gases, atomic structure, and bonding. Laboratory work includes experiments related to topics covered.

CLASS 4, LAB 4, CREDIT 4 (F)

PREREQUISITE: Math completion or concurrent registration in 0817-127

**Introduction to College Chemistry II****Registration #0815-216**

This is a continuation of Introduction to College Chemistry I with the study of solutions and equilibrium principles. Also included are stoichiometric solution calculations involving ionization and solubility, product constants, and acid-base pH calculations. Laboratory work includes qualitative analysis of common cations and anions.

CLASS 4, LAB 4, CREDIT 4 (W)

PREREQUISITES: 0815-215, 0817-127

**Introduction to College Chemistry III****Registration #0815-217**

This course provides an introduction to quantitative analysis utilizing both gravimetric and volumetric techniques. Topics include evaluation of analytical data, gravimetric analysis, acid-base titrations, redox titrations, and principles of colorimetry and spectrophotometry.

CLASS 4, LAB 4, CREDIT 4 (S)

PREREQUISITE: 0815-216

# Civil Technology

## Career Exploration: Civil Technology Registration #0809-100

This course provides students with information regarding a career in civil technology. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences help students understand work activities, conditions, and settings.  
LAB 3, CREDIT 1 (F, W, S)

## Surveying and Mapping Registration #0809-211

This course combines the elements of surveying and mapping. Students have the opportunity to use survey equipment in the field to obtain and record angle, distance, and elevation measurements. Using the information gathered in the field, students perform calculations and produce drawings for a term project. Topics include error of closure, bearings, interior angles, distances, coordinates, slope, reducing field notes, and cut and fill volumes. Students draw with lead and ink on a variety of media, and also use the CAD system to produce drawings.  
CLASS 6, LAB 4, CREDIT 6 (S)  
PREREQUISITES: 0808-113, 0817-128

## Statics Registration #0809-250

This course requires students to apply physical concepts of equilibrium in co-planar force systems to structural members. Topics include vectors, forces, moments, equilibrium, distributed forces, centroids, and centers of gravity. Students calculate reactions, moments, and internal forces in beams, trusses, and frames.  
CLASS 3, LAB 3, CREDIT 4 (F)  
PREREQUISITES: 0817-124, 0817-128, 0818-126

## Strength of Materials Registration #0809-260

Students apply physical concepts of matter to calculate how forces affect structural members. Topics include stress, strain, behavior of common engineering materials, moment of inertia, section modulus, and basic beam theory. Students calculate the maximum tensile, compressive and shear stresses, and deflection in simple members. They also calculate deflection of beams and select simple tension, compression, and bending members and their connections.  
CLASS 3, LAB 3, CREDIT 4 (W)  
PREREQUISITE: 0809-250

## Soil Mechanics Registration #0809-283

This course introduces students to the characteristics of soils related to construction projects. Topics include visual and laboratory classification of soils, compaction, sub-surface investigation, percolation, and soil nomenclature. Students perform laboratory experiments and tests and write laboratory reports.  
CLASS 3, LAB 3, CREDIT 4 (W)

## Civil Technology: A.A.S. Degree

### Typical Course Sequence

#### Fall Term

##### First Year

|                                    | Cr. Hrs. |
|------------------------------------|----------|
| 0808-110 Construction Terminology  | 4        |
| 0808-111 Construction Drafting I   | 2        |
| 0817-127 Algebra IIB or equivalent | 3        |
| 0847-100 Freshman Seminar          | 2        |
| Communication                      | 2        |
| English                            | 4        |
| Physical Education                 | 0        |
|                                    | 17       |

##### Second Year

|   |    |
|---|----|
| 0809-250 Statics  | 4  |
| 0809-285 Civil Technology Seminar                               | 2  |
| 0817-201 College Algebra, Trigonometry, and Analytic Geometry I | 3  |
| 0818-125 Construction Technology Physics II                     | 3  |
| 0847-101 Job Search Process                                     | 1  |
|   | 13 |

#### Winter Term

|                                   | Cr. Hrs. |
|-----------------------------------|----------|
| 0808-112 Construction Drafting II | 2        |
| 0808-201 Construction Methods I   | 3        |
| 0817-124 Geometry or equivalent   | 3        |
| 0818-100 Technical Physics I      | 3        |
| English*                          | 4        |
| Physical Education                | 0        |
|                                   | 15       |

#### Summer

|                                |  |
|--------------------------------|--|
| 0809-299 Co-op Work Experience |  |
|--------------------------------|--|

##### Third Year

|  |    |
|--|----|
| 0809-311 Surveying Projects              | 3  |
| 0809-312 Mapping and Site Design         | 2  |
| 0809-321 Structural Design Drafting I    | 4  |
| 0809-340 Fundamentals of Fluid Mechanics | 4  |
| Liberal Arts                             | 4  |
|  | 17 |

#### Spring Term

|  | Cr. Hrs. |
|--|----------|
| 0808-113 Construction Drafting III           | 2        |
| 0808-202 Construction Methods II             | 3        |
| 0817-128 Trigonometry or equivalent          | 3        |
| 0818-126 Construction Technology Physics III | 3        |
| Communication*                               | 2        |
| Physical Education                           | 0        |
|  | 13       |

|                                |    |
|--------------------------------|----|
| 0809-211 Surveying and Mapping | 6  |
| 0809-284 Engineering Materials | 4  |
| 0809-290 Computer Program      | 3  |
| Liberal Arts                   | 4  |
|                                | 17 |

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\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

**Engineering Materials  
Registration #0809-284**

Student investigate the basic engineering properties of portland cement concrete, portland cement mortar, and asphaltic cement concrete. They learn and practice standard laboratory testing procedures and write laboratory reports.  
CLASS 2, LAB 6, CREDIT 4 (S)  
PREREQUISITE: 0809-283

**Civil Technology Seminar  
Registration #0809-285**

This course provides an overview of the field of civil technology. Students learn how the field is related to the profession of civil engineering. The course also introduces research and laboratory report writing, resume writing, and interviewing skills.  
CLASS 1, LAB 3, CREDIT 2 (F)

**Programming for Civil Technicians  
Registration #0809-290**

This course introduces basic computer skills. Topics include keyboard operation, expressions, variables, programs, branching, input, subscripted variables, and loops. Students have hands-on experience on the computer.  
CLASS 2, LAB 3, CREDIT 3 (F, W, S)

**Co-op Work Experience  
Registration #0809-299  
CREDIT 0 (Su)**

**Surveying Projects  
Registration #0809-311**

Students continue to learn the basic techniques of land measurement. Topics include electronic distance measurement (EDM), theodolites, modern levels, deed descriptions, deed research, tape locations, horizontal and vertical curves, aerial surveying, and surveying computations. Students have hands-on experience with surveying equipment in the field.  
CLASS 1, LAB 6, CREDIT 3 (F)  
PREREQUISITES: 0809-231, 0809-241  
COREQUISITE: 0809-242

**Mapping and Site Design  
Registration #0809-312**

Students apply skills learned in Mapping I to complete a site planning project. Requirements for the project include topographic, traverse, and highway mapping; cut and fill calculations; drafting with pencil and ink on a variety of media; and graphic reproduction.  
CLASS 1, LAB 3, CREDIT 2 (F)  
PREREQUISITES: 0809-231, 0809-241  
COREQUISITE: 0809-232

**Structural Design Drafting I, II, III  
Registration #0809-321, 322, 323**

In this sequence of courses, students apply the principles of statics and strength of materials and drafting skills. Students learn the basic principles of structural analysis and design, estimating quantities, preparation of structural and shop drawings, and construction. The first course and half of the second course concentrate on steel structures. The rest of the second course and the third course concentrate on concrete structures.  
CLASS 2, LAB 6, CREDIT 4  
(0809-321-F, 0809-322-W, 0809-323-S)  
PREREQUISITES:  
0809-260 for 0809-321  
0809-321 for 0809-322  
0809-322 for 0809-323

**Fundamentals of Fluid Mechanics  
Registration #0809-340**

This course introduces students to the basic principles of fluid statics and fluid flow. Topics include hydrostatic pressure, forces on submerged surfaces, buoyancy, laminar and turbulent flow of incompressible fluids, fluid measurements, and open channel flow. Students perform experiments in the laboratory.  
CLASS 3, LAB 3, CREDIT 4 (F)

**Highway Design and Construction  
Registration #0809-350**

This course introduces students to the basic practices in the study, design, plan preparation, and construction of transportation facilities. Topics include horizontal and vertical alignments, typical sections, hydrology, quantity estimating, intersection design, and traffic control devices.  
CLASS 3, LAB 3, CREDIT 4 (W)  
PREREQUISITE: 0809-232

**Principles of Environmental Technology  
Registration #0809-385**

This course introduces students to the factors affecting the quality of the environment. Topics include testing, regulation, and management of water supplies, waste water, soil erosion, solid wastes, atmospheric pollutants, and noise; energy measurement and conservation; visual resource analysis; and environmental impact analysis. Field observations are an important part of this course.  
CLASS 3, LAB 3, CREDIT 4 (S)  
PREREQUISITE: 0809-340

**Construction Seminar  
Registration #0809-390**

This course helps students prepare for their job search and for employment. Topics related to job search include applications, resumes, interviews, and use of a portfolio. Topics related to the world of work include taxes, insurance, employee benefits, credit ratings, marriage, and deaf professionals.  
CLASS 1, LAB 3, CREDIT 2 (W)

**Independent Study  
Registration #0809-399  
CREDIT Variable**

# Electromechanical Technology

## Career Exploration: Electromechanical Technology

### Registration #0811-100

This course provides students with information regarding a career in electromechanical technology. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences help students understand work activities, conditions, and settings.  
LAB 3, CREDIT 1 (F, W, S)

### Basic Drafting I

#### Registration #0811-101

This course provides instruction in the principles and techniques of basic drafting. The emphasis is on understanding how drawings are made and used in industry.  
LAB 6, CREDIT 2 (F)  
PREREQUISITE: 0817-141

### Digital Systems

#### Registration #0811-171

This course is an introduction to logic components and how they are used in machines. Students will study gates, switches, counters, flip-flops, multiplexers, demultiplexers, truth tables, Boolean algebra, logic families, and the difference between analog and digital systems.  
CLASS 3, LAB 4, CREDIT 4 (W)  
PREREQUISITE: 0811-368

### Technical Graphics

#### Registration #0811-209

This course is an introduction to electronic and mechanical drawings. Students learn how to draw using drafting standards. They also learn about electronic symbols, component outlines, block diagrams, schematic diagrams, cable drawings, military standards, and integrated circuits.  
LAB 6, CREDIT 2 (S)  
PREREQUISITES: 0810-101, 0811-368

### Computer Techniques

#### Registration #0811-210

This course emphasizes how the computer can be used to solve problems. Students learn a programming language and develop programming skills. Students are required to solve engineering problems through hands-on computer experience.  
CLASS 3, LAB 3, CREDIT 4 (F)  
PREREQUISITE: 0818-100

### Mechanical Components

#### Registration #0811-211

This course introduces mechanical devices used in electromechanical equipment. The basic topics covered include torque, work, power, gears, cams, and drive systems. Students will develop basic breadboarding skills.  
CLASS 3, LAB 4, CREDIT 4 (S)  
PREREQUISITES: 0817-127, 0818-100

## Electromechanical Technology: A.A.S. Degree

### Typical Course Sequence

#### Fall Term

#### Winter Term

#### Spring Term

#### First Year

|          | Cr. Hrs.                                |    | Cr. Hrs. |                           | Cr. Hrs. |
|----------|---|----|----------|---------------------------|----------|
| 0811-101 | Basic Drafting I                        | 2  | 0811-210 | Computer Techniques       | 4        |
| 0817-142 | Fundamentals of College Mathematics III | 3  | 0811-241 | Tool Skills               | 2        |
| 0818-100 | Physics I                               | 3  | 0817-127 | Algebra IIB or equivalent | 3        |
| 0847-100 | Freshman Seminar                        | 1  | 0818-135 | Physics II                | 3        |
|          | Communication                           | 2  |          | Communication             | 2        |
|          | English                                 | 4  |          | English*                  | 4        |
|          |   | 15 |          |                           | 18       |

#### Second Year

|          |  |    |          |   |    |          |  |    |
|----------|--|----|----------|---|----|----------|--|----|
| 0811-304 | AC Circuits                                    | 5  | 0811-321 | Fluid Power                                     | 4  | 0811-322 | Electrical Power Systems                         | 4  |
| 0811-317 | Kinematics                                     | 4  | 0811-368 | Electronics I                                   | 4  | 0811-369 | Electronics II                                   | 5  |
| 0817-201 | Algebra, Trigonometry, and Analytic Geometry I | 3  | 0817-202 | Algebra, Trigonometry, and Analytic Geometry II | 3  | 0817-203 | Algebra, Trigonometry, and Analytic Geometry III | 3  |
| 0847-101 | Job Search Process                             | 1  |          | Liberal Arts                                    | 4  |          | Liberal Arts                                     | 4  |
|          | Liberal Arts                                   | 4  |          |   | 15 |          |  | 16 |
|          |  | 17 |          |   |    |          |  |    |

#### Summer

0811-299 Co-op Work Experience

#### Third Year

|          |                 |    |          |                                  |    |          |                                   |    |
|----------|-----------------|----|----------|----------------------------------|----|----------|-----------------------------------|----|
| 0811-171 | Digital Systems | 4  | 0811-325 | Control Systems                  | 4  | 0811-209 | Technical Graphics                | 2  |
| 0811-234 | Optical Systems | 4  | 0811-327 | Microprocessor Control Systems I | 2  | 0811-328 | Microprocessor Control Systems II | 2  |
| 0811-324 | Transducers     | 4  |          | Liberal Arts                     | 4  | 0847-102 | Life After College                | 1  |
| 0811-370 | Electronics III | 4  |          | Technical Elective               | 4  |          | Liberal Arts                      | 4  |
|          |                 | 16 |          |                                  | 14 |          | Technical Elective                | 4  |
|          |                 |    |          |                                  |    |          |                                   | 13 |

\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

### **DC Circuits**

#### **Registration #0811-213**

This course introduces students to the theory and use of direct current circuits. Students learn about direct current units and measurements, basic circuit laws, networks, Thevenin's Theorem, and superposition theorem.

CLASS 3, LAB 6, CREDIT 5 (S)  
PREREQUISITES: 0817-127, 0818-135

### **Optical Systems**

#### **Registration #0811-234**

This course introduces students to the use of optics in engineering applications. Students learn about refraction, reflection, imaging, fiber optics, light emitting diodes, lasers, and optically controlled solid state electronic devices.

CLASS 3, LAB 2, CREDIT 4 (S)  
PREREQUISITES: 0811-369, 0817-128

### **Tool Skills**

#### **Registration #0811-241**

This course introduces students to the use of basic hand tools used by electromechanical technicians. Students learn about safety, measuring, layout techniques, cutting, finishing metal, fasteners, drilling, counter-boring, countersinking, tapping, soldering, and wiring. The course requires the completion of several projects.

LAB 6, CREDIT 2 (W)  
PREREQUISITE: 0817-141

### **Co-op Work Experience**

#### **Registration #0811-299**

CREDIT 0 (F, W, S, Su)  
PREREQUISITES: 0811-321, 0811-368

### **AC Circuits**

#### **Registration #0811-304**

This course emphasizes the theory and use of alternating current circuits. Students learn about inductance, capacitance, alternating current circuits, series, and parallel resonant circuits.

CLASS 3, LAB 6, CREDIT 5 (F)  
PREREQUISITES: 0811-210, 0811-213

### **Kinematics**

#### **Registration #0811-317**

This course emphasizes the motion of machine parts. Students learn about linkages and levers, and the relation of these parts to velocities, accelerations, and forces.

CLASS 3, LAB 4, CREDIT 4 (F)  
PREREQUISITES: 0811-211, 0817-128

### **Fluid Power**

#### **Registration #0811-321**

In this course, students learn how power is transmitted by using fluids (liquids and gases). Topics covered include the character of fluids, pumps, valves, cylinders, motors, and the piping used. Students also learn how digital logic is used to control fluid power valves and equipment.

CLASS 3, LAB 4, CREDIT 4 (W)  
PREREQUISITE: 0811-317

### **Electrical Power Systems**

#### **Registration #0811-322**

In this course, students learn how power is transmitted by electricity. Basic topics covered include generators, motors, transformers, and distribution lines. Both alternating and direct current machines are covered.

CLASS 3, LAB 4, CREDIT 4 (F)  
PREREQUISITES: 0811-304, 0811-317

### **Transducers**

#### **Registration #0811-324**

This course introduces students to automatic controls. Students learn about electrical, thermal, hydraulic, and mechanical transducers. Emphasis is on the similar operating characteristics of all kinds of transducers. Students express results using mathematics and graphics.

CLASS 3, LAB 4, CREDIT 4 (S)  
PREREQUISITES: 0811-321, 0811-368

### **Control Systems**

#### **Registration #0811-325**

This is the second course in a sequence on the topic of automatic controls. Students learn about the effects on a controlled process when different ways are used to connect the input transducer to the output transducer. The course covers open and closed loop systems. Graphic techniques are used to help understand systems.

CLASS 3, LAB 4, CREDIT 4 (F)  
PREREQUISITE: 0811-324

### **Microprocessor Control Systems I**

#### **Registration #0811-327**

This is the first course in a two-quarter sequence. The course introduces students to the theory of microprocessor-based control systems. Students learn about software techniques applied to electromechanical systems. This laboratory course emphasizes systems analysis and troubleshooting.

LAB 6, CREDIT 2 (W)  
PREREQUISITES: 0811-171, 0811-370

### **Microprocessor Control Systems II**

#### **Registration #0811-328**

This course emphasizes the construction, testing, and troubleshooting of microprocessor-based systems. Students identify and solve problems and report solutions independently. This course is project-based and ties together many of the concepts learned in the electromechanical technology program.

LAB 6, CREDIT 2 (W)  
PREREQUISITE: 0811-327  
COREQUISITE: 0811-334

### **Circuit Analysis**

#### **Registration #0811-330**

This course emphasizes the analysis of complex circuits. Students learn about Kirchoff's Laws, independent and dependent sources, power, equivalent sources and resistances, Thevenin's Theorem, Norton's Theorem, superposition theorem, mesh analysis, and nodal analysis.

CLASS 4, CREDIT 4 (W)  
PREREQUISITE: 0811-370

### **Statics**

#### **Registration #0811-332**

This elective course covers characteristics of forces and force systems. Emphasis is placed on vectors, levers, moments, free body diagrams, couples, friction, and structure analysis. Problem-solving techniques are stressed throughout the course.

CLASS 4, CREDIT 4 (W)  
PREREQUISITE: 0811-321

### **Strength of Materials**

#### **Registration #0811-333**

This course introduces students to the reactions of engineering materials to different types of loading. The course emphasizes the use of standard handbooks, stress and strain relationships, Poisson's Ratio, safe loading, and expected deflection of beam and column-shaped machine parts.

CLASS 3, LAB 3, CREDIT 4 (S)  
PREREQUISITE: 0811-332

### **Electromechanical Systems**

#### **Registration #0811-334**

This course emphasizes the interface between microprocessors and electromechanical devices. Students work on projects that include circuit design, software design, breadboarding skills, and troubleshooting techniques.

CLASS 3, LAB 3, CREDIT 4 (S)  
PREREQUISITES: 0811-325, 0811-327  
COREREQUISITE: 0811-328

### **Electronics I**

#### **Registration #0811-368**

This course introduces students to basic diode and transistor circuits. Students learn about semiconductor theory, diode circuits, bipolar transistors, transistor biasing circuits, and AC signal amplifiers. Students develop basic measurement and breadboarding skills.

CLASS 3, LAB 6, CREDIT 4 (W)  
PREREQUISITE: 0811-304

### **Electronics II**

#### **Registration #0811-369**

This course introduces students to AC amplifiers and their characteristics. Topics of study include transistor AC equivalent circuits, small signal amplifiers, power amplifiers, push-pull amplifiers, and field effect devices. Students develop basic measurement and breadboarding skills.

CLASS 3, LAB 6, CREDIT 5 (S)  
PREREQUISITE: 0811-368

### **Electronics III**

#### **Registration #0811-370**

This course introduces students to the theory and application of linear integrated circuits. Students learn about operational amplifier characteristics and applications, regulators and control circuits, and a variety of linear integrated circuits. Students are required to use manufacturers' data sheets and to develop proper breadboarding skills.

CLASS 3, LAB 4, CREDIT 4 (F)  
PREREQUISITE: 0811-369

### **Independent Study**

#### **Registration #0811-399**

CREDIT Variable

# Industrial Drafting Technology

## Career Exploration: Industrial Drafting Registration #0810-100

This course provides students with information regarding a career in industrial drafting. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences help students understand work activities, conditions, and settings.  
LAB 3, CREDIT 1 (F, W, S)

## Introduction to Computer-Aided Drafting (CAD)

### Registration #0810-103

In this introductory course, students will acquire basic competency in computer-aided drafting (CAD) that may include using the B & L Producer system software and AutoCAD and PlanCAD programs on the IBM PC or DEC Rainbow computers. Students will create basic computer drawings, add dimensions and lettering, and learn some useful functions of these systems. They also will have the opportunity to work on select special applications.  
CLASS 1, LAB 3, CREDIT 2 (F, W, S)

## Manufacturing Processes I, II

### Registration #0810-131, 132

Students are exposed to various traditional and non-traditional manufacturing operations. Students develop an appreciation for tolerancing of manufactured parts.

LAB 3, CREDIT 1 (0810-131-F, 0810-132-W)

PREREQUISITES:

0817-128 for 0810-131

0810-131 for 0810-132

## Basic Technical Drafting I

### Registration #0810-141

Students learn basic skills of engineering drawing through instruction and drafting projects. Students are introduced to the use of tools and equipment, constructions, orthographic projection, lettering, and basic dimensioning practices.

CLASS 1, LAB 6, CREDIT 3 (F)

PREREQUISITE: 0817-142

## Industrial Drafting: Diploma

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                            | Cr. Hrs. |
|----------|----------------------------|----------|
| 0810-141 | Basic Technical Drafting I | 3        |
| 0817-127 | Algebra IIB or equivalent  | 3        |
| 0847-100 | Freshman Seminar           | 2        |
| 0847-101 | Job Search Process         | 1        |
|          | Communication              | 2        |
|          | English                    | 4        |
|          | Physical Education         | 0        |
|          |                            | 15       |

##### Second Year

|          |                               |        |
|----------|-------------------------------|--------|
| 0810-131 | Manufacturing Processes I     | 1      |
| 0810-151 | Materials and Processes I     | 3      |
| 0810-201 | Technical Drafting I Elective | 5<br>2 |
|          |                               | 11     |

#### Winter Term

|          |                             | Cr. Hrs. |
|----------|-----------------------------|----------|
| 0810-142 | Basic Technical Drafting II | 3        |
| 0817-124 | Geometry or equivalent      | 3        |
| 0818-100 | Technical Physics I         | 3        |
|          | Communication               | 2        |
|          | English                     | 4        |
|          | Physical Education          | 0        |
|          |                             | 15       |

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0810-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

#### Spring Term

|          |                              | Cr. Hrs. |
|----------|------------------------------|----------|
| 0810-143 | Basic Technical Drafting III | 3        |
| 0817-128 | Trigonometry or equivalent   | 3        |
| 0818-135 | Technical Physics II         | 3        |
|          | Communication*               | 2        |
|          | English*                     | 4        |
|          | Physical Education           | 0        |
|          |                              | 15       |

|          |                              |    |
|----------|------------------------------|----|
| 0810-203 | Technical Drafting III       | 4  |
| 0810-211 | Supervised Study in Drafting | 1  |
| 0847-102 | Life After College           | 1  |
|          | Electives                    | 6  |
|          |                              | 12 |

\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

## Basic Technical Drafting II

### Registration #0810-142

The major topics of this course are orthographic projection and dimensioning systems. Auxiliary views, sections, and developments are introduced through the use of instruction and projects. Students produce industrial quality drawings.

CLASS 1, LAB 6, CREDIT 3 (W)

PREREQUISITE: 0810-141

## Basic Technical Drafting III

### Registration #0810-143

Students develop the skills necessary to produce industrial-quality working drawings, including assembly and detail drawings. Students solve problems related to tolerances, mating parts, fasteners, and standard engineering fits.

CLASS 1, LAB 6, CREDIT 3 (S)

PREREQUISITE: 0810-142

**Materials and Processes I**  
**Registration #0810-151**

Students develop a working knowledge of the various materials and related manufacturing processes used in industry.  
 CLASS 3, CREDIT 3 (F)  
 PREREQUISITE: 0818-156

**Materials and Processes II**  
**Registration #0810-152**

Students investigate the properties of metals and plastics and their characteristics and methods of fabrication.  
 CLASS 3, CREDIT 3 (W)  
 PREREQUISITE: 0810-151

**Technical Drafting I**  
**Registration #0810-201**

Students measure and draw parts for machines. In this laboratory course, students produce toleranced working drawings for simple assembly drawings.  
 LAB 15, CREDIT 5 (F)  
 PREREQUISITES: 0810-143, 0818-100

**Technical Drafting II**  
**Registration #0810-202**

Students prepare sub-assembly drawings, final assembly drawings, and check layouts of selected mechanical equipment based on detail drawings. This laboratory simulates group participation in an industrial setting.  
 LAB 13, CREDIT 4 (W)  
 PREREQUISITE: 0810-201

**Technical Drafting III**  
**Registration #0810-203**

Students draw schematics, wiring diagrams, and harnesses found in industrial, electrical, and electronic drafting.  
 CLASS 1, LAB 10, CREDIT 4 (S)  
 PREREQUISITE: 0810-202  
 COREQUISITE: 0810-211

**Technical Drafting IV**  
**Registration #0810-204**

Students design welded structures from realistic engineering requirements. They work in the laboratory to produce a team-based welding assembly and supporting detail drawings.  
 LAB 8, CREDIT 3 (F)  
 PREREQUISITE: 0810-203

**Technical Drafting V**  
**Registration #0810-205**

Students solve a complex design problem from realistic engineering data, applying knowledge of power transmission components and mechanisms. This laboratory course creates a concept layout supported by engineering data.  
 LAB 9, CREDIT 3 (W)  
 PREREQUISITE: 0810-204

**Technical Drafting VI: Seminar Project**  
**Registration #0810-206**

Students design a working layout of a complex power transmission problem based on an engineering concept layout. This laboratory course provides a fully documented layout suitable for drafters to draw all individual parts.  
 LAB 15, CREDIT 5 (S)  
 PREREQUISITE: 0810-205

**Industrial Drafting Technology: A.O.S. Degree**

**Typical Course Sequence**

**Fall Term**

First Year

|          |   | Cr. Hrs.         |
|----------|---|------------------|
| 0810-141 | Basic Technical Drafting I                                  | 3                |
| 0817-126 | Algebra IIA or equivalent                                   | 3                |
| 0847-100 | Freshman Seminar  | 2                |
| 0847-101 | Job Search Process Communication English Physical Education | 1<br>2<br>4<br>0 |
|          |   | 15               |

**Winter Term**

Cr. Hrs.

|          |  |                  |
|----------|--|------------------|
| 0810-142 | Basic Technical Drafting II                                  | 3                |
| 0817-127 | Algebra IIB or equivalent                                    | 3                |
| 0818-100 | Technical Physics I Communication English Physical Education | 3<br>2<br>4<br>0 |
|          |  | 15               |

**Spring Term**

Cr. Hrs.

|          |   |                  |
|----------|---|------------------|
| 0810-143 | Basic Technical Drafting III                                  | 3                |
| 0817-124 | Geometry or equivalent  | 3                |
| 0818-135 | Technical Physics II Communication English Physical Education | 3<br>2<br>4<br>0 |
|          |   | 15               |

**Summer**

0810-299 Co-op Work Experience

Second Year

|          |  |             |
|----------|--|-------------|
| 0810-131 | Manufacturing Processes I                        | 1           |
| 0810-151 | Materials and Processes I                        | 3           |
| 0810-201 | Technical Drafting I                             | 5           |
| 0817-128 | Trigonometry or equivalent Communication English | 3<br>2<br>4 |
|          |  | 18          |

|          |  |             |
|----------|--|-------------|
| 0810-132 | Manufacturing Processes II   | 1           |
| 0810-152 | Materials and Processes II   | 3           |
| 0810-202 | Technical Drafting II  | 4           |
| 0817-201 | Algebra, Trigonometry, and Analytic Geometry I Communication* English* | 4<br>2<br>4 |
|          |  | 17          |

|          |  |             |
|----------|--|-------------|
| 0810-203 | Technical Drafting III Supervised Study in Drafting                        | 4<br>1      |
| 0817-202 | Algebra, Trigonometry, and Analytic Geometry II Elective General Education | 3<br>3<br>4 |
|          |  | 15          |

**Summer**

0810-299 Co-op Work Experience

Third Year

|          |                              |        |
|----------|------------------------------|--------|
| 0810-204 | Technical Drafting IV        | 3      |
| 0810-213 | Statics                      | 5      |
| 0810-215 | Mechanisms General Education | 4<br>4 |
|          |                              | 16     |

|          |                                    |        |
|----------|------------------------------------|--------|
| 0810-205 | Technical Drafting V               | 3      |
| 0810-214 | Strength of Materials              | 5      |
| 0810-221 | Machine Design I General Education | 4<br>4 |
|          |                                    | 16     |

|          |   |             |
|----------|---|-------------|
| 0810-206 | Technical Drafting VI                                   | 5           |
| 0810-222 | Machine Design II                                       | 4           |
| 0847-102 | Life After College General Education Technical Elective | 1<br>4<br>3 |
|          |   | 17          |

\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.



**Supervised Study in Drafting**  
**Registration #0810-211**

Students learn about electrical and electronic component selection and application. They design printed circuit boards from simulated industrial specifications and with the help of individualized instruction.

LAB 2, CREDIT 1 (S)  
 PREREQUISITE: 0810-202  
 COREQUISITE: 0810-203

**Statics**  
**Registration #0810-213**

Students learn the basic principles of statics, including reactants and equilibrium of force systems, trusses containing two-force members, structures containing three-force members, centroids, moments of inertia, and dry friction.

CLASS 6, CREDIT 5 (F)  
 PREREQUISITES: 0817-202, 0818-135

**Strength of Materials**  
**Registration #0810-214**

Students learn the basic concepts of strength of materials, including stress and strain analysis, both elastic and plastic, with emphasis on elastic analysis of axially loaded members, connectors, beams, and columns. The laboratory experience includes testing of materials utilizing appropriate machines. Field trips to see test demonstrations also occur.

CLASS 3, LAB 3, CREDIT 5 (W)  
 PREREQUISITE: 0810-213  
 COREQUISITE: 0810-221

**Mechanisms**  
**Registration #0810-215**

Students learn about basic mechanical components such as linkages and levers, and combinations of these devices as they are applied in machines. Analysis of force, deflection, velocity, and acceleration is stressed. The laboratory experience includes mathematical and graphical solutions of problems.

CLASS 3, LAB 4, CREDIT 4 (F)  
 PREREQUISITE: 0817-202

**Machine Design I**  
**Registration #0810-221**

This is a study of the analytical design of bearings, clutches, couplings, brakes, springs, gearing systems, and power shafting.

CLASS 3, LAB 3, CREDIT 4 (W)  
 PREREQUISITE: 0810-213  
 COREQUISITE: 0810-214

**Machine Design II**  
**Registration #0810-222**

Students learn methods of constructing machine parts and specifications of materials and manufacturing processes.

CLASS 3, LAB 3, CREDIT 4 (S)  
 PREREQUISITE: 0810-221

**Co-op Work Experience**  
**Registration #0810-299**

CREDIT 0 (Su)

**Independent Study**  
**Registration #0810-399**

CREDIT Variable

**Industrial Drafting Technology: A.A.S. Degree**

**Typical Course Sequence**

**Fall Term**

First Year

|          |                                  | Cr. Hrs. |
|----------|----------------------------------|----------|
| 0810-141 | Basic Technical Drafting I       | 3        |
| 0817-127 | Algebra IIB or equivalent        | 3        |
| 0847-100 | Freshman Seminar                 | 2        |
| 0847-101 | Job Search Process Communication | 1        |
|          | English                          | 2        |
|          | Physical Education               | 4        |
|          |                                  | 0        |
|          |                                  | 15       |

**Winter Term**

|          |                             | Cr. Hrs. |
|----------|-----------------------------|----------|
| 0810-142 | Basic Technical Drafting II | 3        |
| 0817-124 | Geometry or equivalent      | 3        |
| 0818-100 | Technical Physics I         | 3        |
|          | Communication               | 2        |
|          | English                     | 4        |
|          | Physical Education          | 0        |
|          |                             | 15       |

**Spring Term**

|          |                              | Cr. Hrs. |
|----------|------------------------------|----------|
| 0810-143 | Basic Technical Drafting III | 3        |
| 0817-128 | Trigonometry or equivalent   | 3        |
| 0818-135 | Technical Physics II         | 3        |
|          | Communication*               | 2        |
|          | English*                     | 4        |
|          | Physical Education           | 0        |
|          |                              | 15       |

**Summer**

0810-299 Co-op Work Experience

Second Year

|          |  |    |
|----------|--|----|
| 0810-131 | Manufacturing Processes I                      | 1  |
| 0810-151 | Materials and Processes I                      | 3  |
| 0810-201 | Technical Drafting I                           | 5  |
| 0817-201 | Algebra, Trigonometry, and Analytic Geometry I | 3  |
|          | Elective                                       | 4  |
|          |  | 16 |

|          |   |    |
|----------|---|----|
| 0810-132 | Manufacturing Processes II                      | 1  |
| 0810-152 | Materials and Processes II                      | 3  |
| 0810-202 | Technical Drafting II                           | 4  |
| 0817-202 | Algebra, Trigonometry, and Analytic Geometry II | 3  |
|          | Liberal Arts                                    | 4  |
|          |   | 15 |

|          |  |    |
|----------|--|----|
| 0810-203 | Technical Drafting III                           | 4  |
| 0810-211 | Supervised Study in Drafting                     | 1  |
| 0817-203 | Algebra, Trigonometry, and Analytic Geometry III | 3  |
|          | Elective   | 3  |
|          | Liberal Arts                                     | 4  |
|          |  | 15 |

**Summer**

0810-299 Co-op Work Experience

Third Year

|          |                       |    |
|----------|-----------------------|----|
| 0810-204 | Technical Drafting IV | 3  |
| 0810-213 | Statics               | 5  |
| 0810-215 | Mechanisms            | 4  |
|          | Liberal Arts          | 4  |
|          |                       | 16 |

|          |                       |    |
|----------|-----------------------|----|
| 0810-205 | Technical Drafting V  | 3  |
| 0810-214 | Strength of Materials | 5  |
| 0810-221 | Machine Design I      | 4  |
|          | Liberal Arts          | 4  |
|          |                       | 16 |

|          |                       |    |
|----------|-----------------------|----|
| 0810-206 | Technical Drafting VI | 5  |
| 0810-222 | Machine Design II     | 4  |
| 0847-102 | Life After College    | 1  |
|          | Liberal Arts          | 4  |
|          | Technical Elective    | 3  |
|          |                       | 17 |

\*Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

# Manufacturing Processes

## Numerical Control I

### Registration #0812-151

This course introduces students to computer-controlled machine tools. Students develop the skills required to program a machine, using several canned cycles, and to develop programs that include point to point, linear, and circular interpolation operations.

CLASS 4, LAB 3, CREDIT 4 (W)

PREREQUISITES: 0813-134, 0817-128

## Numerical Control II

### Registration #0812-152

Students use on-line computers to prepare and verify programs. Students are introduced to advanced concepts through computer numerical control programming of a CNC milling machine.

CLASS 4, LAB 3, CREDIT 4 (S)

PREREQUISITE: 0812-151

## Career Exploration: Manufacturing Processes

### Registration #0813-100

This course provides students with information regarding a career in manufacturing processes. Activities may include field trips, hands-on experiences, career information presentations, and interaction with graduates of the program and professionals in the field. These experiences help students understand work activities, conditions, and settings.

LAB 3, CREDIT 1 (F, W, S)

## Basic Drafting I

### Registration #0813-101

This course provides instruction in the principles and techniques of basic drafting for students in other technical programs. The emphasis is on understanding how drawings are made and used in industry.

LAB 6, CREDIT 2 (F)

PREREQUISITE: 0817-142

## Basic Drafting II

### Registration #0813-102

This course is a continuation of Basic Drafting I and is designed for students who desire or need greater depth of knowledge of drafting in industry. Topics include auxiliary views, sections, applied mathematics, and isometric and pictorial drawings with greater attention to drawing quality.

LAB 6, CREDIT 2 (W)

PREREQUISITES: 0813-101, 0817-127

## Manufacturing Processes I, II, III

### Registration #0813-131, 132, 133

Students develop the basic skills necessary to use traditional machine tools. Laboratory instruction simulates an industrial environment. Emphasis on safety in the operation of machines is an integral part of the courses.

CLASS 1, LAB 8, CREDIT 4 (0813-131-F, 0813-132-W, 0813-133-S)

PREREQUISITES:

0817-123 for 0813-131

0813-131 for 0813-132

0813-132 for 0813-133

## Manufacturing Processes: Diploma

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0813-131 | Manufacturing Processes I             | 4        |
| 0813-139 | Blueprint Reading I                   | 2        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0847-100 | Freshman Seminar                      | 2        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | Physical Education                    | 0        |
|          |                                       | 17       |

##### Second Year

|          |                            |        |
|----------|----------------------------|--------|
| 0813-101 | Basic Drafting I           | 2      |
| 0813-134 | Manufacturing Processes IV | 4      |
| 0813-151 | Industrial Materials       | 3      |
| 0817-128 | Trigonometry Electives     | 3<br>4 |
|          |                            | 16     |

#### Winter Term

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0813-132 | Manufacturing Processes II             | 4        |
| 0813-140 | Blueprint Reading II                   | 2        |
| 0817-141 | Fundamentals of College Mathematics II | 3        |
| 0847-101 | Job Search Process                     | 1        |
|          | Communication                          | 2        |
|          | English                                | 4        |
|          | Physical Education                     | 0        |
|          |  | 16       |

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0813-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

#### Spring Term

|          |   | Cr. Hrs. |
|----------|---|----------|
| 0813-133 | Manufacturing Processes III             | 4        |
| 0813-154 | Precision Measurement                   | 2        |
| 0817-142 | Fundamentals of College Mathematics III | 3        |
|          | Communication <sup>1</sup>              | 2        |
|          | English <sup>*</sup>                    | 4        |
|          | Physical Education                      | 0        |
|          |   | 15       |

|          |                                     |    |
|----------|-------------------------------------|----|
| 0812-152 | Numerical Control II <sup>1</sup>   | 4  |
| 0813-136 | Manufacturing Processes VI          | 4  |
| 0813-152 | Manufacturing Analysis <sup>1</sup> | 3  |
| 0813-155 | Welding II <sup>1</sup>             | 2  |
| 0847-102 | Life After College                  | 1  |
|          |                                     | 14 |

<sup>1</sup>Students who enter this program without the C.O.R.E. year experience will need to take additional English and communication courses.

<sup>\*</sup>Technical Electives: During the final two quarters, students are required to take two or three suggested courses, and their total number of credit hours must total at least 12.

**Manufacturing Processes IV, V, VI**  
**Registration #0813-134, 135, 136**

Students apply the theory associated with the set-up and operation of lathes, milling machines, drill presses, grinders, and bench operations. Students also are introduced to non-traditional machining. Greater emphasis placed on accuracy and tolerance of machine parts. Safety is stressed throughout all courses.

CLASS 1, LAB 8, CREDIT 4 (0813-134-F, 0813-135-W, 0813-136-S)

PREREQUISITES:  
 0813-133 for 0813-134  
 0813-134 for 0813-135  
 0813-135 for 0813-136

**Blueprint Reading I, II**  
**Registration #0813-139, 140**

Students develop the skills necessary to read and interpret prints of engineering drawings of details and assemblies.

CLASS 1, LAB 3, CREDIT 2 (0813-139-F, 0813-140-W)

PREREQUISITES:  
 0817-123 for 0813-139  
 0813-139 for 0813-140

**Industrial Materials**  
**Registration #0813-151**

This course introduces students to the many materials used in industry and the reasons why the final cost of producing a part is influenced by material selection. Metals, plastics, and ceramics will be covered from the perspective of physical, mechanical, and dimensional properties.

CLASS 3, CREDIT 3 (W)  
 PREREQUISITE: 0813-134

**Manufacturing Analysis**  
**Registration #0813-152**

This course introduces students to manufacturing concepts. Students learn about production, management, and sales, the text and class discussions focus on problem solving and industrial operations.

CLASS 3, CREDIT 3 (S)  
 PREREQUISITE: 0813-134

**Welding I**  
**Registration #0813-153**

Students learn about basic oxyacetylene and shielded metal arc welding processes as well as how to set up and operate equipment properly. Safety rules pertaining to welding are emphasized.

LAB 4, CREDIT 2 (W)  
 PREREQUISITE: 0813-134

**Precision Measurement**  
**Registration #0813-154**

Students develop the skills necessary to measure to the highest tolerances commonly used in industry. They measure parts or groups of parts using industrial methods and equipment. Analysis of measurements and problem solving is stressed.

CLASS 1, LAB 3, CREDIT 2 (S)  
 PREREQUISITE: 0813-132

**Welding II**  
**Registration #0813-155**

Students develop skills in gas tungsten arc welding, gas metal arc welding, and resistance welding. The course emphasizes proper operation of equipment and related safety measures.

LAB 4, CREDIT 2 (S)  
 PREREQUISITE: 0813-153

**Co-op Work Experience**  
**Registration #0813-299**

CREDIT 0 (Su)

**Independent Study**  
**Registration #0813-399**

CREDIT Variable

# Medical Laboratory Technology

## Anatomy/Physiology and Disease I, II Registration #0816-101, 102

These courses provide students with the fundamentals of human anatomy with emphasis on physiology and related diseases. Students perform a variety of experiments and dissections in the laboratory portion of the courses.

CLASS 2, LAB 2, CREDIT 4 (0816-101-F, 0816-102-W)

## Introduction to Medical Parasitology Registration #0816-105

This course introduces students to the host/parasite relationship, life cycle, and identification procedures for intestinal and atrial protozoa, nematodes, cestodes, and trematodes. Classes include discussion of diseases and use of preserved microscopic slides, 35mm captioned slides, and laboratory preparation.

CLASS 1, LAB 2, CREDIT 2 (S)

## Basic Histology Registration #0816-111

Theory and practice in tissue preparation for paraffin techniques are presented. Laboratory techniques include preparation of solutions, stains, sectioning, slide mounting, and staining of various tissues. Students develop skills in the operation, use, and care of histologic instruments.

CLASS 12, CREDIT 6 (S)

## Electrocardiography Registration #0816-115

This course emphasizes use of machine techniques for selecting and monitoring tracings of simple heart maladies.

CLASS 4, CREDIT 2 (W)

## Urinalysis Registration #0816-121

This course provides theory and practice in the estimation of urinary constituents, microscopic examination, and additional tests of clinical significance.

CLASS 4, CREDIT 2 (F)

## Hematology Registration #0816-122

This course is a study of routine blood tests, including white count, red count, hematocrit, hemoglobin, sedimentation rate, differential count, and the calculations of the hemacytometer. Emphasis also is placed on recognition of normal and abnormal cellular elements of blood.

CLASS 8, CREDIT 4 (F)

## Advanced Hematology Registration #0816-123

This course provides instruction and practice in automated methods of cell counting, quality control, red cell description, reticulocyte counts, and test procedures in coagulation. The course emphasizes the correlation between laboratory work and diseases, such as anemia and leukemia, as well as bleeding and coagulation disorders.

CLASS 9, CREDIT 5 (W)

PREREQUISITE: 0816-122

## Histologic Assistant: Certificate

### Typical Course Sequence

#### Fall Term

#### Pre-Technical Requirements

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0814-107 | MLT Biology I                         | 4        |
| 0815-115 | MLT Chemistry I                       | 4        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0847-100 | Freshman Seminar                      | 2        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | Physical Education                    | 0        |
|          |                                       | 19       |

#### First Year

|          |                                  |    |
|----------|----------------------------------|----|
| 0816-101 | Anatomy/Physiology and Disease I | 4  |
| 0816-111 | Basic Histology                  | 6  |
| 0817-170 | MLT Mathematics                  | 3  |
|          | Communication                    | 2  |
|          | English                          | 4  |
|          |                                  | 19 |

#### Winter Term

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0814-108 | MLT Biology II                         | 4        |
| 0815-116 | MLT Chemistry II                       | 4        |
| 0817-141 | Fundamentals of College Mathematics II | 3        |
| 0847-101 | Job Search Process                     | 1        |
|          | Communication                          | 2        |
|          | English                                | 4        |
|          | Physical Education                     | 0        |
|          |  | 18       |

#### Spring Term

|          |   | Cr. Hrs. |
|----------|---|----------|
| 0814-109 | MLT Biology III                         | 4        |
| 0815-117 | MLT Chemistry III                       | 4        |
| 0817-142 | Fundamentals of College Mathematics III | 3        |
|          | Communication                           | 2        |
|          | English                                 | 4        |
|          | Physical Education                      | 0        |
|          |   | 17       |

#### Second Year

|          |                                   |    |
|----------|-----------------------------------|----|
| 0816-102 | Anatomy/Physiology and Disease II | 4  |
| 0816-115 | Electrocardiography               | 2  |
| 0816-211 | Histology II                      | 6  |
| 0847-102 | Life After College                | 1  |
|          | Communication                     | 2  |
|          | English                           | 4  |
|          |                                   | 19 |

|          |                               |  |
|----------|-------------------------------|--|
| 0816-299 | MLT Co-op Clinical Experience |  |
|----------|-------------------------------|--|

## Microbiology I Registration #0816-131

This course is an introduction to the study of microscopic organisms such as viruses, bacteria, yeast, protozoa, fungi, and algae. The course also includes clinical procedures for the study of common disease-causing organisms with concentration in bacteriology. Techniques in the laboratory include media preparation, sterilization, culturing, mounting, staining, agglutination, antimicrobial susceptibility testing, and biochemical reactions.

CLASS 9, CREDIT 5 (S)

## Immunology/Serology Registration #0816-132

The nature of immunity, the basic principles of the immune system, immunoassay, immunopathology, histocompatibility, and oncoimmunology are among the topics considered in this course. A variety of routine and special immunological procedures are learned during laboratory sessions.

CLASS 2, LAB 3, CREDIT 3 (W)

## Blood Banking Registration #0816-133

The theory of blood banking and routine procedures is presented in this course. Emphasis is placed on quality control, ABO grouping, sub-grouping, Rh testing, anti-globulin testing, antibody screening, antibody detection and identification, transfusion reactions, compatibility testing, erythroblastosis fetalis, preparation and storage of blood components, and recordkeeping.

CLASS 2, LAB 3, CREDIT 3 (S)

## Electron Microscopy Registration #0816-140

Electron optics and the mechanics of the electron microscope are studied prior to any work on the electron microscope. The principles of specimen preparation, fixation, embedding, microtomy, staining, and photographic processing are studied in depth. The course grade is based on the quality of the final products.

CLASS 2, LAB 5, CREDIT 3 (F, W, S)

PREREQUISITES: 0814-109, 0816-111

### MLT Co-op Seminar Registration #0816-200

This course provides students with knowledge and skills to prepare them for a successful co-op experience, including guidelines on professional ethics, employee-employer responsibilities, communication skills, and interpersonal relationship development. Class activities include discussion groups, panel presentations, hospital visitations, lectures, and the preparation of co-op materials.  
CLASS 2, CREDIT 1 (W)  
PREREQUISITE: Completed pre-technical year

### Clinical Chemistry I, II, III Registration #0816-201, 202, 203

This three-quarter sequence provides theory and practice in the quantitative and qualitative analyses of physiochemical parameters, the sequence includes fundamental concepts of clinical analysis, theory and practical application of clinical instrumentation, and the relationship of clinical analysis to methodology and the diagnostic process. The winter and spring quarters include a hospital affiliation in clinical instrumentation twice weekly.  
CLASS 12, CREDIT 6 (0816-201-F)  
CLASS 9, CREDIT 5 (0816-202-W, 0816-203-S)  
PREREQUISITES:  
0816-201 for 0816-202  
0816-202 for 0816-203

### Histology II Registration #0816-211

This course is a continuation of Basic Histology with emphasis on histochemistry, special stains, and tissue preparation techniques.  
CLASS 12, CREDIT 6 (W, S)  
PREREQUISITE: 0816-111

### Laboratory Simulation Registration #0816-224

This course is a review and summary of all specialties included in the total medical laboratory technology program. Students rotate into all departments in the clinical laboratory environment. Students meet one hour per week with medical laboratory technology faculty members on campus. The remaining six hours each week are spent on rotation in an affiliated hospital or clinical laboratory under supervised conditions.  
CLASS 1, LAB 6, CREDIT 3 (S)

### Microbiology II Registration #0816-232

This course is an in-depth study of medical bacteriology and the related diseases. Theory and practice are provided in specimen collection, culturing, staining, media preparation and selection, normal flora, identification procedures for disease-producing organisms, susceptibility testing, agglutination reactions, and reporting results. This occurs on campus and in affiliated hospital laboratories.  
CLASS 12, CREDIT 6 (F)  
PREREQUISITE: 0816-131

## Medical Laboratory Technology: A.A.S. Degree

### Typical Course Sequence

#### Fall Term

##### Pre-Technical Requirements

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0814-107 | MLT Biology I                         | 4        |
| 0815-115 | MLT Chemistry I                       | 4        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | Physical Education                    | 0        |
|          |                                       | 17       |

##### First Year

|          |                                  |    |
|----------|----------------------------------|----|
| 0816-101 | Anatomy/Physiology and Disease I | 4  |
| 0816-121 | Urinalysis                       | 2  |
| 0816-122 | Hematology                       | 4  |
| 0817-170 | MLT Mathematics                  | 3  |
| 0847-101 | Job Search Process               | 1  |
|          | English                          | 4  |
|          |                                  | 18 |

##### Second Year

|          |                      |    |
|----------|----------------------|----|
| 0816-201 | Clinical Chemistry I | 6  |
| 0816-232 | Microbiology II      | 6  |
|          | Communication        | 2  |
|          | Liberal Arts         | 4  |
|          |                      | 18 |

### Microbiology III Registration #0816-233

This course is a continuation of Microbiology II, with an emphasis on special techniques for anaerobic organisms, mycobacteriology, mycology, and virology. The theory portion of the course includes the study of diseases and their symptoms.  
CLASS 9, CREDIT 5 (W)  
PREREQUISITE: 0816-232

### Co-op Clinical Experience Registration #0816-299

CREDIT 0 (Su)

### Independent Study Registration #0816-399

CREDIT Variable

#### Winter Term

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0814-108 | MLT Biology II                         | 4        |
| 0815-116 | MLT Chemistry II                       | 4        |
| 0817-141 | Fundamentals of College Mathematics II | 3        |
| 0847-100 | Freshman Seminar                       | 2        |
|          | English                                | 4        |
|          | Physical Education                     | 0        |
|          |  | 17       |

|          |                                   |    |
|----------|-----------------------------------|----|
| 0816-102 | Anatomy/Physiology and Disease II | 4  |
| 0816-123 | Advanced Hematology               | 5  |
| 0816-132 | Immunology                        | 3  |
| 0816-200 | Pre-Co-op Seminar                 | 1  |
|          | English or Liberal Arts           | 4  |
|          |                                   | 17 |

#### Summer

0816-299 Co-op Clinical Experience

|          |                       |    |
|----------|-----------------------|----|
| 0816-115 | Electrocardiography   | 2  |
| 0816-202 | Clinical Chemistry II | 5  |
| 0816-233 | Microbiology III      | 5  |
|          | Communication         | 2  |
|          | Liberal Arts          | 4  |
|          |                       | 18 |

#### Spring Term

|          |   | Cr. Hrs. |
|----------|---|----------|
| 0814-109 | MLT Biology III                         | 4        |
| 0815-116 | MLT Chemistry III                       | 4        |
| 0817-142 | Fundamentals of College Mathematics III | 3        |
|          | Communication                           | 2        |
|          | English                                 | 4        |
|          | Physical Education                      | 0        |
|          |   | 17       |

|          |                       |    |
|----------|-----------------------|----|
| 0816-111 | Basic Histology       | 6  |
| 0816-131 | Microbiology I        | 5  |
| 0816-133 | Blood Bank Procedures | 3  |
|          | Liberal Arts          | 4  |
|          |                       | 18 |

|          |                        |    |
|----------|------------------------|----|
| 0816-105 | Medical Parasitology   | 2  |
| 0816-203 | Clinical Chemistry III | 5  |
| 0816-224 | Laboratory Simulation  | 3  |
| 0847-102 | Life After College     | 1  |
|          | Communication          | 2  |
|          | Liberal Arts           | 4  |
|          |                        | 17 |

# Medical Record Technology

## Career Exploration: Medical Record Technology

### Registration #0819-100

This course provides a general overview of experiences related to the medical record profession. It is offered to students who want to explore their interest in selecting medical record technology as a career. Students enrolled in the course typically have not attended the Summer Vestibule Program (SVP) or attended SVP but did not sample medical record technology at that time.  
CLASS 2, CREDIT 1 (S)

### Biology I

#### Registration #0819-106

This is the first in a three-quarter series of courses. Topics covered in this course are basic atomic structure, molecular biology, cellular structure and function, cellular respiration, DNA structure, protein synthesis, mitosis, and the relationship of bacteria and viruses to disease. Laboratory activities involving microscopic and macroscopic observations of prepared and live specimens are performed to supplement classroom lectures and discussion. Study skills development and refinement are emphasized.  
CLASS 4, LAB 2, CREDIT 4 (F)

### Biology II

#### Registration #0819-107

This course concentrates on human biology. Topics covered include hematology and the digestive, excretory, cardiovascular, respiratory, immune, and nervous systems. Laboratory activities, including the use of prepared specimens, supplement classroom lectures and discussion. Medical terminology is introduced through discussion of exemplary pathological conditions.

CLASS 4, LAB 2, CREDIT 4 (W)  
PREREQUISITE: 0819-106

### Biology III

#### Registration #0819-108

The final course in this sequence continues to focus on human biology. Topics covered are the endocrine system, reproduction, embryology, meiosis, and cellular and human genetics. Basic medical terminology related to each topic is discussed. Laboratory activities include dissecting a pig embryo as well as reviewing the anatomy of all body systems studied in this course and Biology II.

CLASS 4, LAB 2, CREDIT 4 (S)  
PREREQUISITE: 0819-107

## Medical Record Technology: A.A.S. Degree

### Typical Course Sequence

#### Fall Term

##### Pre-Technical Year

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0804-111 | Beginning Typing I                    | 2        |
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0819-106 | Biology I                             | 4        |
| 0847-100 | Freshman Seminar                      | 2        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          |                                       | 17       |

##### First Year

|          |                           |    |
|----------|---------------------------|----|
| 0819-111 | Anatomy/Physiology I      | 4  |
| 0819-141 | Medical Records Science I | 5  |
| 0819-161 | Medical Terminology I     | 3  |
|          | Communication             | 2  |
|          | English Composition       | 4  |
|          |                           | 18 |

##### Second Year

|          |                            |    |
|----------|----------------------------|----|
| 0819-244 | Medical Records Science IV | 5  |
| 0819-264 | Medical Terminology IV     | 3  |
| 0847-101 | Job Search                 | 1  |
|          | Communication              | 2  |
|          | Liberal Arts               | 4  |
|          |                            | 15 |

#### Winter Term

|          |                     | Cr. Hrs. |
|----------|---------------------|----------|
| 0804-112 | Beginning Typing II | 2        |
| 0819-107 | Biology II          | 4        |
|          | Communication       | 2        |
|          | English             | 4        |
|          | Physical Education  | 0        |
|          |                     | 12       |

|          |                            |    |
|----------|----------------------------|----|
| 0804-221 | Advanced Typing I          | 3  |
| 0819-112 | Anatomy/Physiology II      | 4  |
| 0819-142 | Medical Records Science II | 5  |
| 0819-162 | Medical Terminology II     | 3  |
|          | Communication              | 2  |
|          | Physical Education         | 0  |
|          |                            | 17 |

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0819-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

#### Spring Term

|          |                      | Cr. Hrs. |
|----------|----------------------|----------|
| 0804-113 | Beginning Typing III | 2        |
| 0819-108 | Biology III          | 4        |
| 0819-145 | Health Organization  | 4        |
|          | English              | 4        |
|          |                      | 14       |

|          |                             |    |
|----------|-----------------------------|----|
| 0802-213 | Data Processing             | 2  |
| 0804-301 | Word Processing I           | 4  |
| 0819-143 | Medical Records Science III | 5  |
| 0819-163 | Medical Terminology III     | 3  |
|          | Liberal Arts                | 4  |
|          |                             | 18 |

|          |                            |    |
|----------|----------------------------|----|
| 0819-246 | Medical Records Science VI | 5  |
| 0819-252 | Pathophysiology II         | 3  |
| 0819-267 | Medical Terminology V      | 3  |
|          | Liberal Arts               | 4  |
|          |                            | 15 |

**Anatomy/Physiology and Disease I, II**  
**Registration #0819-111, 112**

This is a two-quarter, in-depth study of human anatomy and physiology using a systematic approach to basic disease processes, emphasis is placed on related medical terminology and clinical procedures.  
 CLASS 6, CREDIT 4 (0819-111-F, 0819-112-W)  
 PREREQUISITE: 0819-111 for 0819-112

**Medical Record Science I**  
**Registration #0819-141**

The career in medical record technology is introduced through discussion and laboratory practice. Topics covered are the medical record content, record numbering and filing systems, and the medical record profession, procedures in the laboratory include filing, admissions, chart assembly and analysis, and chart deficiencies.  
 CLASS 9, CREDIT 5 (F)

**Medical Record Science II**  
**Registration #0819-142**

This course includes coding rules and laboratory experience in practical application of coding diseases and operations.  
 CLASS 9, CREDIT 5 (W)  
 PREREQUISITE: 0819-141

**Medical Record Science III**  
**Registration #0819-143**

This unit uses the content of patient records to continue the practical experience in manual and automated coding. Students learn manual and computerized abstracting of statistical data to compute health statistics; they also learn to interpret computerized statistical reports.  
 CLASS 9, CREDIT 5 (S)  
 PREREQUISITE: 0819-142

**Health Care Organization and Structure**  
**Registration #0819-145**

This course gives an overall introduction to health care delivery systems. It includes the composition, responsibilities, and functions of the administrative staff, health care providers, and allied health departments and professionals. Students discuss the purposes of and responsibility for the health record.  
 CLASS 5, CREDIT 4 (S)

**Medical Terminology I, II, III**  
**Registration #0819-161, 162, 163**

These are the first three courses in a five-quarter sequence. Etymology, definition, pronunciation, spelling, and correct utilization of medical terms are stressed. Common medical terms are discussed in relation to disorders and diseases of each body system. Pronunciation and correct utilization of medical terms are reinforced.  
 CLASS 3, CREDIT 3 (0819-161-F, 0819-162-W, 0819-163-S)  
 PREREQUISITES:  
 0819-161 for 0819-162  
 0819-162 for 0819-163

**Medical Record Science IV**  
**Registration #0819-244**

Students study data regulations and activities associated with health information control and quality as well as legal aspects of medical records.  
 CLASS 9, CREDIT 5 (F)  
 PREREQUISITE: 0819-143

**Medical Record Science V**  
**Registration #0819-245**

This course includes the medical staff organization and its responsibilities; management and supervision of health information departments; and health facilities/records in long term care, ambulatory care, home care, hospice, and mental health care.  
 CLASS 9, CREDIT 5 (W)  
 PREREQUISITE: 0819-244

**Medical Record Science VI**  
**Registration #0819-246**

This final course includes clinical affiliations in long term, ambulatory, and mental health care at local facilities; cancer registry with abstracting of cases; trends in health care delivery systems; and review/evaluation of medical record technology knowledge and skills.  
 CLASS 9, CREDIT 5 (S)  
 PREREQUISITE: 0819-245

**Pathophysiology I, II**  
**Registration #0819-251, 252**

This two-quarter sequence combines knowledge of human physiology with disease processes. The etiology, pathological mechanisms, characteristic symptoms, clinical manifestations, and diagnostic and therapeutic procedures of common diseases are presented.  
 CLASS 3, CREDIT 3 (0819-251-W, 0819-252-S)  
 PREREQUISITES:  
 0819-112 or equivalent for 0819-251  
 0819-251 for 0819-252

**Medical Terminology IV**  
**Registration #0819-264**

This is a review of terms encountered in Medical Terminology I, II, and III supplemented by secondary vocabulary selected from the same topics. Etymology, definition, spelling, pronunciation, and correct utilization of medical terms are reinforced.  
 CLASS 3, CREDIT 3 (F)  
 PREREQUISITE: 0819-163

**Medical Terminology V**  
**Registration #0819-267**

In this course, terms related to disorders, diagnosis, treatment, and surgical procedures are selected from a variety of specialty topics. These topics include anesthesiology, microbiology, oncology, ontology, pharmacology, psychiatry, radiology, nuclear medicine, and radiation therapy. Etymology, definition, spelling, pronunciation, and correct utilization of medical terms are reinforced.  
 CLASS 3, CREDIT 3 (S)  
 PREREQUISITE: 0819-264

**Co-op Work Experience**  
**Registration #0819-299**  
 CREDIT 0(Su)

# Ophthalmic Optical Finishing Technology

## Introduction to Optical Finishing Technology I

### Registration #0827-105

This course emphasizes a continuation of sampling in optical finishing technology, including an overview of the career, admissions and graduate requirements, sources of employment, and expectations of students in the program. Students learn the titles, roles, and responsibilities of vision care personnel, including the M.D., O.D., dispensing optician, and optical finishing technologist. Laws and regulations governing the ophthalmic laboratory industry are introduced.  
CLASS 2, CREDIT 2(F)

## Introduction to Optical Finishing Technology II

### Registration #0827-106

This course teaches the function and use of optical laboratory equipment necessary to the production of single-vision eyewear. Students learn the basic concepts of sphere, cylinder, axis, and geometric center as well as how to fabricate single-vision uncut lenses into finished eyewear.  
CLASS 2, CREDIT 2 (W)

## Introduction to Optical Finishing Technology III

### Registration #0827-107

This course introduces the concept of writing functions of given vertometer parts. Students learn the process of writing step-by-step sequential procedures for equipment operation. They practice determining lens powers from vertometer readings and calculating decentration from given prescription information. They also learn the meanings of various optical terms found on a given prescription form.

CLASS 2, CREDIT 2 (S)

PREREQUISITE: 0827-106

## Optical Finishing Technology Math I

### Registration #0827-111

This course focuses on the rules of transposition, including transposition of lens powers. Students learn to apply mathematic functions, solving for binocular and monocular RD.s, near vision prescriptions, and bifocal segment height and inset. The concepts of plus and minus cylinder prescription powers are discussed and definitions and determinations of lens powers from given base curves, cross curves, and inside curves are taught.

CLASS 4, CREDIT 3 (F)

PREREQUISITE: 0817-140

## Ophthalmic Optical Finishing Technology: Certificate Typical Course Sequence

### Fall Term

### Winter Term

### Spring Term

#### Pre-Technical Requirements

|          | Cr. Hrs.              |    | Cr. Hrs. |                                       | Cr. Hrs. |
|----------|-----------------------|----|----------|---------------------------------------|----------|
| 0817-120 | Basic Mathematics     | 3  | 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0827-105 | Introduction to OFT I | 2  | 0827-106 | Introduction to OFT II                | 2        |
| 0847-100 | Freshman Seminar      | 2  |          | Communication                         | 2        |
|          | Communication         | 2  |          | English                               | 4        |
|          | English               | 4  |          | General Education                     | 2        |
|          | Physical Education    | 0  |          | Physical Education                    | 0        |
|          |                       | 13 |          |                                       | 13       |
|          |                       |    |          |                                       | 12-16    |

#### First Year

|          |                                 |    |          |                                  |    |          |                                   |   |
|----------|---------------------------------|----|----------|----------------------------------|----|----------|-----------------------------------|---|
| 0827-111 | OFT Math I                      | 3  | 0827-112 | OFT Math II                      | 3  | 0827-122 | Optical Finishing Techniques II   | 5 |
| 0827-115 | Prescription Analysis I         | 3  | 0827-116 | Prescription Analysis II         | 3  | 0827-123 | Optical Finishing Techniques III  | 6 |
| 0827-161 | Optical Finishing Terminology I | 3  | 0827-121 | Optical Finishing Techniques I   | 5  | 0827-163 | Optical Finishing Terminology III | 3 |
|          | Communication                   | 2  | 0827-162 | Optical Finishing Terminology II | 3  | 0847-102 | Life After College                | 1 |
|          | English                         | 4  |          | English                          | 4  |          | Communication                     | 2 |
|          |                                 | 15 |          |                                  | 18 |          |                                   |   |

## Ophthalmic Optical Finishing Technology: Diploma Typical Course Sequence

### Fall Term

### Winter Term

### Spring Term

#### Pre-Technical Requirements

|          | Cr. Hrs.              |    | Cr. Hrs. |                                       | Cr. Hrs. |
|----------|-----------------------|----|----------|---------------------------------------|----------|
| 0817-120 | Basic Mathematics     | 3  | 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0827-105 | Introduction to OFT I | 2  | 0827-106 | Introduction to OFT II                | 2        |
| 0847-100 | Freshman Seminar      | 2  |          | Communication                         | 2        |
|          | Communication         | 2  |          | English                               | 4        |
|          | English               | 4  |          | General Education                     | 2        |
|          | Physical Education    | 0  |          | Physical Education                    | 0        |
|          |                       | 13 |          |                                       | 13       |

#### First Year

|          |                                 |    |          |                                  |    |          |                                   |    |
|----------|---------------------------------|----|----------|----------------------------------|----|----------|-----------------------------------|----|
| 0827-111 | OFT Math I                      | 3  | 0827-112 | OFT Math II                      | 3  | 0827-117 | Lens Design                       | 3  |
| 0827-115 | Prescription Analysis I         | 3  | 0827-116 | Prescription Analysis II         | 3  | 0827-122 | Optical Finishing Techniques II   | 5  |
| 0827-161 | Optical Finishing Terminology I | 3  | 0827-121 | Optical Finishing Techniques I   | 5  | 0827-123 | Optical Finishing Techniques III  | 6  |
| 0847-101 | Job Search Process              | 1  | 0827-162 | Optical Finishing Terminology II | 3  | 0827-163 | Optical Finishing Terminology III | 3  |
|          | Communication                   | 2  |          | English                          | 4  |          |                                   | 17 |
|          | English                         | 4  |          |                                  | 18 |          |                                   |    |
|          |                                 | 16 |          |                                  |    |          |                                   |    |

### Summer

0827-299 Co-op Work Experience

#### Second Year

|          |  |    |          |                            |    |          |   |    |
|----------|--|----|----------|----------------------------|----|----------|---|----|
| 0827-224 | Optical Finishing Techniques IV            | 5  | 0818-165 | Physics I                  | 4  | 0827-226 | Laboratory Simulation II                | 5  |
| 0827-241 | Management of Optical Stockroom Procedures | 4  | 0827-225 | Laboratory Simulation I    | 5  | 0827-243 | Optical Finishing Inspection/Correction | 3  |
|          | Communication                              | 2  | 0827-251 | Professional Optic Seminar | 2  |          | English                                 | 4  |
|          | General Education                          | 1  | 0847-102 | Life After College         | 1  |          |   | 12 |
|          |  | 12 |          |                            | 12 |          |   |    |



### Optical Finishing Technology Math II Registration #0827-112

This course teaches students how to select and determine appropriate base curves, cross curves, and inside curves of given lens powers, students learn mathematic formulas used in determining effective diameter, smallest lens blank, and prism. They also learn to apply mathematical functions related to vertometer power readings, heat treat times, and lens measurer readings.

CLASS 4, CREDIT 3 (W)

PREREQUISITES: 0817-140, 0817-141, 0827-111

### Prescription Analysis I Registration #0827-115

This course teaches students the meaning of various optical terms found on given prescription forms. Students learn what information should be on a complete prescription and how to analyze single-vision and multifocal prescriptions for laboratory processing.

CLASS 4, CREDIT 3 (F)

### Prescription Analysis II Registration #0827-116

Students continue to analyze and write ophthalmic prescriptions in various forms with an emphasis on ortholite plastic, cataract, and trifocal prescriptions.

CLASS 4, CREDIT 3 (W)

PREREQUISITE: 0827-115

### Lens Design

#### Registration #0827-117

This course teaches students how to design lens systems based on specific optical factors such as frame selection, lens material, lens thickness, index of refraction, size of lens, lens power, blank manufacturer, and cosmetic appeal. Students learn trade names of lenses, percentages of lens transmission, multifocal segment placement, and occupational and recreational lens forms.

CLASS 5, CREDIT 3 (S)

PREREQUISITES: 0827-111, 0827-112

### Optical Finishing Techniques I Registration #0827-121

This course teaches students the techniques of using the vertometer, layout marker, heat treat units, and pattern maker, and develops hand-beveling skills.

LASS 6, CREDIT 5 (W)

### Optical Finishing Techniques II Registration #0827-122

This course teaches students how to block and edge lenses using a variety of automatic edging machines. Students learn how to edge given lenses with a Vee bevel, rimless bevel, and hide-a-bevel. Edging concepts and operational techniques are emphasized.

CLASS 6, CREDIT 5 (S)

PREREQUISITE: 0827-121

### Optical Finishing Techniques III Registration #0827-123

This course teaches students the use of the vertometer and various layout markers to prepare lenses for edging. Students learn to process uncut ophthalmic lenses according to ANSI standards.

CLASS 12, CREDIT 6 (S)

PREREQUISITES: 0827-112, 0827-122

## Ophthalmic Optical Finishing Technology: A.O.S. Degree

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                       | Cr. Hrs. |
|----------|-----------------------|----------|
| 0817-120 | Basic Mathematics     | 3        |
| 0827-105 | Introduction to OFT I | 2        |
| 0847-100 | Freshman Seminar      | 2        |
|          | Communication         | 2        |
|          | English               | 4        |
|          | Physical Education    | 0        |
|          |                       | 13       |

##### Second Year

|          |                                 |    |
|----------|---------------------------------|----|
| 0827-111 | OFT Math I                      | 3  |
| 0827-115 | Prescription Analysis I         | 3  |
| 0827-161 | Optical Finishing Terminology I | 3  |
| 0847-101 | Job Search Process              | 1  |
|          | Communication                   | 2  |
|          | English                         | 4  |
|          |                                 | 16 |

##### Third Year

|          |  |    |
|----------|--|----|
| 0827-224 | Optical Finishing Techniques IV            | 5  |
| 0827-241 | Management of Optical Stockroom Procedures | 4  |
| 0847-166 | Human Experience: An Individual Life       | 4  |
|          | Communication                              | 2  |
|          |  | 15 |

### Optical Finishing Terminology I Registration #0827-161

This course emphasizes comprehension, spelling, and application of terminology related to the optical profession, including the laboratory environment, function and disorders of the eye, and optics/lens characteristics.

CLASS 5, CREDIT 3 (F, W, S)

### Optical Finishing Terminology II Registration #0827-162

This course emphasizes the comprehension, spelling, and application of terminology related to the vertometer, lensometer, pattern maker, heat treat units, and ceramic and diamond head beveling wheels.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: 0827-161

#### Winter Term

|          |                                       | Cr. Hrs. |
|----------|---------------------------------------|----------|
| 0817-140 | Fundamentals of College Mathematics I | 3        |
| 0827-106 | Introduction to OFT II                | 2        |
|          | Communication                         | 2        |
|          | English                               | 4        |
|          | General Education                     | 2        |
|          | Physical Education                    | 0        |
|          |                                       | 13       |

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0827-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

|          |  |    |
|----------|--|----|
| 0827-225 | Laboratory Simulation I                      | 5  |
| 0827-251 | Professional Optic Seminar                   | 2  |
| 0847-167 | Human Experience: The Individual and Society | 4  |
|          | Communication                                | 2  |
|          |  | 13 |

#### Spring Term

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0817-141 | Fundamentals of College Mathematics II | 3        |
| 0827-107 | Introduction to OFT III                | 2        |
|          | Communication                          | 2        |
|          | English                                | 4        |
|          | General Education                      | 2        |
|          | Physical Education                     | 0        |
|          |  | 13       |

|          |                                   |    |
|----------|-----------------------------------|----|
| 0827-117 | Lens Design                       | 3  |
| 0827-122 | Optical Finishing Techniques II   | 5  |
| 0827-123 | Optical Finishing Techniques III  | 6  |
| 0827-163 | Optical Finishing Terminology III | 3  |
|          |                                   | 17 |

### Optical Finishing Terminology III Registration #0827-163

This course emphasizes the comprehension, spelling, and application of terminology related to lens tolerances, functions, procedures, operation and troubleshooting of selected auto edge machines, layout markers, and blocking systems. Students complete a paper describing the procedures used in making prescription eyeglasses.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: 0827-162

### Optical Finishing Techniques IV Registration #0827-224

Concepts taught in Optical Finishing Techniques III are further developed, with an emphasis on layout techniques, including multifocal and specialized vocational lens systems. Students learn to identify metal frame types by generic names. Procedures for lens insertion, frame alignment, and proper use of assembly-alignment tools are emphasized.

CLASS 9, CREDIT 5 (F)

PREREQUISITE: 0827-123

**Optical Finishing Laboratory Simulation I  
Registration #0827-225**

This course provides practice in the total processing of actual eyeglass prescriptions from uncut stage through completion and final inspection. Students practice various methods of assembling lenses into plastic (Zylonite) frames, symmetrical alignment of the finished product, and repair and restoration techniques for damaged or distorted plastic frames. Students rotate positions to demonstrate competence in all phases of operation.  
CLASS 9, CREDIT 5 (W)

**Optical Finishing Laboratory  
Simulation II  
Registration #0827-226**

This course teaches the techniques of rimless mounting, notching, drilling, grooving, frame repair (soldering), lens dyeing, use of Shave computer, and the operation of Kirk Chemical Unit. Students select frame and lens for layout and processing to finished product.  
CLASS 9, CREDIT 5 (S)  
PREREQUISITE: 0827-225

**Management of Optical Stockroom  
Procedures**

**Registration #0827-241**

In this course, students learn to identify the function and job responsibilities of stockroom personnel, suppliers of laboratory products, consumers (customers) of laboratory products, and flow of operations. Emphasis is concentrated on basic ophthalmic frames, receipt of orders, picking stock, stock check-in, and related administrative procedures.  
CLASS 6, CREDIT 4 (F)

**Optical Finishing Inspection and  
Correction**

**Registration #0827-243**

Students evaluate finished prescription orders as final inspector, comparing all optical and mechanical details with written specifications. Emphasis is placed on accuracy, quality of workmanship, and the inspector's ability to recommend and produce any changes that may be necessary. Study will include acceptable tolerance levels and prism beveling.  
CLASS 5, CREDIT 3 (S)

**Professional Optic Seminar**

**Registration #0827-251**

In this seminar, professionals from Rochester's ophthalmic community discuss their roles in the complex field of visual care. They offer valuable background information on the many kinds of services, instrumentation techniques, and technologies that comprise the unending efforts to maintain and improve the quality of visual acuity.  
CLASS 2, CREDIT 2 (W)

**Co-op Work Experience**

**Registration #0827-299**

CREDIT 0 (Su)

**Independent Study**

**Registration #0827-399**

CREDIT Variable

**Ophthalmic Optical Finishing Technology: A.A.S. Degree**

**Typical Course Sequence**

**Fall Term**

**Winter Term**

**Spring Term**

**Pre-Technical Requirements**

|          |                       | Cr. Hrs. |          | Cr. Hrs.                              |    | Cr. Hrs. |  |    |
|----------|-----------------------|----------|----------|---------------------------------------|----|----------|--|----|
| 0817-120 | Basic Mathematics     | 3        | 0817-140 | Fundamentals of College Mathematics I | 3  | 0817-141 | Fundamentals of College Mathematics II | 3  |
| 0827-105 | Introduction to OFT I | 2        | 0827-106 | Introduction to OFT II                | 2  | 0827-107 | Introduction to OFT III                | 2  |
| 0847-100 | Freshman Seminar      | 2        |          | Communication                         | 2  |          | Communication                          | 2  |
|          | English               | 4        |          | English                               | 4  |          | English                                | 4  |
|          | Physical Education    | 0        |          | General Education                     | 2  |          | Physical Education                     | 0  |
|          |                       | 13       |          | Physical Education                    | 0  |          |  | 11 |
|          |                       |          |          |                                       | 13 |          |  |    |

**First Year**

|          |                                 |    |          |                                  |    |          |                                   |    |
|----------|---------------------------------|----|----------|----------------------------------|----|----------|-----------------------------------|----|
| 0827-111 | OFT Math I                      | 3  | 0827-112 | OFT Math II                      | 3  | 0827-117 | Lens Design                       | 3  |
| 0827-115 | Prescription Analysis I         | 3  | 0827-116 | Prescription Analysis II         | 3  | 0827-122 | Optical Finishing Techniques II   | 5  |
| 0827-161 | Optical Finishing Terminology I | 3  | 0827-121 | Optical Finishing Techniques I   | 5  | 0827-123 | Optical Finishing Techniques III  | 6  |
| 0847-101 | Job Search Process              | 1  | 0827-162 | Optical Finishing Terminology II | 3  | 0827-163 | Optical Finishing Terminology III | 3  |
|          | Communication                   | 2  |          | English or Liberal Arts          | 4  |          |                                   | 17 |
|          | English                         | 4  |          |                                  | 18 |          |                                   |    |
|          |                                 | 16 |          |                                  |    |          |                                   |    |

**Summer**

0827-299 Co-op Work Experience

**Second Year**

|          |  |    |          |                            |   |          |   |    |
|----------|--|----|----------|----------------------------|---|----------|---|----|
| 0827-224 | Optical Finishing Techniques IV            | 5  | 0818-165 | Physics I                  | 4 | 0827-226 | Laboratory Simulation II                | 5  |
| 0827-241 | Management of Optical Stockroom Procedures | 4  | 0827-225 | Laboratory Simulation I    | 5 | 0827-243 | Optical Finishing Inspection/Correction | 3  |
|          | Liberal Arts                               | 4  | 0827-251 | Professional Optic Seminar | 2 |          | Communication                           | 2  |
|          | Liberal Arts                               | 4  | 0847-102 | Life After College         | 1 |          | Liberal Arts                            | 4  |
|          |  | 17 |          | Liberal Arts               | 4 |          |   | 16 |

# Technical Mathematics

## Business Mathematics

### Registration #0817-104

This course covers all the topics described in Office Procedures Mathematics with the addition of the following: retailing and marketing mathematics, depreciation, merchandise inventory valuation, discounting notes, and business insurance.

CLASS 3, CREDIT 3 (F, W, S)

## Office Procedures Mathematics

### Registration #0817-105

This course improves students' fundamental skills in arithmetic. Students learn to apply these skills to situations in office procedures. Topics covered are basic mathematical computations; a review of fractions and decimals; calculations involving percentages, simple interest, and compound interest; and methods of remuneration, commissions, and payroll records. The use of calculators is stressed.

CLASS 3, CREDIT 3 (F, W, S)

## Basic Mathematics

### Registration #0817-120

This course improves students' fundamental skills in arithmetic. Topics covered are basic mathematical computations, a review of fractions and decimals, and calculations involving percentages. Use of calculators is stressed.

CLASS 3, CREDIT 3 (F)

## Algebra IA, IB

### Registration #0817-122, 123

This is a two-quarter sequence of basic introductory courses in algebra. The topics taught include numbers and sets, algebraic operations, linear equations and inequalities, products and factors, algebraic fractions, powers and roots, quadratic equations, and graphing.

GLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: 0817-122 for 0817-123

## Geometry

### Registration #0817-124

This is a basic course in Euclidean plane geometry that includes the topics of congruence, similarity, area, parallel lines, circles, regular polygons, and right triangle trigonometry.

CLASS 3, CREDIT 3 (W)

## Algebra IIA, IIB

### Registration #0817-126, 127

This is the second two-quarter sequence of basic courses in algebra. The topics taught are much the same as Algebra I except that the depth of study is greater. Additional topics covered are logarithms, complex numbers, quadratic functions with their graphs, ratios and proportions, and higher order factoring.

CLASS 5, CREDIT 3 (F, W, S)

PREREQUISITE: 0817-126 for 0817-127

## Trigonometry

### Registration #0817-128

This is a basic course in trigonometry. Topics covered include an introduction to the six trigonometric functions, use of trigonometric tables, graphs of trigonometric functions, trigonometric identities, solution of right and oblique triangles, trigonometric equations, and area of a triangle.

CLASS 5, CREDIT 3 (F, W, S)

## Fundamentals of College Mathematics I

### Registration #0817-140

This course is an introduction to the application of mathematics as a problem-solving tool. Emphasis is placed on measurement, use of proportion, approach to verbally expressed problems, and computation with and without a calculator. Elementary topics from geometry and statistics are included.

CLASS 5, CREDIT 3 (F, W)

PREREQUISITE: 0817-120 or approval of the offering department

## Fundamentals of College Mathematics II

### Registration #0817-141

This course deals with the application of the basic tools of algebra, geometry, and trigonometry as solutions to problems. The course deals with the concepts of an algebraic variable as well as techniques of solving simple equations and inequalities. Simple applications of geometric principles are taught as well as elementary applications of right-angle trigonometry. Attention also is paid to graphic display of data.

CLASS 5, CREDIT 3 (W, S)

PREREQUISITE: 0817-140 or approval of the offering department

## Fundamentals of College Mathematics III

### Registration #0817-142

This course deals with the application of a variety of algebraic and geometric techniques to problem solving. Emphasis is placed on the concepts of function and relation and on graphing linear relations. Concepts of area and volume, powers and radicals, and geometry on the coordinate plane are included, as well as an introduction to the use of vectors.

CLASS 5, CREDIT 3 (F, S)

PREREQUISITES: 0817-141 or approval of the offering department

## Mathematics for Data Processing

### Registration #0817-163

This course provides basic mathematical skills relevant to the field of data processing. The course emphasizes arithmetic operations in various number systems and logical formulation of problems.

CLASS 3, CREDIT 3 (F, W, S)

## Medical Laboratory Mathematics

### Registration #0817-170

This course provides mathematical skills supporting medical laboratory procedures. Topics taught include use of electronic calculators, use of logarithms for computation, conversion between English and metric unit systems, temperature conversions, and calculations with molar and percentage solutions.

CLASS 3, CREDIT 3 (S)

## College Algebra, Trigonometry, and Analytic Geometry I, II, III

### Registration #0817-201, 202, 203

This is a three-course sequence in college algebra and trigonometry. Topics covered are similar to those studied in 0817-126, 127, and 128, but in some cases are more detailed. Additional topics covered are natural logarithms, solutions of systems of non-linear equations, series and sequences, limits, theory of equations, and selected topics in analytic geometry.

CLASS 3, CREDIT 3 (F, W, S)

## Pre-Calculus

### Registration #0817-204

Pre-calculus is offered to students who intend to take a calculus course in the future. Topics include functions and graphing and provide exposure to the wide variety of functions encountered in calculus. Limits also are introduced.

CLASS 4, CREDIT 3 (F, S)

PREREQUISITES: 0817-201, 0817-202 or permission of instructor

## Independent Study

### Registration #0817-399

CREDIT Variable

# Technical Physics

## Technical Physics I

### Registration #0818-100

This course is required for all engineering technologies students as well as for students preparing for study in the Colleges of Engineering and Science. The course provides background in measurement techniques and use of metrics, vector problem solutions, rectilinear motion, dynamic and static forces, Newton's Laws of Motion, work, energy, power, energy conservation laws, torque, and Law of Moments.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0817-123

## Construction Technology Physics II

### Registration #0818-125

The following concepts are taught in this career-integrated course: heat, temperature, heat transfer, linear and volumetric expansion and contraction, insulation materials, specific heat capacities, calorimetry, fusion and vaporization, energy costs, electrical resistance, DC circuits, fuses and circuit breakers, Ohm's Law, electrical metering, electrical power and cost of electricity, transformers, properties of light, reflection and refraction, Snell's Law, photometry and lighting, properties of sound, and acoustical principles.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-100

## Construction Technology Physics III

### Registration #0818-126

A variety of topics are covered in this final course: work; friction; machines; physical properties of matter, stress, and strain; Young's Modulus; Hooke's Law; concurrent forces; vector analysis; linear equilibrium; density and specific gravity; fluid pressure; Pascal's Principle; fluid dynamics; Bernoulli's Equation; Torricelli's Law; viscous drag; and pressure and velocity in parallel and series pipe systems.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-125

## Technical Physics II

### Registration #0818-135

This is the second course required for industrial drafting, electromechanical technology, and College of Science students. Course topics include magnetism, electrostatics, magnetic and electrostatic forces, static and current electricity, electromagnetic induction, AC and DC motors, electrical meters, photoelectric effect, potential difference and voltage drop, electrical resistance and resistivity, resistor code, electrical circuits, fuses and circuit breakers, Ohm's Law, use of electrical meters, Gauss' Law, principles of capacitors and circuitry, dielectrics, electrical power, and cost of electricity.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-100

## Technical Physics III

### Registration #0818-136

This course includes the following topics: Kirchoffs Voltage and Current Laws, mesh circuit problem solutions using the determinant and superposition methods, current division and voltage division rules for circuits, Wheatstone Bridge, mutual and self inductance, Oersted Fields, Lenz's Law, inductance in circuits, electrical transformers, alternating current, rms current and voltage in AC circuits, inductive and capacitive circuits, electrical resonance, and power factor.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-135

## Technical Physics IV

### Registration #0818-137

This elective course includes topics on characteristics and transmission of sound waves, acoustics and applications of sound, radio communication principles, wave theory and transmission principles, Fourier's Theorem, standing waves, resonance and harmonics, principles of reflection and refraction, Snell's Law, lenses and prisms, geometrical and wave optics, Gaussian Formula, lens power, optical instruments, use of oscilloscope, and formation of Lissajous Figures.

CLASS 4, LAB 1, CREDIT 3 (F, W, S)

PREREQUISITE: 0818-136

## Optical Finishing Physics

### Registration #0818-168

This course involves the study of light, reflection, and refraction. These principles are applied to the study of the behavior of spherical and piano mirrors, prisms, and lenses. The usefulness and application of dioptric power, the lensmaker's equation, image and object dimensions, and focal length measurements are addressed. Also included are basic optical instruments and a study of the electromagnetic spectrum. Emphasis is placed on geometrical (ray) optics. The course includes a comprehensive laboratory experience that supplements and closely follows classroom instruction.

CLASS 4, LAB 1, CREDIT 3 (W, S)

PREREQUISITE: 0817-123

## Independent Study

### Registration #0818-399

CREDIT Variable

# School of Visual Communication Careers

## Applied Art

### Career Exploration: Applied Art Registration #0849-100

This course is designed to help students collect the information necessary to make appropriate decisions about a possible career in the art field. Students receive opportunities to explore their interests and skills in art through structured hands-on experiences with art tools and equipment. Emphasis is on increasing students' awareness of their art skills, applied art career options, working conditions, salaries, and job responsibilities.

STUDIO 2, CREDIT 1 (F, W, S)

### Basic Design I, II, III Registration #0849-111, 112, 113

This course sequence is an introduction to the concepts and elements of design as they relate to a vocation in applied art. Emphasis is on exploration and analysis of all design principles such as point, line, shape, texture, space, and color as they apply to two- and three-dimensional applications.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-100 for 0849-111

0849-111 for 0849-112

0849-112 for 0849-113

### Basic Drawing I, II, III Registration #0849-121, 122, 123

This is a fundamental course sequence that introduces students to various freehand drawing concepts, methods, and techniques. Emphasis is placed on eye-hand coordination, rendering techniques, one- and two-point perspective, and various drawing media. A variety of forms are used, including still life objects, architectural forms, and the human figure.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITES:

0849-100 for 0849-121

0849-121 for 0849-122

0849-122 for 0849-123

### Media/Processes I, II, III Registration #0849-131, 132, 133

The basic tools, materials, and equipment used in the professional applied art studio are introduced to students. Emphasis is placed on identification; vocabulary; maintenance; and correct use of media, mechanical tools, photostat equipment, typesetting machines, and a variety of materials.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITES:

0849-100 for 0849-131

0849-131 for 0849-132

0849-132 for 0849-133

## Applied Art: Diploma Typical Course Sequence

### Fall Term

### Winter Term

### Spring Term

#### First Year

|          | Cr. Hrs.              |    | Cr. Hrs. |                    | Cr. Hrs. |          |                     |    |
|----------|-----------------------|----|----------|--------------------|----------|----------|---------------------|----|
| 0847-100 | Freshman Seminar*     | 2  | 0849-112 | Basic Design II    | 2        | 0849-113 | Basic Design III    | 2  |
| 0847-101 | Job Search Process*   | 1  | 0849-122 | Basic Drawing II   | 3        | 0849-123 | Basic Drawing III   | 3  |
| 0849-111 | Basic Design I        | 2  | 0849-132 | Media/Processes II | 3        | 0849-133 | Media/Processes III | 3  |
| 0849-121 | Basic Drawing I       | 3  | 0849-142 | Career Seminar II  | 1        | 0849-143 | Career Seminar III  | 1  |
| 0849-131 | Media/Processes I     | 3  | 0849-150 | Introduction to    |          |          | Communication       | 2  |
| 0849-141 | Career Seminar I      | 1  |          | Computer Graphic   |          |          | English             | 4  |
|          | Applied Art Elective" | 2  |          | Systems"           | 2        |          |                     | 15 |
|          | Communication         | 2  |          | English            | 4        |          |                     |    |
|          | Physical Education    | 0  |          | Physical Education | 0        |          |                     |    |
|          |                       | 16 |          |                    | 15       |          |                     |    |

#### Second Year

|          |                       |    |          |                        |    |          |                         |    |
|----------|-----------------------|----|----------|------------------------|----|----------|-------------------------|----|
| 0849-211 | Layout Applications I | 2  | 0849-212 | Layout Applications II | 2  | 0849-213 | Layout Applications III | 2  |
| 0849-221 | Mechanical            |    | 0849-222 | Mechanical             |    | 0849-223 | Mechanical              |    |
|          | Preparation I         | 3  |          | Preparation II         | 3  |          | Preparation III         | 3  |
| 0849-231 | Introduction to       |    | 0849-232 | Introduction to        |    | 0849-233 | Introduction to         |    |
|          | Typography I          | 2  |          | Typography II          | 2  |          | Typography III          | 2  |
| 0849-241 | Art Survey I          | 2  | 0849-242 | Art Survey II          | 2  | 0849-243 | Art Survey III          | 2  |
| 0849-250 | Computer Production   |    |          | English                | 4  |          | Applied Art Elective"   | 2  |
|          | Graphics""            | 2  |          | Physical Education     | 0  |          | English                 | 4  |
|          | Communication         | 12 |          |                        | 13 |          |                         | 15 |
|          |                       | 13 |          |                        |    |          |                         |    |

#### Third Year

|          |                        |    |          |                         |    |          |                       |    |
|----------|------------------------|----|----------|-------------------------|----|----------|-----------------------|----|
| 0849-311 | Graphic Applications I | 5  | 0849-312 | Graphic Applications II | 5  | 0847-102 | Life After College*   | 1  |
| 0849-321 | Employment Seminar I   | 3  | 0849-322 | Employment              |    | 0849-313 | Graphic               |    |
|          | Applied Art Elective"  | 2  |          | Seminar II              | 3  |          | Applications III      | 5  |
|          | English                | 4  |          | Applied Art Elective"   | 2  | 0849-323 | Employment            |    |
|          |                        | 14 |          | Communication           | 2  |          | Seminar III           | 3  |
|          |                        |    |          |                         | 12 |          | Applied Art Elective" | 2  |
|          |                        |    |          |                         |    |          | Communication         | 2  |
|          |                        |    |          |                         |    |          |                       | 13 |

\*May be waived by department; Career Seminar and Employment Seminar courses are appropriate substitutes.

"See page 37 for Applied Art Technical Electives; 10 or more elective credits are required.

""Can be taken in either winter or spring term of the first year.

""Students are required to take Computer Production Graphics in either the fall, winter, or spring term of the second year or fall or winter term of the third year.

### Career Seminar I, II, III

#### Registration #0849-141, 142, 143

These courses provide experience in the development of a personal career plan in art and assists with the development of college survival skills. Students explore personal interests, aptitudes, art program opportunities, and college adjustment issues, through presentations, field trips, discussions, and research of art careers. This course sequence emphasizes systematic decision making related to art careers.

CLASS 2, CREDIT 1 (F, W, S)

PREREQUISITES:

0849-100 for 0849-141

0849-141 for 0849-142

0849-142 for 0849-143

### Introduction to Computer Graphics Systems

#### Registration #0849-150

This course is an introduction to computer graphics systems. Emphasis is placed on learning how to use hardware and software for visual problem solving. Specific vocabulary related to computer terminology also is covered. In this course, students have hands-on experiences using various types of hardware and software.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES: 0849-111, 0849-121, 0849-131

### Layout Applications I, II, III

#### Registration #0849-211, 212, 213

This is an advanced course sequence applying design concepts, principles, and methods developed in first-year courses. The emphasis is on practices and procedures evident in a professional art studio, such as the use of grid systems, production of accurate comps, indication of typographic specifications, and use of computer systems to develop design solutions. These courses also stress quality workmanship related to the graphics field.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-113, 0849-123, 0849-133, 0849-150 for 0849-211

0849-211 for 0849-212

0849-212 for 0849-213

### Mechanical Preparation I, II, III

#### Registration #0849-221, 222, 223

The fundamentals of mechanical construction are taught in these courses. Emphasis is on vocabulary, techniques, and printing production methods. The course sequence involves simulated on-the-job projects using a variety of production methods, including one-color mechanicals, multicolor mechanicals, imposition set-up, form ruling, diecut drawing, and the use of the computer as a mechanical production tool.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITES:

0849-133, 0849-150 for 0849-221

0849-221 for 0849-222

0849-222 for 0849-223

## Applied Art: A.A.S. Degree

### Typical Course Sequence

#### Fall Term

##### First Year

|                              | Cr. Hrs. |
|------------------------------|----------|
| 0847-100 Freshman Seminar*   | 2        |
| 0847-101 Job Search Process* | 1        |
| 0849-111 Basic Design I      | 2        |
| 0849-121 Basic Drawing I     | 3        |
| 0849-131 Media/Processes I   | 3        |
| 0849-141 Career Seminar I    | 1        |
| Communication                | 2        |
| English                      | 4        |
| Physical Education           | 0        |
|                              | 18       |

##### Second Year

|  |    |
|--|----|
| 0849-211 Layout Applications I         | 2  |
| 0849-221 Mechanical Preparation I      | 3  |
| 0849-231 Introduction to Typography I  | 2  |
| 0849-241 Art Survey I                  | 2  |
| 0849-250 Computer Production Graphics" | 2  |
| Communication                          | 2  |
| English                                | 4  |
|  | 17 |

##### Third Year

|                                 |    |
|---------------------------------|----|
| 0849-311 Graphic Applications I | 5  |
| 0849-321 Employment Seminar I   | 3  |
| Applied Art Elective"           | 2  |
| Liberal Arts                    | 4  |
| Physical Education              | 0  |
|                                 | 14 |

#### Winter Term

|  | Cr. Hrs. |
|--|----------|
| 0849-112 Basic Design II                           | 2        |
| 0849-122 Basic Drawing II                          | 3        |
| 0849-132 Media/Processes II                        | 3        |
| 0849-142 Career Seminar II                         | 1        |
| 0849-150 Introduction to Computer Graphic Systems" | 2        |
| Communication                                      | 2        |
| English  | 4        |
| Physical Education                                 | 0        |
|  | 17       |

|  |    |
|--|----|
| 0849-212 Layout Applications II        | 2  |
| 0849-222 Mechanical Preparation II     | 3  |
| 0849-232 Introduction to Typography II | 2  |
| 0849-242 Art Survey II                 | 2  |
| English                                | 4  |
|  | 13 |

|                                  |    |
|----------------------------------|----|
| 0849-312 Graphic Applications II | 5  |
| 0849-322 Employment Seminar II   | 3  |
| Applied Art Elective"            | 2  |
| Liberal Arts                     | 4  |
| Liberal Arts                     | 4  |
|                                  | 18 |

#### Spring Term

|                              | Cr. Hrs. |
|------------------------------|----------|
| 0849-113 Basic Design III    | 2        |
| 0849-123 Basic Drawing III   | 3        |
| 0849-133 Media/Processes III | 3        |
| 0849-143 Career Seminar III  | 1        |
| Applied Art Elective"        | 2        |
| Communication                | 2        |
| English                      | 4        |
|                              | 17       |

|   |    |
|---|----|
| 0849-213 Layout Applications III        | 2  |
| 0849-223 Mechanical Preparation III     | 3  |
| 0849-233 Introduction to Typography III | 2  |
| 0849-243 Art Survey III                 | 2  |
| Applied Art Elective"                   | 2  |
| Communication                           | 2  |
| Liberal Arts                            | 4  |
|   | 17 |

|                                   |    |
|-----------------------------------|----|
| 0847-102 Life After College*      | 1  |
| 0849-313 Graphic Applications III | 5  |
| 0849-323 Employment Seminar III   | 3  |
| Applied Art Elective"             | 2  |
| Liberal Arts                      | 4  |
|                                   | 15 |

\*May be waived by department; Career Seminar and Employment Seminar courses are appropriate substitutes.

\*\*Can be taken in either the winter or spring term of the first year.

\*\*\*See page 37; 10 or more elective credits are required.

\*\*\*\*Students are required to take Computer Production Graphics in either the fall, winter, or spring term of the second year or in the fall or winter term of the third year.

### Introduction to Typography I, II, III

#### Registration #0849-231, 232, 233

This sequence is a study of the use of typography in applied art: the origins of typographic form, type classifications, production processes, measurement systems, and type specification methods. Students gain experience in design, copy marking, planning formats, copy fitting, and the use of the computer as a composition tool.

LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-113, 0849-133, 0849-150 for 0849-231

0849-231 for 0849-232

0849-232 for 0849-233

### Art Survey I, II, III

#### Registration #0849-241, 242, 243

These courses offer a survey of major historical developments in the visual arts as they relate to applied art. Students are introduced to research methods used in the field of art as the basis for design concept development.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES:

0849-143 for 0849-241

0849-241 for 0849-242

0849-242 for 0849-243

### Computer Production Graphics Registration #0849-250

This is an advanced course in the use of computers in the preparation of full-page layouts for various publications. Students learn to use various hardware and software as well as related vocabulary. An emphasis is placed on basic graphic design principles and readability, using the computer as a tool.  
LAB 3, CREDIT 2 (F, W, S)  
PREREQUISITES: 0849-113, 0849-123, 0849-133, 0849-150

### Applied Art Photography Registration #0849-258

This is an elective course in the use of photographic processes as they relate to the applied artist. Emphasis is on understanding and using the camera, black and white film processing, contact printing, and enlarging. Students practice darkroom procedures and methods for obtaining a basically well-crafted photographic image.  
CLASS 4, CREDIT 2 (F, W)

### Three-Dimensional Applications Registration #0849-267

This elective course extends basic concepts, principles, and methods as they apply to the three-dimensional form. Emphasis is on material characteristics, tool/material processes, construction techniques, and basic model making.  
LAB 3, CREDIT 2 (S)

### Air Brush/Retouching Registration #0849-277

This elective course provides basic experience with the air brush as a tool for original art, retouching, and illustration. Emphasis is on care and maintenance, dyes, paints, masks, working surfaces, and a variety of working techniques.  
CLASS 3, CREDIT 2 (F, S)  
PREREQUISITES: 0849-112, 0849-122, 0849-132

### Mechanical Perspective Registration #0849-284

Students learn the use of mechanical drawing methods for visualizing three-dimensional form in perspective. Experiences in this elective course include orthographic projection and one- and two-point perspective, based on forms ranging from simple geometric solids to complex forms. Emphasis is on mastery of basic methods for constructing a technically accurate drawing.  
CLASS 3, CREDIT 2 (W)  
PREREQUISITE: 0849-121

### Mechanical Drawing Methods Registration #0849-285

Students are introduced to mechanical processes for depicting three-dimensional forms on a flat surface. This elective course includes drawing methods, such as oblique and isometric, based on simple and complex forms. Emphasis is on translating the three-dimensional form into a technically accurate drawing.  
CLASS 3, CREDIT 2 (S)  
PREREQUISITE: 0849-284

## Applied Art Technical Electives

|  | Credit Hours | Prerequisites   |
|--|--------------|---|
| Applied Art Photography<br>0849-258        | 2            | None  |
| Three-Dimensional Applications<br>0849-267 | 2            | None  |
| Air Brush/Retouching<br>0849-277           | 2            | Basic Design II0849-112<br>Basic Drawing II0849-122<br>Media/Processes II0849-132 |
| Mechanical Perspective<br>0849-284         | 2            | Basic Drawing 10849-121   |
| Mechanical Drawing Methods<br>0849-285     | 2            | Mechanical Perspective 0849-284   |
| Drawing Applications<br>0849-287           | 2            | Basic Drawing III 0849-123  |
| Freehand Lettering<br>0849-294             | 2            | Media/Processes 10849-131   |
| Finished Lettering<br>0849-295             | 2            | Freehand Lettering 0849-294   |

### Drawing Applications Registration #0849-287

This is an advanced elective course refining freehand and technical drawing concepts, methods, and techniques developed in Basic Drawing I, II, and III. Emphasis is on development of advanced drawing skills, using various types of subject matter, media, and processes.  
CLASS 3, CREDIT 2 (F)  
PREREQUISITE: 0849-123

### Freehand Lettering Registration #0849-294

Students are introduced to the basic processes of freehand lettering. The emphasis of this elective course is on identification, care, and the use of various lettering tools such as carpenter's pencil, speedball pen, and lettering brush. Use of basic methods of stroking, Interspacing, wordspacing, linespacing, and rendering of both serif and sans serif letterforms are taught.  
CLASS 3, CREDIT 2 (W)  
PREREQUISITE: 0849-131

### Finished Lettering Registration #0849-295

This elective course is an introduction to the processes, tools, equipment, and methods for producing finished lettering for reproduction. Included are exercises designed to develop skills in rendering script, serif, sans serif, and decorative letterforms.  
CLASS 3, CREDIT 2 (S)  
PREREQUISITE: 0849-294

### Graphic Applications I, II, III Registration #0849-311, 312, 313

This is an advanced course sequence stressing layout, mechanical, and computer skills within the context of a professional studio environment. The courses involve practical work experience, with an emphasis on studio procedures, work habits, professional skills, and dealing with clients, as well as refinement of individual portfolios.  
LAB 10, CREDIT 5 (F, W, S)  
PREREQUISITES:  
0849-213, 0849-223, 0849-233, 0849-243 for 0849-311  
0849-311 for 0849-312  
0849-250, 0849-312 for 0849-313

### Employment Seminar I, II, III Registration #0849-321, 322, 323

Students are oriented to the total working/living environment of the professional applied art field, with an emphasis on processes for securing and maintaining employment. Experiences include resume preparation, interviewing techniques, guest lectures, field trips, presentations, discussions, and personally directed job-seeking.  
CLASS 3, CREDIT 3 (F, W, S)  
PREREQUISITES:  
0849-213, 0849-223, 0848-233 for 0849-321  
0849-321 for 0849-322  
0849-322 for 0849-323

### Independent Study Registration #0849-399

CREDIT Variable

# Photo/Media Technologies

## Career Exploration: Photo/Media Technologies

### Registration #0851-100

This course explores a photo/media career to help students make well-informed decisions regarding their college area of specialization. Students have opportunities to explore their interest in the field through hands-on experiences with photo/media equipment and tools. Opportunities are provided for students to increase their awareness of necessary photo/media skills, the industries, the program, and the expectations of the photo/media technologies department. Technical areas of study include color negative printing and film processing, computer graphics, special effects slides, storyboards from 35mm slides, and video equipment.

LAB 2, CREDIT 1 (F, W, S)

### Introduction to Photographic Printing

#### Registration #0851-101

Students learn proper use of equipment and how to process, enlarge, and evaluate black and white prints.

LAB 8, CREDIT 4 (F, W, S)

COREQUISITES: 0851-111, 0851-121

### Black and White Printing

#### Registration #0851-102

This course builds on previously learned basic printing skills. Students use a variety of negative sizes to develop more advanced skills in controlling print contrast and exposure. The making of a quality photographic print is emphasized.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-101, 0851-111, 0851-121

### Introduction to Film Processing

#### Registration #0851-111

This course introduces and gives students practice techniques for processing and process control of black and white roll film. Emphasis is on consistency and high quality film processing through control of processing variables.

LAB 3, CREDIT 2 (F, W, S)

COREQUISITES: 0851-101, 0851-121

### Film Processing

#### Registration #0851-112

This course extends the skills learned in Introduction to Film Processing. Various types and sizes of black and white films are used. Emphasis is placed on control and repeatability.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-101, 0851-111, 0851-121

## Custom Photographic Laboratory Services: Diploma

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                                 | Cr. Hrs. |
|----------|---------------------------------|----------|
| 0847-100 | Freshman Seminar                | 2        |
| 0851-101 | Introduction to Photo Printing  | 4        |
| 0851-111 | Introduction to Film Processing | 2        |
| 0851-121 | Introduction to Cameras         | 2        |
|          | Communication                   | 2        |
|          | English                         | 4        |
|          | Physical Education              | 0        |
|          |                                 | 16       |

##### Second Year

|          |                                   |    |
|----------|-----------------------------------|----|
| 0847-101 | Job Search Process                | 1  |
| 0851-201 | Custom Color Printing I           | 4  |
| 0851-211 | Integrated Custom Lab I           | 2  |
| 0851-221 | Advanced Black and White Printing | 2  |
|          | Communication                     | 2  |
|          | English                           | 4  |
|          |                                   | 15 |

### Introduction to Cameras

#### Registration #0851-121

This course introduces students to the proper operation of the camera and the control and manipulation of exposure through use of a light meter. Students have the opportunity to demonstrate their ability by photographing assigned subjects.

LAB 3, CREDIT 2 (F, W, S)

COREQUISITES: 0851-101, 0851-111

### Introduction to Copy Work

#### Registration #0851-122

Students use and extend basic camera skills to meet the special needs of copy work. They use 35mm and 4 x 5 copy cameras with a variety of film types and are introduced to special lighting and exposure techniques.

LAB 4, CREDIT 2 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-101, 0851-111, 0851-121

#### Winter Term

|          |   | Cr. Hrs. |
|----------|---|----------|
| 0851-102 | Black and White Printing                                  | 2        |
| 0851-112 | Film Processing   | 2        |
| 0851-122 | Introduction to Copy Work                                 | 2        |
| 0851-132 | Orientation to Photo/Media Careers                        | 2        |
| 0851-142 | Introduction to Advanced Photographic Studies (optional)* | 2        |
|          | Communication   | 2        |
|          | English   | 4        |
|          | Physical Education  | 0        |
|          |   | 14-16    |

#### Spring Term

|          |                                     | Cr. Hrs. |
|----------|-------------------------------------|----------|
| 0851-200 | Basic Color Printing                | 4        |
| 0851-210 | Mechanized Film Processing          | 2        |
| 0851-220 | Print Finishing                     | 2        |
|          | Communication                       | 2        |
|          | English                             | 4        |
|          |                                     | 14       |
| 0847-102 | Life After College                  | 1        |
| 0851-203 | Custom Color Printing III           | 4        |
| 0851-213 | Integrated Custom Lab III           | 2        |
| 0851-223 | Introduction to Color Copy Work     | 2        |
|          | Communication                       | 2        |
|          | General Education or other elective | 2        |
|          |                                     | 13       |

\*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

### Orientation to Photo/Media Careers

#### Registration #0851-132

This course teaches students more about careers in custom photographic laboratory services and media production through field trips, class discussions, and hands-on experiences. After completing this course, students are expected to choose their major area of study (custom photographic laboratory services or media production options).

CLASS 1, LAB 3, CREDIT 2 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-101, 0851-111, 0851-121

### Introduction to Advanced Photographic Studies

#### Registration #0851-142

This course teaches students about programs and career areas offered by RIT's School of Photographic Arts and Sciences. Students develop both creative and technical skills in still photography and have an opportunity to evaluate their interest and readiness for advanced program areas. Class time is spent reviewing services offered by the visual communication support department.

CLASS 2, CREDIT 2 (W)



### Introduction to Materials and Processes of Photography

#### Registration #0851-151

This course is designed for, and its enrollment is limited to, students who plan to apply to RIT's School of Photographic Arts and Sciences. Students are introduced to the technical and theoretical aspects of photography, including variability, tone reproduction, photo chemistry, color, and light. These skills prepare them to meet the challenges of a similar course in the School of Photographic Arts and Sciences.

CLASS 2, CREDIT 2 (S)

### Preparation for the School of Photographic Arts and Sciences

#### Registration #0851-161

This course is designed for, and its enrollment is limited to, students who plan to apply to RIT's School of Photographic Arts and Sciences. Through a variety of photographic assignments, students learn creative and technical photographic skills. They also practice academic skills such as test taking, time management, classroom participation, understanding instructions, and use of support services that are essential to effective learning in a mainstream educational setting.

CLASS 2, LAB 5, STUDIO 5,  
CREDIT 7 (S)

### Machine Printing I

#### Registration #0851-171

Students develop basic skills at operating machine color printers and color paper processors as well as operation of a roll paper printer and miniprinter. They also learn how to set up printers, classify and print color negatives, process paper, cut prints and negatives, and inspect orders.

LAB 16, CREDIT 8 (F, W, S)

### Machine Printing II

#### Registration #0851-172

Students learn additional skills using the roll paper printer and miniprinter as well as learning to organize work flow, sort film, set up and check printers, and monitor paper processing.

LAB 16, CREDIT 8 (F, W, S)

PREREQUISITE: 0851-171

### Basic Color Printing

#### Registration #0851-200

This course introduces techniques for printing color negatives and evaluating color prints. Students learn principles of color theory and materials and relate these to making prints from color negatives.

LAB 8, CREDIT 4 (F, W, S)

COREREQUISITES: 0851-210, 0851-220

### Custom Color Printing I

#### Registration #0851-201

This course builds on skills learned in Basic Color Printing and Mechanized Film Processing. It introduces additional concepts in color negative printing, mechanized film processing, and custom lab practices.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-200, 0851-210, 0851-220

COREREQUISITES: 0851-211, 0851-221

## Custom Photographic Laboratory Services: A.A.S. Degree

### Typical Course Sequence

#### Fall Term

##### First Year

|          |                                 | Cr. Hrs. |
|----------|---------------------------------|----------|
| 0847-100 | Freshman Seminar                | 2        |
| 0851-101 | Introduction to Photo Printing  | 4        |
| 0851-111 | Introduction to Film Processing | 2        |
| 0851-121 | Introduction to Cameras         | 2        |
|          | Communication                   | 2        |
|          | English                         | 4        |
|          | Physical Education              | 0        |

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##### Second Year

|          |                                   |   |
|----------|-----------------------------------|---|
| 0847-101 | Job Search Process                | 1 |
| 0851-201 | Custom Color Printing I           | 4 |
| 0851-211 | Integrated Custom Lab I           | 2 |
| 0851-221 | Advanced Black and White Printing | 2 |
|          | Communication                     | 2 |
|          | English                           | 4 |

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##### Third Year

|          |                                     |   |
|----------|-------------------------------------|---|
| 0851-301 | Advanced Custom Color Printing I    | 4 |
| 0851-314 | Integrated Custom Lab IV            | 2 |
|          | General Education or other elective | 2 |
|          | Liberal Arts                        | 4 |

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#### Winter Term

|          |  | Cr. Hrs. |
|----------|--|----------|
| 0851-102 | Black and White Printing                                 | 2        |
| 0851-112 | Film Processing  | 2        |
| 0851-122 | Introduction to Copy Work                                | 2        |
| 0851-132 | Orientation to Photo/Media Careers                       | 2        |
| 0851-142 | Introduction to Advanced Photographic Studies (optional) | 2        |
|          | Communication  | 2        |
|          | English  | 4        |
|          | Physical Education                                       | 0        |

14-16

#### Summer

|          |                       |  |
|----------|-----------------------|--|
| 0851-299 | Co-op Work Experience |  |
|----------|-----------------------|--|

#### Spring Term

|          |                            | Cr. Hrs. |
|----------|----------------------------|----------|
| 0851-200 | Basic Color Printing       | 4        |
| 0851-210 | Mechanized Film Processing | 2        |
| 0851-220 | Print Finishing            | 2        |
|          | Communication              | 2        |
|          | English                    | 4        |
|          | Physical Education         | 0        |

14

|          |                                 |   |
|----------|---------------------------------|---|
| 0851-203 | Custom Color Printing III       | 4 |
| 0851-213 | Integrated Custom Lab III       | 2 |
| 0851-223 | Introduction to Color Copy Work | 2 |
|          | Communication                   | 2 |
|          | Liberal Arts                    | 4 |

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\*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

### Custom Color Printing II

#### Registration #0851-202

This course, a continuation of Custom Color Printing I, introduces additional skills related to color negative printing, mechanized film process (E-6, C-41), and concepts related to reversal printing materials.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-201, 0851-211, 0851-221

COREREQUISITES: 0851-212, 0851-222

### Custom Color Printing III

#### Registration #0851-203

This course continues to build on concepts learned in Custom Color Printing II. The use of a Video Color Negative Analyzer (VCNA) and related translators is introduced and custom photographic laboratory practices are studied in depth. In addition, students prepare a portfolio of finished work.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: 0851-202, 0851-212, 0851-222

COREREQUISITES: 0851-213, 0851-223

**Mechanized Film Processing  
Registration #0851-210**

This course teaches students how to operate automatic processing equipment for C-41 (color negative) and E-6 (color transparency) materials. Basic process monitoring and chemical mixing also are included.  
LAB 4, CREDIT 2 (F, W, S)  
COREQUISITES: 0851-200, 0851-220

**Integrated Custom Lab I, II, III  
Registration #0851-211, 212, 213**

These courses give students real and simulated custom production work to prepare them for work in the photographic laboratory industry. Students practice and maintain skills learned in Custom Color Printing I, II, and III, and are expected to work from job tickets and to perform job requirements.  
LAB 4, CREDIT 2 (F, W, S)  
COREQUISITES:  
0851-201, 0851-221 for 0851-211  
0851-202, 0851-222 for 0851-212  
0851-203, 0851-223 for 0851-213

**Print Finishing  
Registration #0851-220**

This course teaches students how to retouch color prints to remove dust spots and other defects and introduces the use of Flexichrome dyes to color large print areas. Students practice the proper method for dry mounting black and white and color prints.  
LAB 4, CREDIT 2 (F, W, S)  
COREQUISITES: 0851-200, 0851-210

**Advanced Black and White Printing  
Registration #0851-221**

This course continues the development of skills taught in Black and White Printing and extends skills to cover a variety of paper types and processes. Students learn the relationship between black and white and color printing.  
LAB 4, CREDIT 2 (F, W, S)  
PREREQUISITES: Grade of C or better in 0851-200, 0851-210, 0851-220  
COREQUISITES: 0851-201, 0851-211

**Introduction to Slide Duplicating  
Registration #0851-222**

Students learn basic slide duplicating techniques and how to use equipment and materials related to this field. Evaluation methods related to slide duplication techniques also are presented.  
LAB 4, CREDIT 2 (F, W, S)  
COREQUISITES: 0851-202, 0851-212

**Introduction to Color Copy Work  
Registration #0851-223**

Students learn the camera skills necessary for color copy work and use 35mm and 4 x 5 copy cameras with a variety of color film types and sizes. The concept of calibration is introduced and practiced.  
LAB 4, CREDIT 2 (F, W, S)  
COREQUISITES: 0851-203, 0851-213

**Media Production: Diploma**

**Typical Course Sequence**

| Fall Term   |                                 |    | Winter Term |   |       | Spring Term |                                    |    |
|-------------|---------------------------------|----|-------------|---|-------|-------------|------------------------------------|----|
| First Year  |                                 |    | Cr. Hrs.    |   |       | Cr. Hrs.    |                                    |    |
| 0847-100    | Freshman Seminar                | 2  | 0851-102    | Black and White Printing                                  | 2     | 0851-241    | Media Graphics I                   | 3  |
| 0851-101    | Introduction to Photo Printing  | 4  | 0851-112    | Film Processing   | 2     | 0851-261    | Media Photo I                      | 3  |
| 0851-111    | Introduction to Film Processing | 2  | 0851-122    | Introduction to Copy Work                                 | 2     | 0851-290    | Audiovisual Equipment Applications | 2  |
| 0851-121    | Introduction to Cameras         | 2  | 0851-132    | Orientation to Photo/Media Careers                        | 2     |             | Communication English              | 2  |
|             | Communication English           | 4  | 0851-142    | Introduction to Advanced Photographic Studies (optional)* | 2     |             |                                    | 4  |
|             | Physical Education              | 0  |             | Communication English                                     | 4     |             |                                    | 14 |
|             |                                 | 16 |             | Physical Education  | 0     |             |                                    |    |
|             |                                 |    |             |   | 14-16 |             |                                    |    |
| Second Year |                                 |    | Cr. Hrs.    |   |       | Cr. Hrs.    |                                    |    |
| 0847-101    | Job Search Process              | 1  | 0851-251    | Basic Computer Graphics                                   | 3     | 0847-102    | Life After College                 | 1  |
| 0851-242    | Media Graphics II               | 3  | 0851-271    | Videography I   | 3     | 0851-283    | Slide Production III               | 3  |
| 0851-262    | Media Photo II                  | 3  | 0851-282    | Slide Production II                                       | 3     | 0851-296    | Media Production Workshop I        | 6  |
| 0851-281    | Slide Production I              | 3  |             | Communication English                                     | 4     |             | Communication                      | 2  |
|             | Communication English           | 4  |             |   | 15    |             |                                    | 12 |
|             |                                 | 16 |             |   |       |             |                                    |    |

\*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

**Media Graphics I  
Registration #0851-241**

Students learn to use electronic and hand drawing tools to produce charts, graphs, and work for slide or video reproduction. Methods used to produce typography are taught and practiced and the basics of graphic composition are introduced. Good work habits are emphasized.  
LAB 6, CREDIT 3 (F, W, S)

**Media Graphics II  
Registration #0851-242**

This course teaches students advanced techniques for preparing graphics as well as design principles that can be used to focus attention and convey concepts in presentation graphics. Students gain practice in the use of photo-lettering equipment, photostat machines, digital typesetters, computers, and other production equipment.  
LAB 6, CREDIT 3 (F, W, S)  
PREREQUISITE: 0851-241

**Basic Computer Graphics  
Registration #0851-251**

This course introduces students to computer applications used in producing graphic displays. The use of menu-driven graphics packages is taught.  
LAB 6, CREDIT 3 (F, W, S)  
PREREQUISITE: 0851-242

**Media Photography I  
Registration #0851-261**

This course provides students in the media production option with an opportunity to increase their skills with cameras, exposure, and light meters. Students are expected to use these skills to meet the needs of specific media-related assignments. Supporting skills in film processing and printing also are practiced.  
LAB 6, CREDIT 3 (F, W, S)

**Media Photography II  
Registration #0851-262**

This course teaches advanced methods of studio and location photography for creating product, portrait, titling, and scenic images. It also teaches multi-image photography techniques.  
LAB 6, CREDIT 3 (F, W, S)  
PREREQUISITE: 0851-261

Media Production: A.A.S. Degree

Typical Course Sequence

Fall Term

Winter Term

Spring Term

First Year

|          | Cr. Hrs.                        |    | Cr. Hrs. |   | Cr. Hrs. |          |                                    |    |
|----------|---------------------------------|----|----------|---|----------|----------|------------------------------------|----|
| 0847-100 | Freshman Seminar                | 2  | 0851-102 | Black and White Printing                                  | 2        | 0851-241 | Media Graphics I                   | 3  |
| 0851-101 | Introduction to Photo Printing  | 4  | 0851-112 | Film Processing   | 2        | 0851-261 | Media Photo I                      | 3  |
| 0851-111 | Introduction to Film Processing | 2  | 0851-122 | Introduction to Copy Work                                 | 2        | 0851-290 | Audiovisual Equipment Applications | 2  |
| 0851-121 | Introduction to Cameras         | 2  | 0851-132 | Orientation to Photo/Media Careers                        | 2        |          | Communication English              | 2  |
|          | Communication English           | 2  | 0851-142 | Introduction to Advanced Photographic Studies (optional)* | 2        |          | Physical Education                 | 4  |
|          | Physical Education              | 0  |          | Communication English                                     | 2        |          |                                    | 0  |
|          |                                 | 16 |          | Physical Education  | 0        |          |                                    | 14 |
|          |                                 |    |          |   | 14-16    |          |                                    |    |

Second Year

|          |                       |    |          |                         |    |          |                             |    |
|----------|-----------------------|----|----------|-------------------------|----|----------|-----------------------------|----|
| 0847-101 | Job Search Process    | 1  | 0851-251 | Basic Computer Graphics | 3  | 0851-283 | Slide Production III        | 3  |
| 0851-242 | Media Graphics II     | 3  | 0851-271 | Videography I           | 3  | 0851-296 | Media Production Workshop I | 6  |
| 0851-262 | Media Photo II        | 3  | 0851-282 | Slide Production II     | 3  |          | Communication Liberal Arts  | 2  |
| 0851-281 | Slide Production I    | 3  |          | Communication English   | 2  |          |                             | 4  |
|          | Communication English | 4  |          |                         | 4  |          |                             | 15 |
|          |                       | 16 |          |                         | 15 |          |                             |    |

Summer

0851-299 Co-op Work Experience

Third Year

|          |                     |    |          |                      |    |          |                              |       |
|----------|---------------------|----|----------|----------------------|----|----------|------------------------------|-------|
| 0851-343 | Media Graphics III  | 3  | 0851-352 | Computer Graphics II | 3  | 0847-102 | Life After College           | 1     |
| 0851-372 | Videography II      | 3  | 0851-373 | Videography III      | 3  | 0851-396 | Media Production Workshop II | 6     |
| 0851-384 | Slide Production IV | 3  | 0851-385 | Slide Production V   | 3  | 0851-397 | Media Seminar                | 2-6   |
|          | Liberal Arts        | 4  |          | Liberal Arts         | 4  |          | Liberal Arts                 | 4     |
|          | Liberal Arts        | 4  |          |                      | 13 |          |                              | 13-17 |
|          |                     | 17 |          |                      |    |          |                              |       |

\*This elective is for students who need to evaluate their interest and readiness for advanced program areas.

Advanced Custom Color Printing I

Registration #0851-301

Students begin working with advanced color printing techniques and with various methods of calibration for representative types of equipment and materials. They also learn the E-6, C-41, and EP-2 process monitoring systems.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: Grade of C or better in

0851-203, 0851-213, 0851-223

COREQUISITE: 0851-314

Advanced Custom Color Printing II

Registration #0851-302

Students continue to build advanced color printing skills including specialized techniques such as masking and multiple printing, replenishment and processor utilization calculations, and advanced theories related to these topics.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: Grade of C or better in

0851-301, 0851-314

COREQUISITE: 0851-315

Videography I

Registration #0851-271

This course introduces students to videography, cameras, videocassette recording, editing, and lighting. Emphasis is on Draper operation of video equipment for single camera productions. Students have hands-on experience in making a single camera production.

LAB6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-262

Slide Production I

Registration #0851-281

This course introduces students to the production of duplicate, captioned, and basic special effect slides as well as the production of slides from flat art. Emphasis is on the correct use of equipment and appropriate choice of materials.

LAB6, CREDIT 3 (F, W, S)

PREREQUISITES: 0851-122, 0851-241

Slide Production II

Registration #0851-282

This course presents advanced slide duplication techniques, filmstrip production, special effects slide variations, digital film recorders, and color correction techniques.

LAB6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-281

Slide Production III

Registration #0851-283

Students calibrate and use 35 mm slide duplicating film and produce intermediate special effects slides requiring computer-generated mattes and counter-mattes. This course, which introduces the operation of basic slide programming equipment and dissolvers, emphasizes quality control and testing of films and materials.

LAB6, CREDIT 3 (F, W, S)

PREREQUISITES: 0851-262, 0851-282

Audiovisual Equipment Applications

Registration #0851-290

Students learn to set up, operate, and maintain the various types of recorders, optical cameras, projectors, computers, and electronic accessories commonly used in media and media production. Identification and application of various projection and audio formats also are covered.

LAB4, CREDIT 2 (F, W, S)

Media Production Workshop I

Registration #0851-296

Students apply previously learned skills to user-oriented media projects in a simulated work environment where the emphasis is on good work habits, material use, working with others, and professionally produced media products. Students use job tickets and interact with clients.

LAB12, CREDIT 6 (F, W, S)

PREREQUISITES: 0851-251, 0851-271, 0151-282

Co-op Work Experience

Registration #0851-299

CREDIT 0 (F, W, S, Su)

**Advanced Custom Color Printing III****Registration #0851-303**

This course, which prepares students for work in custom photographic laboratories, emphasizes critical color printing skills and techniques and presents the psychology of color. Students work to develop a portfolio.

LAB 8, CREDIT 4 (F, W, S)

PREREQUISITES: Grade of C or better in 0851-302, 0851-315

COREQUISITE: 0851-316

**Integrated Custom Lab IV, V, VI****Registration #0851-314, 315, 316**

These courses prepare students for work in the photographic laboratory industry by giving them real and simulated custom production work. Students practice and maintain skills learned in Advanced Custom Color Printing I, II, and III. They are expected to work from job tickets and to perform job requirements.

LAB 4, CREDIT 2 (F, W, S)

COREQUISITE:

0851-301 for 0851-314

0851-302 for 0851-315

0851-303 for 0851-316

**Media Graphics III****Registration #0851-343**

In this course, students produce graphics for slide and computer applications and prepare multicell graphics for optical effect slides. A series of graphs is designed for computer application.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-251

**Computer Graphics II****Registration #0851-352**

In this course, students continue to solve graphic problems and use computer graphic systems as tools to create presentation graphics.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-343

**Videography II****Registration #0851-372**

This course teaches operation of television studio cameras, lighting, switching, and digital titling. Students gain experience working in the television studio and control room. Post-production techniques are taught and productions are made.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-271

**Videography III****Registration #0851-373**

This course combines single camera remotes with studio productions and teaches advanced post-production techniques. Students produce their own television programs and are encouraged to try new video techniques.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-372

**Slide Production IV****Registration #0851-384**

This course emphasizes the production of advanced special effects slides and introduces the production of in-camera matte techniques and the creation of animation sequences. Optical and digital cameras are used for slide production.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-283

**Slide Production V****Registration #0851-385**

In this course, students produce a catalog of special effects slides and document slide production procedures, materials, and equipment.

LAB 6, CREDIT 3 (F, W, S)

PREREQUISITE: 0851-384

**Media Production Workshop II****Registration #0851-396**

This course, taken in the last quarter of the program, requires practical solutions to problems in presentation graphics, still photography, computers, television, and slide production. Students must produce appropriate media materials when given projects in a typical work environment. Portfolios are expanded.

LAB 12, CREDIT 6 (F, W, S)

PREREQUISITES: 0851-352, 0851-373, 0851-385

**Media Seminar****Registration #0851-397**

This course, taken during the last quarter of the associate degree option in media production, provides a relevant framework for students' previous media production courses. It also prepares students for continued growth on the job by emphasizing new directions in media production. Students may study independently a topic agreed on with their instructor. Portfolios are expanded.

CLASS 1, LAB 5, CREDIT 2-6 (F, W, S)

PREREQUISITES: 0851-352, 0851-373, 0851-385

**Independent Study****Registration #0851-399**

CREDIT Variable

# Printing Production Technology

## Printing Production Career Exploration Registration #0822-100

This course explores printing as a career choice to help students make well-informed decisions regarding the area in which they will concentrate their studies. Students receive opportunities to explore their interest in printing through hands-on experiences with printing equipment and tools. Although non-technical in nature, this course does provide opportunities for students to increase their awareness of necessary printing skills, the industry as a whole, the program, and the expectations of the printing production technology department. Technical areas of study include experiences in composition and paste-up, reproduction photography, stripping and platemaking, and press and finishing. LAB 2, CREDIT 1 (F, W, S)

## Page Creation Methods — Level I Registration #0822-141

This course prepares students to be paste-up artists and photolettering machine operators. Students learn the use of layout grids, adhesives, and mechanical drawing tools. State-of-the-art headline and special-effect typographic equipment are used and maintained. The course includes an introduction to direct input phototypesetters. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

## Fundamentals of Reproduction Photography — Level I Registration #0822-142

This course prepares students to be entry-level camera operators. Workers with this job title make films and paper prints used in the preparation of printed products. Students learn chemical mixing, lith and rapid access tray processing, machine processing, basic contact printing, basic halftone negative and print productions, camera maintenance, and how to determine basic exposures and change copy size. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

## Basic Film Assembly and Platemaking — Level I

**Registration #0822-143**  
This course prepares students to be single-color strippers and platemakers in the offset printing industry. Students learn single-color stripping, including halftones, tints, reverse and surprint type, manual step, and various signature impositions. Students learn to use contact and duplicating film and proofing methods to calibrate, expose, and process subtractive and direct photo plates. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

## Printing Production Technology: Certificate

### Typical Course Sequence

#### Fall Term

#### Winter Term

#### Spring Term

#### First Year

|          | Cr. Hrs.               |    | Cr. Hrs. |   | Cr. Hrs.                                 |    |
|----------|------------------------|----|----------|---|--|----|
| 0822-141 | Page Creation Methods* | 5  | 0822-142 | Fundamentals of Reproduction Photography' | 5  |    |
| 0847-100 | Freshman Seminar       | 2  | 0822-143 | Basic Film Assembly'                      | 5  |    |
|          | Communication          | 2  |          | Communication                             | 2  |    |
|          | English                | 4  |          | English                                   | 4  |    |
|          | Physical Education     | 0  |          | Physical Education                        | 0  |    |
|          |                        | 13 |          |   | 16                                       |    |
|          |                        |    |          | 0822-144                                  | Basic Lithographic Duplicator Operation' | 5  |
|          |                        |    |          | 0822-170                                  | Production Printing I                    | 2  |
|          |                        |    |          |   | Communication                            | 2  |
|          |                        |    |          |   | Elective                                 | 2  |
|          |                        |    |          |   | English                                  | 4  |
|          |                        |    |          |   | Physical Education                       | 0  |
|          |                        |    |          |   |  | 15 |

\*These courses may be taken in any sequence.

## Basic Lithographic Duplicator Operation — Level I Registration #0822-144

This course prepares students to be duplicator operators. Included is instruction on various duplicators that are widely used by in-plant and commercial printers. A systematic method of preparation, operation, and maintenance is emphasized. The operation of small power stitchers, paper drills, paper cutters, and commercial type folders is taught as part of this course. CLASS 4, LAB 4, CREDIT 5 (F, W, S)

## Production Printing I, II, III, IV, V Registration #0822-170, 0822-269, 0822-270, 0822-271, 0822-272

The production printing laboratory sequence is a simulated work experience where each student is expected to work from a job ticket. Job procedures, good skills, production rates, and work habits are emphasized. Previously learned skills are reinforced. The complexity of jobs increases in each production course. LAB 4, CREDIT 2 (F, W, S)  
PREREQUISITES:  
0822-170 for 0822-269  
0822-269 for 0822-270  
0822-270 for 0822-271  
0822-271 for 0822-272

## Computerized Typesetting — Level II Registration #0822-251

This course prepares students to be keyboard and phototypesetter operators. Special keyboard functions of various machines are presented and practiced for familiarity. Special function codes are used to drive different phototypesetters. Complete operation of several phototypesetters is required. CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITES: Touch-typing skills, 0822-141

## Electronic Publishing — Level III Registration #0822-252

This course prepares students with advanced keyboarding procedures for complex typographic formats. Included are skills in telecommunication with computers and word processors. The layout and paste-up skills learned in Page Creation Methods are used in new, more complex applications. CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITES: Touch-typing skills, 0822-251

## Advanced Halftone and Line Technique — Level II Registration #0822-255

This course prepares students to be camera operators. Graduates with this job title can do advanced line photography, halftones, 50 percent dot placement for tone reproduction, related contacting, proofing, and film processing as required by in-plant printing departments, newspapers, and commercial printing companies. CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-142

## Color Separation Methods — Level III Registration #0822-256

This course prepares students to be color separators, color scanner operators, and dry dot etchers. Graduates with these job titles can make duotones, direct color separations, color corrections by dry-dot etching, the required color proofs, and with limited on-the-job training, operate a color scanner. CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-255

**Color Scanning Methods — Level IV  
Registration #0822-257**

This course prepares students to enter the printing industry as color scanner operators. Areas of study include copy evaluation, color separation of transparencies and reflection copy, scanner linerization, scanning problem copy, color proofing and correction, gray component replacement, and color separation for different reproduction methods.  
CLASS 4, LAB 4, CREDIT 5  
PREREQUISITE: 0822-256

**Flat Color Film Assembly — Level II  
Registration #0822-261**

This course continues students' preparation for the offset printing industry. Students learn skills necessary for stripping, proofing, and platemaking flat color. Skills learned include multitone and multicolor work using tints, duotones, special effects, and spot color. Students use a precision pin register system throughout the stripping, proofing, and platemaking operations for all jobs. Additional skills include determining imposition planning and quality control systems for film, proof, and plate exposures and processing.  
CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-143

**Process Color Film Assembly — Level III  
Registration #0822-262**

This course prepares students in process color stripping procedures and considerations. Included are various methods of aligning negatives, stripping multiple sets on the same form, matching color using process color tints, stripping reverse and surprint type in process color areas, split-page/form stripping, making spread and choked negatives and positives, and making composite negatives and positives.  
CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-161

**Film Assembly Systems and Quality Control — Level IV  
Registration #0822-263**

This course continues the study of process color film assembly techniques and related applications. Areas of study include computer-aided masking methods, use of a precision line-up table, web offset film assembly considerations, quality control targets, and auto stripping/register systems.  
CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-262

**Printing Production Technology: Diploma**

Students must complete the following requirements: one Level I course from each of the four areas of offset lithography; two Level II and two Level III courses from any two of those areas; and Production Printing I, II, and III. In addition, a co-op work experience is required.

**Typical Course Sequence**

| Fall Term   |                         |          | Winter Term |                       |          | Spring Term |                        |          |
|-------------|-------------------------|----------|-------------|-----------------------|----------|-------------|------------------------|----------|
| First Year  |                         |          |             |                       |          |             |                        |          |
|             |                         | Cr. Hrs. |             |                       | Cr. Hrs. |             |                        | Cr. Hrs. |
| 0817-120    | Basic Mathematics*      | 3        | 0822-       | Level I Printing      | 5        | 0822-       | Level I Printing       | 5        |
| 0822-       | Level I Printing        | 5        |             | Communication         | 2        |             | Communication          | 2        |
| 0847-100    | Freshman Seminar        | 2        |             | Elective              | 2        |             | English                | 4        |
|             | Communication           | 2        |             | English               | 4        |             | General Education      | 2        |
|             | English                 | 4        |             | Physical Education    | 0        |             | Physical Education     | 0        |
|             | Physical Education      | 0        |             |                       | 13       |             |                        | 13       |
|             |                         | 16       |             |                       |          |             |                        |          |
| Second Year |                         |          |             |                       |          |             |                        |          |
| 0822-       | Level I Printing        | 5        | 0822-       | Level II Printing     | 5        | 0822-       | Level III Printing     | 5        |
| 0847-101    | Job Search Process      | 1        | 0822-170    | Production Printing I | 2        | 0822-269    | Production Printing II | 2        |
|             | Communication           | 2        |             | Communication         | 2        |             | Elective               | 3        |
|             | English                 | 4        |             | Elective              | 2        |             | General Education      | 2        |
|             |                         | 12       |             | General Education     | 2        |             |                        | 12       |
|             |                         |          |             |                       | 13       |             |                        |          |
| Summer      |                         |          |             |                       |          |             |                        |          |
|             |                         |          | 0822-299    | Co-op Work Experience |          |             |                        |          |
| Third Year  |                         |          |             |                       |          |             |                        |          |
| 0822-       | Level II Printing       | 5        | 0822-       | Level III Printing    | 5        |             |                        |          |
| 0822-270    | Production Printing III | 2        | 0847-102    | Life After College    | 1        |             |                        |          |
|             | Elective                | 3        |             | Elective              | 3        |             |                        |          |
|             | General Education       | 2        |             | Communication         | 2        |             |                        |          |
|             |                         | 12       |             |                       | 11       |             |                        |          |

\*Students with sufficient mathematic skills may not need to take this course.

## Printing Production Technology: A.A.S. Degree

Students must complete the following requirements: one Level I course from each of the four areas of offset lithography; two Level II and Level III courses from any two of those areas; Production Printing Lab I, II, III, and IV; nine additional elective printing credits; five liberal arts courses; and a co-op work experience.

### Typical Course Sequence

#### Fall Term

#### Winter Term

#### Spring Term

##### First Year

|          | Cr. Hrs.           |    | Cr. Hrs. |                    | Cr. Hrs. |
|----------|--------------------|----|----------|--------------------|----------|
| 0817-120 | Basic Mathematics* | 3  | 0822-    | Level I Printing   | 5        |
| 0822-    | Level I Printing   | 5  |          | Communication      | 2        |
| 0847-100 | Freshman Seminar   | 2  |          | Elective           | 2        |
|          | Communication      | 2  |          | English            | 4        |
|          | English            | 4  |          | General Education  | 2        |
|          | Physical Education | 0  |          | Physical Education | 0        |
|          |                    | 16 |          |                    | 15       |

##### Second Year

|          |                    |    |       |                   |    |          |                       |    |
|----------|--------------------|----|-------|-------------------|----|----------|-----------------------|----|
| 0822-    | Level I Printing   | 5  | 0822- | Level II Printing | 5  | 0822-    | Level III Printing    | 5  |
| 0847-101 | Job Search Process | 1  |       | Communication     | 2  | 0822-170 | Production Printing I | 2  |
|          | Communication      | 2  |       | Elective          | 2  |          | Liberal Arts          | 4  |
|          | Elective           | 2  |       | Liberal Arts      | 4  |          |                       | 11 |
|          | English            | 4  |       |                   | 13 |          |                       |    |
|          |                    | 14 |       |                   |    |          |                       |    |

#### Summer

0822-299 Co-op Work Experience

##### Third Year

|          |                        |    |          |                         |    |          |                        |    |
|----------|------------------------|----|----------|-------------------------|----|----------|------------------------|----|
| 0822-    | Level II Printing      | 5  | 0822-    | Level III Printing      | 5  | 0822-271 | Production Printing IV | 2  |
| 0822-269 | Production Printing II | 2  | 0822-270 | Production Printing III | 2  | 0847-102 | Life After College     | 1  |
|          | Communication          | 2  |          | Elective                | 2  |          | Elective               | 2  |
|          | Liberal Arts           | 4  |          | Liberal Arts            | 4  |          | Liberal Arts           | 4  |
|          | Printing Elective      | 3  |          | Printing Elective       | 3  |          | Printing Elective      | 3  |
|          |                        | 16 |          |                         | 16 |          |                        | 12 |

\*Students with sufficient mathematic skills may not need to take this course.

### Lithographic Press Operator — Level II Registration #0822-265

This course is an introduction to the small press. Systematic methods of small press preparation and operation are taught. Students are taught how to read and use a micrometer. Adequate practice time is provided for students to reach a level of competence required for placement as beginning press operators.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-144

### Advanced Lithographic Press — Level III Registration #0822-266

This course emphasizes the use of close registration systems. Four-color process printing is done, but not at normal production rates. Students learn how to use a packing gauge and are instructed in the use of a densitometer for measuring ink densities. Opportunity to gain sufficient skills to do routine troubleshooting is provided.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-265

### Production Presswork — Level IV Registration #0822-267

This course continues the study of lithographic press operation in a production-related setting. Areas of study include blanket squeeze and its effect on image length, systematic methods of solving press-related problems, and development of production skills. It will reinforce skills developed in prerequisite press courses. The course simulates on-the-job training, using sheet fed single- and multicolor off-set presses.

CLASS 4, LAB 4, CREDIT 5 (F, W, S)  
PREREQUISITE: 0822-266

### Co-op Work Experience Registration #0822-299

CREDIT 0 (Su)

### Independent Study

Registration #0822-399

Credit: Variable

# Division of Communication Programs

## English

### Entry Courses

#### **Ideas in English/A Registration #0862-100**

This course includes work on basic English sentence structure for reading, writing, speaking, and speechreading; practice with vocabulary and comprehension skills needed to read about contemporary topics; and the use of writing to report events. Reading and writing laboratories are required. The course is for students with basic English skills.  
CLASS 5, LAB 2, CREDIT 4 (F)  
COREQUISITE: 0860-136

#### **English in American Life Registration #0862-103**

This is a summary course that integrates four communication skills — reading, writing, grammar, and vocabulary. Materials in each area provide reinforcement, follow-up activity, or context for the three other areas. To this end, the grammar and vocabulary are contained in the reading assignments; the reading provides inspiration for the writing assignments; and the writing assignments contain vocabulary and structures taught in the grammar portion. Reading and writing laboratories are required. This course is for students with low to intermediate English skills.  
CLASS 4, LAB 2, CREDIT 4 (F)

#### **Social Issues Registration #0862-105**

This English course is designed to help students develop better reading and writing skills. Social issues such as child abuse and drug misuse are discussed. Students have opportunities to improve communication skills by completing a variety of vocabulary, grammar, and writing exercises. Summary writing is stressed and is preceded by a variety of pre-writing exercises. Reading and writing laboratories are required. This course is for students with intermediate to high English

CLASS 3, LAB 2, CREDIT 4 (F)

#### **Language Structure in Written English Registration #0862-107**

This course provides students with instruction and practice in using appropriate language structures for different writing purposes. The course has three parts: reading and studying the content and meaning of different modes of writing, analyzing and practicing the various grammatical and structural strategies used in different modes, and writing and editing papers in the various modes. Generally, descriptive, narrative, and several forms of expository writing are reviewed. This course is appropriate for students with high-level English skills.  
CLASS 4, CREDIT 4 (F)

### Integrative Courses

#### **Ideas in English/B Registration #0862-110**

In this course, students study English grammar for compound and beginning complex sentences. Reading materials and vocabulary practice include world knowledge needed for college learning. Students are expected to write paragraphs and longer compositions about reading materials and short films. Reading and writing laboratories are required.  
CLASS 5, LAB 2, CREDIT 4 (W)  
PREREQUISITE: 0862-100

#### **Ideas in English/C Registration #0862-111**

In this course, students work on English needed for college reading and writing activities. Students study complex sentences and advanced verb patterns, reading for understanding, summarizing information, and communicating ideas clearly in longer writing assignments. Reading and writing laboratories are required.  
CLASS 5, LAB 2, CREDIT 4 (S)  
PREREQUISITE: 0862-110

#### **Using Written Communication to Organize Ideas and Solve Problems Registration #0862-112**

In this course, students study English skills needed to solve problems in situations related to their technical coursework in college and to their employment environment after graduation. Students are expected to work individually and in small groups to read and prepare written descriptions, requests, recommendations, and short reports.  
CLASS 3, CREDIT 3 (W, S)  
PREREQUISITES: California Reading Test score of 6.5-8.5, 12 credits of NTID English, one year in an area of specialization

#### **Verbs and Complements Registration #0862-113**

This course deals with verb tense, agreement, and active and passive voice. It includes a detailed study of complementation, which involves the writing of several short passages. Students also work on vocabulary development.  
CLASS 4, LAB 1, CREDIT 4 (S)  
PREREQUISITES: 0862-174, Michigan Test score of 55-90, California Reading Test score of 8.0-10.0

#### **Reading English Dialogue Registration #0862-114**

This course is designed to help students improve their skills in writing English and using English words. It provides instruction in two areas: the use of verbs in different kinds of sentences and the independent analysis of vocabulary words. There is heavy emphasis on reading with practice also in writing skills. Reading and writing laboratories are required.  
CLASS 4, LAB 2, CREDIT 4 (F, W, S)  
PREREQUISITE: Michigan Test score lower than 60, California Reading Test score of 7.0-9.0

#### **Self-Expression Registration #0862-118**

In this course, students explore communication and self-expression through discussions; viewing films; reading materials; and practicing reading, writing, signing, and speechreading. The course uses vocabulary and structural forms that are common in social, academic, and professional situations. Vocabulary clues, reading skills, and descriptive phrases are important parts of this course. Reading and writing laboratories are required.  
CLASS 4, LAB 2, CREDIT 4 (W)  
PREREQUISITE: California Reading Test score higher than 7.5

#### **Mass Communication Registration #0862-119**

This course utilizes selections from literature and current newspaper and magazine articles to give students an idea of the power of language and to teach them sentence structure and paragraph organization in popular literature. Reading and writing laboratories are required.  
CLASS 4, LAB 2, CREDIT 4 (W)  
PREREQUISITE: California Reading Test score higher than 7.5

#### **English and the Arts Registration #0862-120**

This course uses vocabulary and structural forms common in social, academic, and professional situations as well as slides and reading materials that provide an opportunity to practice complex sentence forms. Students learn idioms and verb forms in connection with art history and photojournalism. Reading and writing laboratories are required.  
CLASS 4, LAB 2, CREDIT 4 (S)  
PREREQUISITE: California Reading Test score higher than 7.5

#### **English for Life and Living Registration #0862-121**

This course is a continuation of English in American Life. The focus is on integrating the four communication skills — reading, writing, vocabulary, and grammar. Vocabulary, grammar, and writing assignments are based exclusively on the readings and are intended to provide continual follow-up, review, and support for material learned. Reading and writing laboratories are required.  
CLASS 4, LAB 2, CREDIT 4 (W)  
PREREQUISITE: 0862-103

#### **Quantitative Concepts Registration #0862-122**

This course uses vocabulary and sentence structures that are used in mathematical word problems. Students practice reading, writing, and performing calculations for word problems dealing with subjects that include wages, taxes, working hours, and cost of products. Reading and writing laboratories are required.  
CLASS 4, LAB 2, CREDIT 4 (F)  
PREREQUISITE: California Reading Test score of 7.0-8.5



**Famous Scientists****Registration #0862-123**

This course uses vocabulary and sentence structures that are used in technical reading and writing. Students read a textbook covering the lives of 36 famous scientists. Students practice reading and writing biographical information about these famous scientists, and reading and writing laboratories are required. CLASS 4, LAB 2, CREDIT 4 (F, W, S)  
PREREQUISITE: California Reading Test score of 7.0-8.5

**The Earth and Universe****Registration #0862-124**

This course uses vocabulary and sentence structures that are used in technical reading and writing. Students read textbooks covering various topics in geology and astronomy. Electronic media is used to practice reading and writing compositions on geology and astronomy. Reading and writing laboratories are required. CLASS 4, LAB 2, CREDIT 4 (F, W, S)  
PREREQUISITE: California Reading Test score of 7.0-8.5

**Changing World****Registration #0862-131**

This course reviews parts of speech, selected phrases and clauses, and kinds of sentences. It applies this review to the practical task of understanding a variety of texts related to the theme of idealism and reality in American life. Texts have included *Of Mice and Men*, "I Have a Dream," personal accounts of commercial living, and a science fiction short story. Reading and writing laboratories are required. CLASS 3, LAB 2, CREDIT 4 (F, W, S)  
PREREQUISITE: 0862-105

**Medical Issues****Registration #0862-132**

This is an advanced technical English course designed to help students develop better reading and writing skills. Students discuss medical issues, including the cause, spread, and prevention of disease, and have opportunities to become familiar with the language of everyday medical science. Reading and writing laboratories are required. CLASS 3, LAB 2, CREDIT 4 (S)  
PREREQUISITE: 0862-105

**Visual Arts****Registration #0862-133**

Students in this course read a variety of texts that develop the human dimensions of issues related to photography. The course stimulates students to improve their English through use of captioned and uncaptioned slides, film, and photos, including shots of Iwojima and Kent State; song lyrics; and art. Reading and writing laboratories are required. CLASS 3, LAB 2, CREDIT 4 (W)  
PREREQUISITE: 0862-105

**Beginning Scientific English****Registration #0862-134**

This course introduces students to a broad range of topics related to the technical aspects of society. Emphasis is placed on developing reading skills, acquiring new vocabulary in context, and skimming and scanning procedures. This course is most useful to engineering and science students. Reading and writing laboratories are required. CLASS 3, LAB 2, CREDIT 4 (F, W)  
PREREQUISITES: Michigan Test score higher than 60, California Reading Test score higher than 8.0

**Writing Scientific English****Registration #0862-135**

In this course, designed to improve reading and writing skills, students discuss measurements, dimensions, and properties of objects used in experiments. General technical reading and grammar skills also are used. Homework includes writing short compositions, letters, and laboratory reports. This course is recommended for engineering and science students. Reading and writing laboratories are required. CLASS 3, LAB 2, CREDIT 4 (W, S)  
PREREQUISITES: Michigan Test score higher than 60, California Reading Test score higher than 8.0

**The American Dream****Registration #0862-136**

This integrative course focuses on the theme of alienation in American society. The course requires students to read and discuss articles or a novel, do vocabulary work, complete comprehension exercises, and write compositions related to the articles or novel. Reading and writing laboratories are required. CLASS 3, LAB 2, CREDIT 4 (W, S)  
PREREQUISITE: 0862-105

**Clear Thinking and Writing****Registration #0862-144**

This critical thought course includes critical reading, using language for personal analysis, writing for persuasive purposes, and studying the vocabulary of inference and implication. CLASS 4, CREDIT 4 (W, S)  
PREREQUISITE: 0862-107

**Emphasis Courses — Reading****English in Context****Registration #0862-150**

This course focuses on reading a novel and discussing the structures of English involved in the description of location (setting) and sequence of events (plot) in a narrative. It also touches on the organization and sequencing of formal composition. CLASS 2, CREDIT 2 (F, W, S)  
PREREQUISITE: California Reading Test score of 7.0-9.0

**Reading a Novel****Registration #0862-152**

This course, which emphasizes the reading process, offers instruction in the elements of a novel. It provides experience in discussing and writing about a novel in terms of its setting, characterization, and conflict. To encourage reading for details, drawing conclusions, and making inferences, the course also provides experience with an interactive computer novel. CLASS 4, CREDIT 3 (F, W, S)  
PREREQUISITE: California Reading Test score lower than 8.5

**Reading for Language Learning****Registration #0862-153**

This course is designed to help students use reading as a means of improving general English skills. The course emphasizes the skills involved in controlling reading processes to improve understanding and in learning new information while reading. The course also teaches the skills involved in using dictionaries and encyclopedias to increase world knowledge while reading. Some of the reading assignments involve the use of interactive computer materials that require problem solving and use of information during the reading process. CLASS 3, CREDIT 3 (F, W, S)  
PREREQUISITES: California Reading Test score of 7.0-9.0, Michigan Test score higher than 50

**Reading for Comprehension in the Liberal Arts****Registration #0862-155**

This course allows students to practice college reading skills while they learn vocabulary and develop reading strategies for learning abstract ideas and acquiring information from reading. Materials in this course emphasize important background knowledge and vocabulary useful for a variety of liberal arts courses while sampling from traditional liberal arts disciplines such as anthropology, history, religion, and science. Vocabulary units include key concepts from these disciplines. The course includes practice reading and studying textbooks, outlining, taking lecture notes, and using reference books to provide background knowledge and help in solving reading comprehension problems. CLASS 3, CREDIT 3 (F, W, S)  
PREREQUISITE: California Reading Test score higher than 9.2 or a grade of A or B in another reading emphasis course

**Literature Seminar****Registration #0862-156**

This course involves reading novels or short stories based on a specific theme. The course helps students become interactive, reflective, and thoughtful readers. Interaction between students and instructors helps students gain a cultural and historical perspective. CLASS 3, CREDIT 3 (W, S)  
PREREQUISITE: California Reading Test score higher than 9.0

## *Emphasis Courses — Vocabulary*

### **Vocabulary Through ASL Registration #0862-160**

This course is for students whose preferred method of communication is American Sign Language (ASL). The course is designed to develop ability and confidence in translating ASL vocabulary into English equivalents. It includes translation principles, ASL vocabulary items, and English idioms.

CLASS 2, LAB 1, CREDIT 2

PREREQUISITES: ASL knowledge, rating of 4 or 5 on the Sign Instruction Placement Interview (SIPI)

### **Business Vocabulary**

#### **Registration #0862-161**

In this course, students read nine stories of famous businesspeople/inventors. Each week, more than 60 vocabulary words are chosen for students to use in various vocabulary-practice exercises and games and weekly tests are given on half of these words. Other exercises include weekly reading comprehension, determination of anaphoric references, derivational morphology, and some inductive syntax. All vocabulary, grammatical, morphological, and anaphoric exercises relate to the context of the readings.

CLASS 3, LAB 2, CREDIT 4 (S)

PREREQUISITE: California Reading Test score higher than 8.0

### **Vocabulary/Dictionary Skills**

#### **Registration #0862-162**

This course helps students develop self-reliant methods for improving their vocabulary. To achieve the course's primary goal of developing advanced dictionary skills, students use the *Longman* and *Merriam-Webster* dictionaries.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES: Michigan Test score of 60-80 and California Reading Test score of 7.5-9.9

### **English Idioms**

#### **Registration #0862-163**

This course is designed to help students understand and use common English idioms. Students are encouraged to bring to class for discussion idioms that they encounter. Idioms are discussed and practiced in context. Activities include written assignments and student participation.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: California Reading Test score higher than 8.5

### **Popular Film and English**

#### **Registration #0862-164**

This course is designed to expose students to popular films and readings related to films in order to develop vocabulary skills and general world knowledge. Students then use the vocabulary in essays that express opinions about a variety of film genres. By viewing captioned films, students are introduced to the concept of genre and learn about the connection between film and literature through genre study.

CLASS 4, LAB 4, CREDIT 4 (F, S)

PREREQUISITES: California Reading Test score higher than 9.0, Michigan Test score higher than 65, or completion of a writing emphasis course with a grade of B or better or permission of instructor

## *Emphasis Courses — Grammar*

### **Introduction to Complex Sentences**

#### **Registration #0862-171**

This course is designed to improve English skills for constructing sentences and using new vocabulary. It provides instruction in two areas: the structure of sentences with two verbs and a connector and analyzing vocabulary words independently. The course concentrates on improving written communication and developing reading skills. Reading and writing laboratories are required.

CLASS 4, LAB 2, CREDIT 4 (F, W, S)

PREREQUISITE: 0862-100

### **Basic English Phrase Structure**

#### **Registration #0862-173**

This course emphasizes grammar and deals with phrase structure, including noun and verb phrases. Gerunds also are introduced. Students are required to read a short novel and work on vocabulary development.

CLASS 4, LAB 1, CREDIT 4 (F)

### **Adverbials and Basic Clause Structure**

#### **Registration #0862-174**

This course emphasizes grammar and deals with adverbials, including single word and adverb phrases; basic clause structure, including adjective and adverb clauses; and noun clause complements. Students also are introduced to coordination. In addition, students are required to read a short novel and work on vocabulary development.

CLASS 5, LAB 1, CREDIT 4 (W)

PREREQUISITE: 0862-173

### **English Phrase Structure**

#### **Registration #0862-175**

This course, the first in a sequence of two, deals with parts of speech and phrase structure, including noun, verb, adjective, and adverb phrases. In addition, students are required to read a short novel and work on vocabulary development. This course is *not* for students who have completed Verbs and Complements, Basic English Phrase Structure, Adverbials and Basic Clause Structure.

CLASS 4, LAB 1, CREDIT 4 (F, W, S)

PREREQUISITES: California Reading Test score of 7.0-8.5, Michigan Test score of 55-65

### **English Clause Structure, Tense, and Passive Voice**

#### **Registration #0862-176**

This course, which emphasizes grammar, is the second in a sequence of two. It deals with English clause structure, including adjective, adverb, and noun clause complements. Coordination also is introduced, and verb tense, agreement, and active and passive voice are covered. In addition, students are required to read a short novel and work on vocabulary development.

CLASS 4, LAB 1, CREDIT 4 (F, W, S)

PREREQUISITE: 0862-175

### **English Discourse Grammar**

#### **Registration #0862-178**

This course is designed to help students better express ideas in written English. Two hours a week, formal grammar is studied, including the semantic function of sentence constituents and classical grammar (fragments, run-ons, pronoun reference, subject/verb agreement, consistent tense, etc.). One hour each week is devoted to composition, which then is evaluated for discourse and grammar components. One hour each week is devoted to reading for comprehension through grammatical cues (passive voice, tense, etc.).

CLASS 4, CREDIT 4 (W, S)

PREREQUISITE: 0862-107

## *Emphasis Courses — Writing*

### **Basic Composition**

#### **Registration #0862-180**

The course provides instruction in composition writing at the basic level. It focuses on the areas of English sentence structures for composition coherence, development of a more flexible vocabulary, and practice with different styles of composition organization. Students write compositions based on nonverbal films and discuss the areas mentioned above.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITE: Michigan Test score lower than 60

### **Organizing Paragraphs**

#### **Registration #0862-181**

This course offers instruction and practice in developing short, well-organized compositions. The course focuses on two parts: intensive practice in developing specific writing skills, such as topic sentences, detail (supporting) sentences, outlining and transition words; and learning to use different composition styles such as description, classification, cause/effect, comparison/contrast, and personal opinion.

CLASS 2, CREDIT 2 (F, W, S)

PREREQUISITES: California Reading Test score higher than 7.5, Michigan Test score higher than 55, or 0862-180

### Essay Writing Registration #0862-183

This course focuses on the development of essay-writing skills. Essays provide the basis for many types of writing: proposals, research papers, memos to recommend a change in procedure, etc. Skill in writing essays also is required for the liberal arts curriculum. This course includes basic paragraph structure, structure of essays, how to express a view or opinion, and how to defend it logically with reason or examples.

CLASS 3, CREDIT 3 (F, W, S)  
PREREQUISITES: California Reading Test score higher than 8.5, Michigan Test score higher than 60, or grade of B or higher in 0862-181

### Creative Writing Registration #0862-187

This course is designed for students who need or want to improve their creative thinking and writing skills. The focus of the course is on stories and poetry. Students learn the mechanics of short stories and poetry and participate in assignments designed to improve their ability to think and write using imagination, imagery, descriptions, and feelings.

CLASS 2, CREDIT 2 (F, W, S)  
PREREQUISITE: Michigan Test score higher than 60

### Practical Writing Registration #0862-188

This course is designed to help students become skilled in practical, everyday writing. Students practice writing directions, forms, letters, notes, memos, ads, and reports that are encountered in both the workplace and their personal lives. There is an emphasis on form, content, and special grammatical structures necessary for the various kinds of professional writing.

CLASS 3, CREDIT 3 (F, W, S)  
PREREQUISITE: Michigan Test score of 50-65

### Professional Writing Registration #0862-189

This course examines various types of letters, memos, and reports that students encounter in the workplace. There is an emphasis on form, content, and special grammatical structures that are necessary for various kinds of professional writing.

CLASS 3, CREDIT 3 (F, W, S)  
PREREQUISITE: Michigan Test score higher than 65

### Independent Study Registration #0862-399

This course is designed for students with special needs that cannot be met by another English course. Students are required to write a contract describing what the course will cover. The contract must be signed by the student, instructor, and chairperson. Students interested in this course should talk to their communication advisor.

CREDIT 1-4 (F, W, S)

## Sign Communication

### Sign Communication I Registration #0863-101

This course is designed to assist students in developing basic receptive and expressive sign and simultaneous communication skills. The course focuses on natural sign English as used for communication by skilled signers. Also, strategies for effective use of signs and speech together are discussed and practiced, and information on the use of sign communication in academic and social environments is discussed. This course is appropriate for students with Sign Instruction Placement Interview (SIPI) ratings of 1.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

### Sign Communication II Registration #0863-103

This course is designed to assist students in continuing their development of sign communication skills, with a focus on natural sign English. Information on the use of sign communication in academic and social situations is discussed. Practice in using signs and speech together is included. This course is appropriate for students with Sign Instruction Placement Interview (SIPI) ratings of 2 or who have successfully completed Sign Communication I.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

### Sign Communication III Registration #0863-105

This course is designed to assist students in developing advanced-level natural sign English skills and to improve simultaneous communication skills. Information on the use of sign communication in academic and social environments is discussed. This course is appropriate for students who have successfully completed Sign Communication II or have Sign Instruction Placement Interview (SIPI) ratings of 3.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

### American Sign Language for Sign English Users Registration #0863-111

This course is designed to assist students in developing expressive and receptive American Sign Language (ASL) skills. ASL historical, cultural, and linguistic information is included. This course is appropriate for students with Sign Instruction Placement Interview (SIPI) ratings of 4 or who have successfully completed Sign Communication III.

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

### Signing Basic English Idioms Registration #0863-131

This course is designed to assist students in developing skills necessary to receive and express English idioms using natural sign English and American Sign Language. In addition, strategies are discussed and practiced for effective use of these sign skills to assist in reading and writing English idioms. This course is appropriate for students with Sign Instruction Placement Interview (SIPI) or Language Background Questionnaire (LBQ) ratings of 4 or 5 and English status of Marginally Qualified (MQ) or Preparatory (PP).

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

### Signing Idiomatic English Registration #0863-133

This course is designed to assist students in developing skills necessary to receive and express English idioms in using natural sign English and American Sign Language. In addition, strategies are discussed and practiced for effective use of these sign skills to assist in reading and writing English idioms. This course is appropriate for students with Sign Instruction Placement Interview (SIPI) or Language Background Questionnaire (LBQ) ratings of 4 or 5 and English status of Proficient (PF) or Provisionally Qualified (PQ).

CLASS 2, LAB 3, CREDIT 2 (F, W, S)

### Understanding American Sign Language as a Language Registration #0863-141

This course, designed to assist students in developing basic knowledge about the linguistic structure of American Sign Language (ASL), also introduces and deals with basic information about the historical and cultural aspects of ASL. This course is appropriate for students with Sign Language Instruction Placement Interview (SIPI) ratings of 5 and Michigan Test scores higher than 60.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

# Speech-Language-Hearing Center

## Audiology

### Strategies and Speech Registration #0861-101

This introductory course is recommended for students interested in speech therapy. It is designed to help students improve communication with people who do not know sign language. The course introduces basic speech and speechreading concepts as well as a variety of alternative communication strategies. Particular emphasis is placed on oral strategies to facilitate communication. Students with speech scores lower than 3.0, speechreading scores (with or without sound) lower than 35 percent, and Michigan Test scores lower than 70 may enroll in this course.  
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### Survival Strategies for the Basic Speechreader Registration #0861-103

This course is designed to help students improve their communication with people who do not know sign language. Students are introduced to speechreading and learn a variety of alternative communication strategies. Particular emphasis is placed on writing as a means of facilitating communication. Students with speech scores lower than 3.0, speechreading scores (with or without sound) lower than 35 percent, and Michigan Test scores lower than 70 may enroll in this course.  
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### Practicing Communication Strategies Registration #0861-105

This course provides review, practice, and integration of newly acquired listening, speechreading, speech, and strategy skills. It is a follow-up course for students who have completed any basic speechreading or strategy courses. Students role play a variety of everyday and work-related situations with people who do not know sign language. Overall communication success is evaluated by both students and instructor using a videotape format. Students also learn how to use these communication skills to succeed in basic conversations and conflict situations with non-signers. To enroll in this course, students must have speechreading scores (with or without sound) lower than 35 percent.  
CLASS 2, CREDIT 2, (F, W, S)  
PREREQUISITE: One of the following: 0860-177, 0861-101, 0861-103, 0861-155, or 0861-157

### Communication for the Job Interview: Writing Registration #0861-115

This course focuses on improving the communication aspect of the job interview through a series of practice interviews. It is designed for students who have completed the Job Search course and have difficulty communicating during an interview. Students should have completed one year in their program or have had a cooperative work experience prior to taking this course. This course is appro-

priate for students who prefer to use writing to communicate during the interview. For students with speech scores higher than 3.0, the speech-language department offers Communication for the Job Interview: Speaking. CLASS 2, LAB 1, CREDIT 2 (W, S)  
PREREQUISITE: 0847-101

### Orientation to Hearing Aids and Listening Registration #0861-118

This course is for students who have not used a hearing aid in a long time. It provides information about hearing aids and an opportunity to use them in supportive and structured situations. It also exposes students to the benefits of amplification through listening practice. This course meets twice for class lecturing and listening practice and once for individual hearing aid evaluation/listening laboratory practice each week. Students must have an audiologist's recommendation to enroll in this course.  
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### Auditory Training for Auditory Profile 1 and 2 Students Registration #0861-120

This auditory training course is designed to help students learn the meaning of sound. Since students in the first two auditory profiles often are part-time hearing aid users, the major goal is to help them become better listeners. Students meet three times each week to participate in both group and individual practice listening for syllables, stress, and duration. Practice with these materials helps students' speechreading skills. Environmental sound training, with special emphasis on warning sounds and music, also is included. Students who have a working hearing aid and auditory reception profiles of 1 or 2 may enroll in this course.  
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### Auditory Training I for Profile 3 Students Registration #0861-130

The goal of this course is acquisition of listening skills. Listening materials include words, sentences, short stories, and songs. Development of vocabulary skills is integrated into all listening activities. Classes meet twice weekly and a weekly one-hour laboratory is held for additional listening activities and lectures on topics related to audition and amplification. Students with an auditory reception profile of 3, who use amplification all or most of the time and have speechreading scores (with or without sound) lower than 35 percent may enroll in this course.  
CLASS 2, LAB 1, CREDIT 2 (F, W, S)  
PREREQUISITES: 0861-101, 0861-103

### Auditory Training II for Profile 3 Students Registration #0861-135

This course for profile 3 students is a continuation of Auditory Training I and continues auditory training for the acquisition of listening fluency and comprehension. Students with an auditory reception profile of 3, who use amplification all or most of the time, and have speechreading scores (with or without sound) lower than 35 percent may enroll in this course.  
CLASS 2, LAB 2, CREDIT 2 (F, W, S)  
PREREQUISITE: 0861-130

### Auditory Training I for Profile 4 and 5 Students

#### Registration #0861-140

The focus of this course is to help students acquire listening fluency and auditory comprehension skills. Classes meet twice weekly for group listening activities, group discussions, and lectures on special topics related to audition and amplification. A one-hour listening laboratory is held weekly for individual listening activities. Auditory activities for this course include books and short stories on audiotapes, music listening, and speech perception in noise. Vocabulary skill development also is emphasized. Students with auditory profiles of 4 or 5 and who use amplification all or most of the time may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### Auditory Training II for Profile 4 and 5 Students

#### Registration #0861-145

This course is a continuation of Auditory Training I for profile 4 and 5 students. The focus of the course is to continue auditory training for the acquisition of listening fluency and auditory comprehension skills. Vocabulary skill development is emphasized, and listening activities include music and books on audiotape. Special emphasis is placed on auditory skills and strategies for successful communication in social and vocational situations. Classes meet twice weekly for group lectures, discussions, and listening activities, and a one-hour laboratory is held weekly for individual listening activities. Students with auditory profiles of 4 or 5 and who use amplification all or most of the time may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)  
PREREQUISITES: 0861-140, recommendation of instructor

### Speechreading and Listening Registration #0861-155

The course develops reception of words, everyday sentences, and on-the-job social sentences by using speechreading and listening. Some auditory only exercises are done in class and for laboratory assignments. Knowledge of strategies and associational cues will be reviewed. Students with speechreading scores (with or without sound) lower than 35 percent, Michigan Test scores lower than 70, auditory profiles higher than 1, and who use amplification may enroll in this course.  
CLASS 2, LAB 2, CREDIT 2 (F, W, S)  
PREREQUISITE: 0861-101 or 0861-103

### Speechreading and Strategies Registration #0861-157

This course is designed to help students use their visual skills to understand speakers. Students practice interpreting verbal and non-verbal information, facial expressions, eye glances, gestures, and body movements as people talk. Practice activities include speechreading and listening to individual words and everyday sentences. Students may be required to speechread hearing people during a practice interview. Students must have speechreading scores (with or without sound) lower than 35 percent and Michigan Test scores higher than 70.  
CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Intermediate Speechreading  
Registration #0861-160**

In this course, speechreading and listening are used to help students understand sentences and short paragraphs. Strategies to assist communication are reviewed and practiced in conversational interviews with hearing staff members. Students with speechreading scores (with or without sound) of 35-60 percent and Michigan Test scores lower than 70 may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Receptive Technical Communication  
Registration #0861-167**

This course uses an experiential learning approach to help students improve their ability to understand other people in technical on-the-job situations. Deaf faculty and staff members share their own communication strategies and discuss the importance of attitude for effective communication. Students gain experience in various communication settings and develop personal goals/strategies through discussions with peers. Practice materials include vocabulary sentences and paragraphs from students' areas of specialization. Primary emphasis is on the use of communication strategies for spoken language, with secondary emphasis on written language. Students with speechreading scores (with or without sound) of 35-60 percent may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (W, S)

PREREQUISITE: Students must have completed at least three quarters in their program

**Receptive Social/Academic Communication  
Registration #0861-168**

This course uses an experiential learning approach to help students improve their ability to understand other people in social and academic settings. Deaf faculty and staff members share their own communication strategies and discuss the importance of attitude for effective communication. Students develop personal goals/strategies through discussions with peers. Practice materials include vocabulary, sentences, and paragraphs commonly found in social and academic environments. Primary emphasis is on the use of communication strategies for spoken language, with secondary emphasis on written language. Students with speechreading scores (with or without sound) of 35-60 percent and Michigan Test scores higher than 70 may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W)

**Advanced Speechreading: Non-Technical  
Registration #0861-170**

The intent of this course is threefold: to improve students' ability to speechread in noisy environments and to speechread difficult speakers, to develop factual knowledge to optimize receptive communication skills, and to develop useful strategies for communicating with hearing people. Students are challenged by a variety of speechreading exercises with and without sound. They learn pronunciation techniques, practical strategies for communicating in social and job environments, and skills for speechreading sentences and paragraphs. Class participation is strongly emphasized. Students with speechreading scores (with or without sound) higher than 60 percent and who use amplification may enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Technical Speechreading and Speech  
Registration #0861-177**

This course is designed to help students improve their speech and speechreading of technical vocabulary associated with their areas of specialization. This is a small group class, with one discussion hour, one individual practice hour, and one homework laboratory hour weekly. Group discussions are provided on work communication, strategies, associational cues, and interviews. Individual practice includes speechreading key vocabulary as well as sentences and short paragraphs from technical areas of specialization. Students also practice pronouncing technical vocabulary with a speech instructor during individual practice hours. Students with speechreading scores (with or without sound) higher than 60 percent and speech scores higher than 3.0 may enroll in this course. All students entering the course must pass vocabulary definitions on the first day of class.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

PREREQUISITE: Students must have completed at least three quarters in their program

**Technical Speechreading and Strategies  
Registration #0861-178**

This course helps students improve their speechreading of technical vocabulary in their areas of specialization. It focuses on the use of writing strategies for communicating at work. The class consists of a small group with one discussion hour, one individual practice hour, one homework hour, and up to two laboratory hours weekly. Group discussions are provided on work communication strategies, associational cues, and job interviews. Individual practice includes speechreading key vocabulary, sentences, and short paragraphs from technical areas of specialization. Students also practice writing strategies with the instructor during individual practice hours. This course is open to students with speechreading scores (with or without sound) higher than 60 percent and speech scores lower than 3.0. All students entering the course must pass a vocabulary test the first day of class; those who score low are encouraged to delay enrollment. CLASS 2, LAB 1, CREDIT 2 (F, W, S) PREREQUISITE: Students must have completed three quarters in their program

**Telecommunication Aids  
Registration #0861-180**

This course teaches students about regular telephones and about different kinds of Telecommunication Devices for the Deaf (TDDs). Students use TDDs to make long distance and emergency calls and appointments. They learn what to do if they have a bad connection or are disconnected. Each student makes calls using amplifiers and pay telephones. They are taught special codes for listening and speaking on the telephone. This course is open to students who have auditory reception scores lower than 40 percent. CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Telephone Communication  
Registration #0861-186**

This course is offered to help students improve their ability and confidence in using the telephone with strangers. Students learn a variety of techniques, including the best way to use their hearing aids with the telephone, how to make long distance calls, get information, make appointments over the telephone, and what to do if they have problems or an emergency. Students practice using special strategies to improve their talking and listening over the telephone. They also practice with pay phones. Students are required to practice making telephone calls every week. The instructor works with each student individually during four special appointments. Students with auditory reception scores higher than 40 percent and speech scores higher than 3.4 may enroll in this course. Students must have a telephone in their room or apartment and use a hearing aid all or most of the time. CLASS 2, LAB 1, CREDIT 2 (F, W, S) PREREQUISITE: Students must have completed at least two quarters in their program

**Independent Study  
Registration #0861-399  
CREDIT 1-3 (F, W, S)**

## *Speech -Language*

### **Speech Therapy I Registration #0860-101**

This course helps students improve their speech. Special tests allow the teacher to evaluate individual needs. Students meet with a speech instructor for two hours and practice in the laboratory for one hour each week. Instruction may include training in articulation (speech sounds), voice, pitch control, and loudness control. Students practice words, phrases, sentences, and conversations. Students with speech priority ratings of C may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### **Speech Therapy II Registration #0860-102**

This course is designed to help students improve their speech. Special tests allow the teacher to evaluate individual needs. Students meet with a special instructor for two hours and practice in the laboratory for one hour each week. Instruction may include training in articulation (speech sounds), voice, pitch control, and loudness control. Students must have a therapist's recommendation to enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

PREREQUISITE: 0860-101

### **Speech Therapy III Registration #0860-103**

This course is designed to help students improve their speech. Special tests allow the teacher to evaluate individual needs. Students meet with a speech instructor for two hours and practice in the laboratory for one hour each week. Instruction may include training in articulation (speech sounds), voice, pitch control, and loudness control. Students must have a therapist's recommendation to enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

PREREQUISITE: 0860-102

### **Pronunciation A Registration #0860-115**

Students practice pronunciation of vocabulary via use of the *Merriam-Webster Dictionary* and knowledge of pronunciation rules. Students with speech scores of 2.0-3.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### **Pronunciation B Registration #0860-116**

Students practice independent pronunciation of vocabulary via use of the *Merriam-Webster Dictionary* and knowledge of pronunciation rules. Students with speech scores higher than 3.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### **Speech and Listening Lab I Registration #0860-120**

This course is appropriate for students who wish to improve articulation, listening, and self-monitoring skills. Students meet with a speech instructor to establish goals. Students work individually at their own pace using a variety of prerecorded audiotapes. The speech instructor monitors students and provides feedback. Students with speech scores higher than 3.5 and auditory reception scores higher than 16 percent may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### **Speech and Listening Lab II Registration #0860-121**

This course is a continuation of Speech and Listening Lab I. Students continue to work on speaking and listening skills. They must receive a recommendation from the instructor of Speech and Listening Lab I to enroll in this course.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

PREREQUISITE: 0860-120

### **Speech Improvement Using Songs and Poems Registration #0860-124**

In this class, students use singing and poetry readings to improve their speech. Exercises in pitch control, loudness control, and breath support are used to improve voice, vocal quality, and listening skills. Students with speech scores higher than 3.0 and auditory reception scores higher than 16 percent may enroll.

CLASS 2, LAB 1, CREDIT 2 (S)

### **Vocabulary Development Registration #0860-132**

In this course, students use a workbook, textbook, and computer laboratory practice to develop vocabulary. They develop strategies to determine vocabulary meaning through use of contextual clues and knowledge of prefixes and suffixes. Students with Michigan Test scores lower than 70 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### **Understanding Vocabulary in Context Registration #0860-133**

This course focuses on and develops students' ability to determine the meaning of unfamiliar words encountered in everyday reading. Students identify specific types of vocabulary difficulties in their reading. Using newspaper and magazine articles in class, students practice word attack skills based on context. Implications; connotations; and a knowledge of prefixes, suffixes, and roots are used to determine meaning in reading passages. Students with Michigan Test scores higher than 70 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

### **Spoken Language Learning IA Registration #0860-136**

This course, designed for students with some intelligible speech, focuses on the use of spoken English to express information effectively. Students study basic patterns of English structures, questions and answers, conveying basic information, and brief descriptions. Students with speech scores higher than 3.0 and California Reading Test scores lower than 7.0 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F)

COREQUISITE: 0862-100

### **Spoken Language Learning IIA Registration #0860-137**

This course focuses on using spoken English correctly in the organization and expression of personal experiences. Practice is provided in some common complex sentence forms. This course uses the self-instruction laboratory for speech and speechreading practice.

CLASS 2, LAB 1, CREDIT 2 (W)

PREREQUISITE: 0860-136

### **Spoken Language Learning IB Registration #0860-138**

This course, designed for students with some intelligible speech, focuses on the use of spoken English to express information effectively. Students practice basic patterns of English structures, including questions and answers, conveying basic information, and brief descriptions. Students with speech scores higher than 3.0 and California Reading Test scores of 7.1-8.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (F)

### **Spoken Language Learning IIB Registration #0860-139**

This course, designed for students with some intelligible speech, focuses on using English correctly in the organization and expression of personal experiences. Practice is provided in some common complex sentence forms. Students who tend to make grammatical errors that interfere with the intelligibility of their spoken message should take Spoken Language Learning IB prior to this course.

CLASS 2, LAB 1, CREDIT 2 (W)

### **Spoken Language Learning IC Registration #0860-140**

This course, designed for students with some intelligible speech, focuses on the use of spoken English to express information effectively. Students practice basic patterns of English structures, including questions and answers, conveying basic information, and brief descriptions. Students with speech scores higher than 3.0 and California Reading Test scores higher than 8.5 may enroll.

CLASS 2, LAB 1, CREDIT 2 (S)

### **Interpersonal Communication Registration #0860-160**

This course helps students become aware of the communication process and their role in it. Students examine their communication skills and evaluate how successfully they communicate expressively and receptively. Students develop strategies to help them take control and communicate effectively in social and employment situations. Some traditional interpersonal communication concepts are discussed, including first impressions, opinions, points of view, clarification of information, problem solving, anger, assertiveness, and consideration. Classes include lectures, discussions, laboratories, films and videos, and role playing. Students must have the recommendation of a speech pathologist to enroll.

CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Building Relationships Through Communication A**  
**Registration #0860-162**

This course helps students develop effective interpersonal communication skills and confidence. Students come to understand related concepts and develop skills in areas including first impressions, perception, self-disclosure, provision and use of feedback, listening, sharing opinions, conflict resolution, and assertiveness. An experiential approach is used, including structured experiences, role playing, and journal writing. Students with speech scores lower than 3.0 may enroll.  
 CLASS 2, CREDIT 2 (F, W, S)

**Building Relationships Through Communication B**  
**Registration #0860-163**

This course helps students develop effective interpersonal communication skills and confidence. Students come to understand related concepts and develop skills in areas including first impressions, perception, self-disclosure, provision and use of feedback, listening, sharing opinions, conflict resolution, and assertiveness. An experiential approach is used, including structured experiences, role playing, and journal writing. Students with speech scores higher than 3.0 may enroll.  
 CLASS 2, CREDIT 2 (F, W, S)

**Group Presentation**  
**Registration #0860-170**

This course helps students improve their ability to search for, organize, and present information to groups. It deals with topic selection, library research, organizing, outlining written reports, and making presentations to an audience. Activities include a library tour, discussions, evaluations of speeches, and information regarding interpreting. Students with speech scores higher than 3.5 and California Reading Test scores higher than 7.0 may enroll.  
 CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Public Speaking**  
**Registration #0860-171**

This course is designed to refine and increase presentation ability by giving further experience in researching and organizing information for presentation to different audiences. Presentations focus on topics related to hearing impairment and its effect on communication, psychosocial development, and habilitation. Students may serve as presenters representing NTID. The course is highly recommended for students enrolled in social work and those preparing for managerial positions. Students should have some experience in public speaking before taking this course. Students with speech scores higher than 4.0 and California Reading Test scores higher than 10.0 may enroll.  
 CLASS 2, LAB 1, CREDIT 2 (W, S)

**Group Discussion Techniques**  
**Registration #0860-172**

This course develops an awareness of group process and interaction. It introduces the principles and techniques necessary for successful communication in group discussions and other complex situations such as interviewing. Group dynamics and leading and participating in groups are taught. Topics for group discussions include social and job-related situations. Students with speech scores higher than 4.0, speechreading scores (with or without sound) higher than 65 percent, and California Reading Test scores higher than 9.0 may enroll.  
 CLASS 2, CREDIT 2 (F, W, S)

**Conversational Speech**  
**Registration #0860-175**

Students develop skills and confidence in using appropriate discourse rules to function both as speakers and listeners in oral/aural conversations. Students develop an awareness of the characteristics of an effective conversationalist, improve their self-knowledge, and set goals toward becoming effective conversationalists. The course also helps students develop vocabulary and pronunciation skills and refine speech skills. Current issues are used as conversational topics. The course is structured to promote learning and reliance on individual and peer feedback. Students with speech scores higher than 3.0, speechreading scores (with or without sound) higher than 36 percent, and Michigan Test scores higher than 60 may enroll.  
 CLASS 2, LAB 1, CREDIT 2 (F, W, S)

**Strategies to Aid Functional Communication**  
**Registration #0860-177**

This course is suitable for students who want to develop and practice receptive and expressive strategies to aid in oral/aural communication with a non-signing person. Students develop strategies for communicating in specific dialogue situations, such as renting an apartment and ordering food in a restaurant. Class activities focus on speaking, speechreading, and using strategies in specific functional situations. Laboratory work includes viewing videotapes and practicing speech. Students produce and critique videotapes of simulated situations. Journals are used to describe out-of-class conversational practice. Students with speech scores of 1.9-3.1, speechreading scores (with or without sound) higher than 34 percent, and Michigan Test scores higher than 50 may enroll.  
 CLASS 2, LAB 1, CREDIT 2 (F, W, S)  
 PREREQUISITE: This course is not appropriate for students with severe voice disorders as noted by a speech-language pathologist

**Communication for the Job Interview: Speaking**  
**Registration #0860-178**

This course focuses on improving the communication aspect of the job interview through a series of practice interviews. It is for students who have difficulty communicating during an interview. The course concentrates on using speech effectively. This course is appropriate for students with some speech skills and who prefer to use them during an interview. For students who plan to use writing during an interview, the audiology department offers Communication for the Job Interview: Writing. Students who have completed one year in their program and have speech scores higher than 3.0 may enroll.  
 CLASS 2, LAB 1, CREDIT 2 (W, S)  
 PREREQUISITE: 0847-101

**Independent Study**  
**Registration #0860-399**

This course is designed for students with special needs that cannot be met by another communication course. Students are required to write a contract describing what the course will cover and the student's responsibilities. Students interested in this course should talk to their communication advisor.  
 CREDIT 1-4 (F, W, S)

## Technical and Integrative Communication Studies

**Seminar in Postlingual Adventitious Deafness**

**Registration #0864-118**

This course is intended to provide students who have an acquired hearing loss with an understanding of their deafness educationally, socially, culturally, and communicatively. Communication strategies for social and classroom settings are discussed and discussion of feelings, attitudes, and issues related to the psychosocial and cultural implications of deafness are stressed.  
 CLASS 2, DISCUSSION GROUP 1,  
 CREDIT 3 (F, W, S)  
 PREREQUISITE: 0863-101 or interview with instructor

# Division of General Education Programs

## Educational Interpreting

### Sign Vocabulary Development Registration #0850-200

This course allows students to develop, expand, and refine sign vocabulary skills that prepare them for future courses in interpreting. Vocabulary introduced includes at least 300 signs.

CLASS 1, LAB 1, CREDIT 1

### American Sign Language I Registration #0850-203

This required course concentrates on the development of basic knowledge of and beginning skills in the conversational use of American Sign Language (ASL). Students describe ASL as it fits into a general language model. Students learn to recognize and accurately produce ASL sentence types with appropriate non-manual behaviors and grammatical features

CLASS 2, LAB 2, CREDIT 3

### American Sign Language Interpreting I Registration #0850-204

This required course uses skills and principles learned in American Sign Language I and II. Students practice interpreting from English to American Sign Language using consecutive interpreting. Using the body of knowledge available from foreign language interpreting, students examine the theoretical aspects of the interpreting process.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITE: 0850-206

### American Sign Language Interpreting II Registration #0850-205

This skills-development elective course provides experience in simultaneous and consecutive interpretation. Activities include simulated interpreting experiences, interpreting practice with the use of audio- and videotapes, and critiques.

CLASS 1, LAB 4, CREDIT 3

PREREQUISITE: 0850-204

### American Sign Language II Registration #0850-206

This required course develops conversational fluency in American Sign Language (ASL). Students incorporate appropriate use of ASL classifiers, non-manual grammatical markers, and grammatical features of ASL in a conversational setting.

CLASS 2, LAB 2, CREDIT 3

PREREQUISITE: 0850-203

### Fingerspelling and Number Comprehension Registration #0850-210

Students improve their ability to comprehend fingerspelled words and manually signed numbers within messages signed at a conversational rate of speed. Instructional activities include games, drills, and voice interpreting.

LAB 6, CREDIT 3 (F)

## Educational Interpreting: A.A.S. Degree

### Typical Course Sequence

| Fall Term  |   |          | Winter Term |   |          | Spring Term |   |          |
|------------|---|----------|-------------|---|----------|-------------|---|----------|
| First Year |   |          | First Year  |   |          | First Year  |   |          |
|            |   | Cr. Hrs. |             |   | Cr. Hrs. |             |   | Cr. Hrs. |
| 0520-220   | English Composition   | 4        | 0850-211    | Voice Interpreting I                              | 3        | 0520-332    | Literature  | 4        |
| 0850-200   | Sign Vocabulary Development   | 1        | 0850-262    | Theory and Practice of Interpreting II            | 3        | 0850-203    | American Sign Language I                          | 3        |
| 0850-210   | Fingerspelling and Number Comprehension                                     | 3        | 0850-331    | Expressive Transliterating                        | 3        | 0850-252    | Aspects and Issues of Deafness II                 | 3        |
| 0850-251   | Aspects and Issues of Deafness I  | 3        | 0850-391    | Principles of Tutoring/Notetaking                 | 3        | 0850-271    | Professional Interpreter I                        | 3        |
| 0850-261   | Theory and Practice of Interpreting I                                       | 3        |             | Liberal Arts Social Science Elective (one of two) | 4        |             | Liberal Arts Social Science Elective (two of two) | 4        |
| 10-289     | Contemporary Science Elective (biology, chemistry, physics, or mathematics) | 4        |             | Physical Education                                | 0        |             | Physical Education                                | 0        |
|            |   |          |             |   | 16       |             |   | 17       |

### Optional Summer Quarter

|          |                          |   |
|----------|--------------------------|---|
| 0850-281 | Interpreting Practicum I | 5 |
| 0850-283 | Interpreting Seminar I   | 1 |
|          |                          | 6 |

### Second Year

|          |                                     |    |          |  |   |          |                                       |    |
|----------|-------------------------------------|----|----------|--|---|----------|---------------------------------------|----|
| 0850-212 | Voice Interpreting II               | 3  | 0850-206 | American Sign Language II                            | 3 | 0502-520 | College Vocabulary Skills             | 4  |
| 0850-332 | Expressive Transliterating II       | 3  | 0850-213 | Voice Interpreting III                               | 3 | 0850-204 | American Sign Language Interpreting I | 3  |
| 0850-343 | Expressive Oral Transliterating     | 3  | 0850-281 | Interpreting Practicum I                             | 5 | 0850-382 | Interpreting Practicum II             | 5  |
| 0850-372 | Professional Interpreter II         | 3  | 0850-283 | Interpreting Seminar I                               | 1 | 0850-384 | Interpreting Seminar II               | 1  |
|          | Liberal Arts Science and Humanities | 4  | 0850-392 | Tutoring/Notetaking Practicum                        | 3 | 0850-396 | Support Service Professional          | 3  |
|          | Physical Education                  | 0  | 0850-395 | Mainstreaming: Educational Programs and Alternatives | 3 |          |                                       | 16 |
|          |                                     | 16 |          |  |   |          |                                       |    |

### Optional Summer Quarter

|          |                           |   |
|----------|---------------------------|---|
| 0850-382 | Interpreting Practicum II | 5 |
| 0850-384 | Interpreting Seminar II   | 1 |
|          |                           | 6 |



**Voice Interpreting I**  
**Registration #0850-211**

This course will increase students' ability to receive the spoken and signed messages of hearing-impaired people and will refine students' ability to use vocal modulation to prepare for the voice interpreting task. This is a self-paced laboratory course. Students learn by viewing videotapes and completing a series of exercises. The videotapes contain hearing-impaired people communicating orally, in signed English, or in American Sign Language.

CLASS 2, LAB 2, CREDIT 3  
PREREQUISITE: 0850-210

**Voice Interpreting II**  
**Registration #0850-212**

This course develops students' ability to generate a spoken English equivalent while viewing/listening to a hearing-impaired person's signed/spoken message. This is a self-paced laboratory course.

CLASS 1, LAB 4, CREDIT 3  
PREREQUISITES: 0850-211, 0850-331

**Voice Interpreting III**  
**Registration #0850-213**

This course continues development of the voicing task. More complex videotaped samples of signed/spoken messages of hearing-impaired people are delivered at a faster rate than those in Voice Interpreting I and II. This is a self-paced laboratory course.

CLASS 1, CREDIT 3  
PREREQUISITE: 0850-212

**Aspects and Issues of Deafness I, II**  
**Registration #0850-251, 252**

Students learn the communication and psychosocial/cultural aspects of deafness through panel and class discussions, readings, and field trips.

CLASS 3, CREDIT 3  
PREREQUISITE: 0850-251 for 0850-252

**Theory and Practice of Interpreting I**  
**Registration #0850-261**

This course addresses the current theory and practices of the profession of interpreting. Topic areas include: general communication principles and their application to the interpreting task; the history of the profession of interpreting; different types of interpreting and related terminology; general skills required in interpreting and current applications by professional interpreters; overview of the professional code of ethics and its rationale; population serviced by interpreters, e.g. hearing-impaired speechreaders, deaf-blind individuals, multiply disabled individuals, etc.; resources related to interpreting and mainstreaming available to students; and current issues facing the professional, e.g. multiple roles and mainstreaming specialists.

CLASS 3, CREDIT 3

**Theory and Practice of Interpreting II**  
**Registration #0850-262**

Students use a communication process model to acquire a theoretical base for the interpreting task. Topics addressed are the linguistic principles associated with sign language and the interpreting task and skills in positioning and lighting. This course includes lectures and student participation in small and large group activities.

CLASS 3, CREDIT 3  
PREREQUISITE: 0850-261

**The Professional Interpreter I**  
**Registration #0850-271**

Students develop a broad understanding of interpreting as a profession, national standards for certification, and the concepts contained in the Registry of Interpreters for the Deaf Code of Ethics. Other areas of concentration are interpersonal skills, self-critique, professional development, and resume writing. Coursework includes panels, role playing, discussions, readings, and lectures.

CLASS 3, CREDIT 3 (S)

**Interpreting Practicum I**  
**Registration #0850-281**

This course provides the opportunity to acquire knowledge about the profession of interpreting through observation of and discussion with professional interpreters. The practicum student will be assigned a mentor who will supervise the practicum experience. Students enrolled in Interpreting Practicum I also must register for Interpreting Seminar I.

CLASS 10, CREDIT 5 (F, W, S)  
PREREQUISITES: 0850-211, 0850-251, 0850-262, 0850-271, 0850-331  
COREQUISITE: 0850-283

**Interpreting Seminar I**  
**Registration #0850-283**

This course is designed as part of the practicum experience. Students come together and share observations and experiences gained from the practicum placement. Class discussion focuses on analyzing ethical or situational problems, behavioral alternatives, and outcomes.

CLASS 2, CREDIT 1 (F, W, S)  
COREQUISITE: 0850-281

**Expressive Transliterating I, II**  
**Registration #0850-331, 332**

These two courses concentrate on expressive transliteration as it relates to conceptually accurate English. Students develop skills required to present a spoken message in a signed English mode. Emphasis is placed on conceptual accuracy, accuracy of fingerspelling, vocabulary development, facial expression and body movement, and self-critiquing skills.

CLASS 2, LAB 2, CREDIT 3 (F, S)  
PREREQUISITES: 0850-205 for 0850-331, 0850-331 for 0850-332

**Deaf-Blind Interpreting**  
**Registration #0850-342**

Students are prepared to interpret for deaf-blind consumers. Topics concerning deaf-blindness include causes and effects, aspects and issues of deaf-blindness, information and resources, and interpreting modes and methods of communication.

CLASS 3, CREDIT 3  
PREREQUISITES: 0850-212, 0850-271, 0850-331

**Expressive Oral Interpreting/  
Transliterating**  
**Registration #0850-343**

This course concentrates on the skill of expressive oral transliteration. Students develop the skill of receiving an auditory message and reproducing it in a highly visual modality by applying the principles of clear speech production and support techniques. Emphasis is placed on speech production principles, natural gestures, body language, facial expressions, and speed of transmission.

CLASS 3, CREDIT 3  
PREREQUISITE: 0850-252

**The Professional Interpreter II**  
**Registration #0850-372**

Students develop a broad understanding of interpreting as a profession, national standards for certification, and the concepts contained in the Registry of Interpreters for the Deaf Code of Ethics. Other areas of concentration are interpersonal skills, self-critique, professional development, and resume writing. Coursework includes panels, role playing, discussions, readings, and lectures.

CLASS 3, CREDIT 3  
PREREQUISITE: 0850-271

**Interpreting Practicum II**  
**Registration #0850-382**

This course provides the opportunity to integrate skills and knowledge through practicum situations. Experiences are gained by observation and actual interpreting in a variety of settings. Practicum students are assigned mentors who supervise the practicum experience. Students enrolled in Interpreting Practicum II also must register for Interpreting Seminar II.

CLASS 12, CREDIT 5 (F, W, S)  
PREREQUISITES: 0850-212, 0850-252, 0850-332, 0850-372, 0850-395  
COREQUISITE: 0850-384

**Interpreting Seminar II**  
**Registration #0850-384**

This course is designed as part of the practicum experience. Students come together and share observations and experiences gained from the practicum placement. Class discussion focuses on analyzing ethical or situational problems, behavioral alternatives, and outcomes.

CLASS 2, CREDIT 1 (F, W, S)  
PREREQUISITES: 0850-212, 0850-252, 0850-372, 0850-395  
COREQUISITE: 0850-382

**Principles of Tutoring/Notetaking  
Registration #0850-391**

This course prepares students to provide tutoring and notetaking support for hearing-impaired people in mainstreamed educational settings. The methodology is appropriate for elementary, secondary, and postsecondary education levels.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-251

**Tutoring/Notetaking Practicum  
Registration #0850-392**

Students provide tutoring and notetaking services to hearing-impaired students. A minimum of 10 hours per week is devoted to taking notes in class and tutoring outside of class. Practicum sites include the Rochester City School District, Monroe County Board of Cooperative Educational Services (BOCES) program, colleges of RIT, and other Rochester-area universities and colleges. Supervision is provided.

CLASS 10, CREDIT 3 (F, W, S)

PREREQUISITE: 0850-391

**Mainstreaming: Educational Programs  
and Alternatives**

**Registration #0850-395**

This course explores the goals and processes of education of hearing-impaired people, and covers current demographic, legal, economic, and social trends affecting education of hearing-impaired people. Students identify criteria and processes for the establishment of quality support services for hearing-impaired students.

CLASS 3, CREDIT 3

PREREQUISITE: 0850-251

**The Support Service Professional  
Registration #0850-396**

This course addresses the knowledge and skills necessary for functioning in a variety of educational and non-educational settings where the support service provider will have more than one major responsibility. Presentations by people with practical experience in the field enhance students' awareness of what it means to be a support service professional.

CLASS 3 CREDIT 3

PREREQUISITES: 0850-281, 0850-283, 0850-391, or permission of instructor

**Contemporary Studies in Support Services  
Registration #0850-397**

This course addresses the dynamic nature of support services and special education. As changes and growth occur in the field, this course will address "state-of-the-art" issues. Some examples are court decisions, state or federal legislation, research findings, development of new techniques or technology, in-service training programs for faculty members and service providers, and management of support services. The course is offered as new topics arise, or if a lecturer with specific expertise in support services is available to conduct the course.

CLASS 1-3, CREDIT 1-3 (S)

PREREQUISITES: 0850-281, 0850-392, or permission of instructor

**Independent Study  
Registration #0850-399**

CREDIT 1-3

PREREQUISITES: 0850-205, 0850-252, 0850-262, 0850-331, 0850-391, or permission of instructor

Other courses offered within NTID and RIT may be taken as electives if the student has interests outside the educational interpreting program and time available to take them. For information on these courses and the process for registering for them, the student should see the educational interpreting academic advisor.

# General Education

## Required Courses

### Freshman Seminar

#### Registration #0847-100 or #0853-100

This course is designed to provide entering students with opportunities to enhance intellectual, academic, personal, social, and ethical decision-making skills in order to maximize their college experience. Students have opportunities to explore and negotiate the college environment, expand critical thinking skills, learn and use academic skills, confront questions of identity and social roles, and deal with ethical issues with faculty members and senior-level students who serve as mentors. CLASS 3, CREDIT 2 (F, W)

### Job Search Process

#### Registration #0847-101

This course is designed for students who are preparing for their first co-op experience or permanent job. Students learn about resume writing, employment letters, sources of employment information, job applications, interviews, and ways to find a job. Learning activities include lectures and written assignments. CLASS 2, CREDIT 1 (F, W)

### Life After College

#### Registration #0847-102

This course, designed for students in their last year, provides information that will help them after they graduate. Topics include budgeting, housing, birth control, and keeping a job. Learning activities include lectures, videotapes, and individual conferences with the instructor. CLASS 2, CREDIT 1 (F, W, S)

## Elective Courses

## CAREER/JOB DEVELOPMENT

### SIGI Decision Making

#### Registration #0847-160

This course helps students learn about themselves and about potential careers by using the career computer SIGI. Topics are decision making, value clarification, and self-assessment. Activities include lectures, discussions, small group activities, and presentations. CLASS 2, CREDIT 2 (F, W, S)

### Career Decision Making

#### Registration #0847-161

This course, designed for students who are not sure about their educational and career goals, teaches them how to plan careers and lives. Work is on an individual or small-group basis. Activities include independent study, field trips, role playing, lectures, and discussions. CLASS 2, CREDIT 2 (F, W, S)

### The World of Work

#### Registration #0847-162

This course prepares students for a co-op experience or permanent employment. Students learn skills important to success in any job. Class activities include lectures, student presentations, and discussions. CLASS 2, CREDIT 1 (S)

### Interpersonal Relationships on the Job

#### Registration #0847-163

This course teaches students the importance of good work relationships to careers. Topics include employer-employee relationships, co-worker relationships, and how work relationships affect job satisfaction. Activities include role playing, discussions, and presentations. CLASS 2, CREDIT 2 (F, W, S)

## FINE ARTS AND HUMANITIES

### History

#### Deaf Heritage

##### Registration #0847-148

This course examines many topics related to deafness. Students survey "the deaf experience" from ancient times to the present by tracing the social and cultural heritage of deaf people and by examining important events and developments. Deaf individuals who have made important and remarkable contributions and achievements also are studied. CLASS 3, CREDIT 3 (F, W, S)

#### American Past

##### Registration #0847-149

This course gives students an understanding of American history, beginning in 1607 and continuing through the 20th century. It introduces students to a history of the country's past (heritage) and helps prepare them for the personal responsibilities of good citizenship in contemporary society. CLASS 2, CREDIT 2 (F, W, S)

#### European History

##### Registration #0847-201

This course is an introduction to political, social, and cultural history from 1600 through the 20th century and serves as a bridge to Modern European History offered in the College of Liberal Arts. Emphasis is placed on the major historical developments that have influenced the development of modern Europe. CLASS 3, CREDIT (W)

#### Current Events Seminar

##### Registration #0847-202

This course examines the major news events as they occur through identification of underlying issues and their historical foundations. CLASS 3, CREDIT 3 (F)

## Language and Literature

### Introduction to Dramatic Literature

#### Registration #0847-215

This course provides a basic introduction to dramatic literature, as well as a bridge to the study of dramatic literature in the College of Liberal Arts. It introduces students to the play script as literature and to play script analysis, focusing on vocabulary and basic skills. CLASS 3, CREDIT 3 (F, W)

### Introduction to Prose Literature

#### Registration #0847-216

This course serves as a survey course for students desiring a basic knowledge of prose fiction and nonfiction and as a bridge to the study of prose in the College of Liberal Arts. It introduces students to the genres of the short story, novel, autobiography, and essay. CLASS 3, CREDIT 3 (W)

### Written Communication I

#### Registration #0847-218

This course is designed for students who need to improve their reading and writing skills before entering Written Communication II. Using a variety of readings and topics, students develop the language and thinking skills needed to write effectively. Specifically, students learn the conventional structures of paragraphs and essays; generate ideas through a variety of invention strategies; use basic development techniques and order choices in writing; use a variety of analytic strategies for both reading and writing; and write paragraphs and essays using narration, exposition, and summary forms. CLASS 3, CREDIT 4 (F, W, S, Su)

PREREQUISITE: Appropriate score on NTID Liberal Arts Placement Test

### Written Communication II

#### Registration #0847-219

This course is designed for students planning to take English Composition and who need an introduction to the basic concepts of good writing. Using a variety of readings and topics, students develop the language and thinking skills needed to write effectively. Specifically, students learn the conventional structures of documented reports; generate ideas through a variety of invention strategies; review basic development techniques and order choices and learn more complex forms; use a variety of analytic strategies for both reading and writing; enhance critical thinking skills by recognizing assumptions, overgeneralizations, oversimplifications, etc.; and write essays using exposition, summary, critique, persuasion, and argumentation forms. CLASS 3, CREDIT 4 (F, W, S, Su)

PREREQUISITE: 0847-218 or appropriate score on the NTID Liberal Arts Placement Test

## Religion

### **The Bible as Literature: A Cultural and Historical Perspective** **Registration #0847-145**

This course provides a basic understanding of the contents of the Bible. It presents some of the major events and themes, and focuses on the cultural and historical circumstances in which the biblical literature grew. Students with a variety of religious interests may take this course. The course does not approach the literature from any particular belief or lack thereof.  
CLASS 2, CREDIT 2 (F)

### **Our Judeo-Christian Heritage** **Registration #0847-150**

This course gives students an understanding of the historical and literary roots of two major religions of the world, Judaism and Christianity. The foundations of Western culture also are explored. A study of these roots begins with a geographical and sociological view of the Ancient Near East 6,000 years ago, and continues with a study of factors that encouraged the later development of Jewish/Christian religious thought and understanding. Students have an opportunity to become more familiar with their own heritage so that they can better form values, opinions, and answers to religious questions in their own lives.  
CLASS 2, CREDIT 2 (F, W, S)

## INTERDISCIPLINARY

### **The Human Experience: An Individual Life** **Registration #0847-166**

This course introduces the major challenges faced by human beings throughout the life cycle. It explores the factors that affect healthy and unhealthy adjustments to the circumstances of an individual's life, including biological inheritance, thoughts, feelings, and environment. Students examine contemporary issues related to the challenges of adolescence, adulthood, and old age in order to understand how unconscious adjustment and conscious decision making help in attaining and maintaining psychological health. Selected contemporary issues are explored through self-reflection; group discussions; writing; examination of scientific, literary, and periodical materials; guest speakers; and campus and community activities. Alternative solutions to life's challenges are generated, shared, and evaluated by students. Through these experiences, students are introduced to the knowledge, communication skills, and critical thinking skills important for making responsible decisions throughout their adult lives.  
CLASS 4, CREDIT 4 (F, W, S)  
PREREQUISITE: Permission of department chairperson or instructor

### **The Human Experience: The Individual and Society** **Registration #0847-167**

This course focuses on the individual's relationships with others, starting from a study of primary groups and moving through a study of secondary groups (peers, school, work, and citizenship groups) to a study of world awareness and responsibility. The course involves the perception and evaluation of values, morals, ethics, human rights, and responsibilities. The study of selected social issues is accomplished through self-reflection, group and panel discussions, reading of periodicals and teacher-created materials, and participation in campus and community activities. Students are introduced to the knowledge, communication skills, and critical thinking skills important for making responsible decisions throughout their lives.  
CLASS 4, CREDIT 4 (F, W, S)  
PREREQUISITE: 0847-166

### **The Human Experience: The Individual and Technology** **Registration #0847-168**

This course explores the social, political, economic, and ethical dimensions of the relationship between the individual and technology in modern society. It provides a specific focus for the application of the general understanding of human development, society, and the possibilities for personal self-determination that students acquire in The Human Experience: An Individual Life and The Human Experience: The Individual and Society. Drawing on this knowledge and using the skills in communication and critical thinking that they have developed, students analyze selected current issues that affect their lives, present and future, and develop a course of responsible actions based on their analysis. This activity will be grounded in a consideration of the nature of science and technology, the role of human values in determining the course of scientific inquiry and the social uses of technology, and some major areas of controversy in this field.  
CLASS 4, CREDIT 4 (F, W, S)  
PREREQUISITE: 0847-167

## MATHEMATICS AND SCIENCE

### **Reading and Thinking in Science and Technology** **Registration #0847-220 or #0853-220**

This course is offered to cross-registered science and engineering students who are interested in raising their academic achievement level and to other students who wish to improve their skills and increase their knowledge in those areas. The course helps students evaluate their strengths and weaknesses in areas of thinking such as comparing, analyzing, reasoning, and problem solving. With an emphasis on making thinking overt, strategies are modeled and practiced. Expansion of both background knowledge and scientific vocabulary are additional benefits.  
CLASS 3, CREDIT 3 (S)

## PERSONAL DEVELOPMENT

### **Learning Strategies**

**Registration #0847-105 or #0853-105**  
This course is designed to help students evaluate their strengths and weaknesses and to improve their learning efficiency and effectiveness through appropriate training. Students have the opportunity to improve their learning skills in areas such as reading, test taking, questioning, and general study habits. Activities include lectures, discussions, and individual conferences.  
CLASS 2, CREDIT 2 (F, W, S)

### **Health Self-Care**

**Registration #0847-107**  
This course teaches students the importance of health and how to make responsible health care decisions. Information about choosing and using health care products and services is presented. Activities include lectures, field trips, and discussions.  
CLASS 2, CREDIT 2 (F, W, S)

### **Drug and Alcohol Usage**

**Registration #0847-108**  
This course is designed to give a general overview of various drugs commonly used among college-age populations. Upon completion of this course, students should be able to identify and describe the effects on the body, both short and long term, from using each drug covered; classification; dependence; and tolerance. Students will study the following drug-related topics: social impact, peer pressure, economy of drugs, and personal values related to drugs.  
CLASS 2, CREDIT 2 (F, W, S)

### **Adjusting to Deafness** **Registration #0847-109**

This course is designed to assist students who are postlingually deafened, individuals who prefer using an oral method of communication and have had little or no contact with other hearing-impaired people, and prelingually deaf people who have grown up in hearing environments. The course will cover topics about deafness, including social issues, how deafness affects individuals and their families, and ways that an individual adjusts to

CLASS 2, CREDIT 2 (F, W, S)

### **Personal Development** **Registration #0847-110**

This course helps students learn about themselves. Students learn to understand their actions, needs, desires, and relationships with other people. Topics include personal goals, planning time, choosing friends, and choosing a career. Class activities include lectures, group activities, discussions, and individual conferences.  
CLASS 2, CREDIT 2 (F, W, S)

**Introduction to Outdoor Living**  
**Registration #0847-125**

This course helps students develop personal and social skills. Some of the topics taught are decision making, communication, group interaction, and environmental awareness, this course can prepare students for other outdoor programs. Day outings, seasonal activities, a weekend trip, and lectures are included.  
CLASS 2, CREDIT 2 (F, W, S)

**Leadership Development**  
**Registration #0847-126**

This course helps students develop managerial/leadership skills. A required project and class activities assist them in improving leadership skills. Course topics include one- and two-way communication, group leadership and followership, styles of leadership, delegating responsibility, planning skills, helping behaviors, establishing goals, and problem-solving techniques.  
CLASS 2, CREDIT 2 (F, W, S)

## SOCIAL SCIENCE

### *Economics and Political Science*

**Personal Finance**  
**Registration #0847-106**

This course introduces students to basic money management. Topics for in-depth discussion are based on student interest and elected from the areas of income tax, banking, credit, budgeting, inflation, and shopping wisely to save money.  
CLASS 2, CREDIT 2 (F, W, S)

**Economic Basics**  
**Registration #0847-203**

This course serves as a bridge to Introduction to Economics offered in the College of Liberal Arts. It is designed to introduce students to basic background knowledge in economic concepts and methods of analysis. Emphasis is placed on the application of basic methods of economic analysis, economic theories, and contemporary economic issues of the United States.  
CLASS 3, CREDIT 3 (S)  
PREREQUISITE: 0817-142 or the equivalent is recommended

### *Psychology*

**Basic Human Sexuality**  
**Registration #0847-111**

This course provides information and helps students understand human sexuality. Topics addressed include feelings and attitudes toward sexuality, values, and sensitivity to the feelings of others. Activities include lectures, discussions, and projects.  
CLASS 3, CREDIT 2 (F, W, S)

**Psychology and Your Life**  
**Registration #0847-113**

This course presents a life-stages model of human development that emphasizes psychological aspects of development,

including emotional, self-concept, and interpersonal relationship development. Students use this model to identify important life issues for themselves and others and also to better understand their own behavior as well as that of children, teenagers, parents, and older people.  
CLASS 3, CREDIT 3 (F, W, S)

**Psychology of Religion**  
**Registration #0847-146**

This course is designed to help students understand how religion may relate to their lives and how they can develop a mature, reflective, and critical view of religion as a life influence. Topics for study include religion as a type of human behavior, methods of studying religious experiences, the psychology of conversion, mysticism, and human development in religious understanding and practice.  
CLASS 2, CREDIT 2 (S)

### *Sociology and Anthropology*

**Love, Marriage, and the Family**  
**Registration #0847-112**

This course examines the potentials and problems of married life. Students are introduced to such relevant topics as love, sexuality, singlehood, marital roles, conflict resolution, and parenting. The course challenges students to recognize their rights and responsibilities in relationships and offers them opportunities to clarify their thinking with peers and faculty members.  
CLASS 3, CREDIT 3 (F, W, S)

**Community Service I**  
**Registration #0847-127**

This course is designed to give students an opportunity to learn some basic helping skills and to use these skills in a supervised community service experience. Students explore different volunteer and professional helping roles and use this information to make personal and career choices. Activities include lectures, discussions, volunteer service, and individual conferences.  
CLASS 2, CREDIT 2 (F, W, S)

**Community Service II**  
**Registration #0847-128**

This course is a continuation of Community Service I. Each student investigates and reports on a community or social problem. Students also learn how personal goals and values affect a community. Activities include discussions, field trips, and individual conferences.  
CLASS 2, CREDIT 2 (W, S)  
PREREQUISITE: 0847-127

**Law and Society**  
**Registration #0847-147**

This course is designed to assist students in understanding the basic rules and applications of practical law as it applies to personal rights and responsibilities. Topics covered are how laws affect a society, civil rights, legal rights, torts, marriage, family relations, and criminal law. Activities include lectures and field trips.  
CLASS 2, CREDIT 2 (F, W, S)

## Theater

**Technical Theater I**  
**Registration #0848-100**

This course covers the methods and materials used in technical theater. Topics include scenery construction, properties, and the responsibilities of different theater personnel. Activities include lectures, demonstrations, discussions, and involvement in theater productions.  
CLASS 2, CREDIT 2 (F, W, S)

**Technical Theater II**  
**Registration #0848-101**

This is a course for students who want to learn more about technical theater. Activities include independent projects, supervision of crews, and shopwork.  
CLASS 2, CREDIT 2 (F, W, S)  
PREREQUISITE: 0848-100

**Stage Lighting**  
**Registration #0848-102**

This course introduces students to theater lighting and teaches them how to use each piece of lighting equipment. Activities include hanging lights for plays, running the light board, and using color in lighting.  
CLASS 2, CREDIT 2  
PREREQUISITE: 0848-100

**Acting I**  
**Registration #0848-120**

This course explores communication by using pantomime, sign mime, body language, facial expression, character study, and role playing. Students learn to perform in front of an audience with confidence and skill.  
CLASS 2, CREDIT 2 (F, W, S)

**Acting II**  
**Registration #0848-121**

This course helps students perfect acting skills. Activities include advanced character development and preparation of scenes with a partner.  
CLASS 2, CREDIT 2 (F, W, S)  
PREREQUISITES: 0848-120, permission of instructor

**Introduction to Theater**  
**Registration #0848-130**

This course, designed to teach students about theater production, encourages them to take part in theatrical experiences while they learn about acting, writing, directing, and designing (lights, scenery, costumes, make-up). Activities include lectures, demonstrations, and discussions.  
CLASS 2, CREDIT 2

**Creative Translation into Sign Language  
Registration #0848-131**

This course covers translation forms used by the department of performing arts. Students learn to translate stories, poems, and plays into American Sign Language. They also learn to present their translated works in sign. Activities include lectures, discussions, drills, and group workouts.  
CLASS 2, CREDIT 2

**Sign Mime  
Registration #0848-132**

This course teaches students to translate plays, poems, and stories into sign mime. Topics include how to develop and use sign mime in theater and how to express original ideas in sign mime. Activities include lectures, demonstrations, and a laboratory.  
CLASS 2, CREDIT 2

**Theater Practicum  
Registration #0848-133**

This course is for students who are accepted for a role (performance or crew) in a faculty-directed theater production. Acting students analyze a script, develop a character, rehearse, memorize, and perform. Crew students build a specific scene or costume element and serve as members of the running crew. This course may be taken more than once.  
CLASS 3-8, CREDIT 1-3

**Dance Performance I  
Registration #0848-140**

This course teaches students the basic terminology and techniques of modern dance. Basic body structure and creative movement are studied by the class. Individuals and groups perform in the studio. Activities include lectures, demonstrations, exercises, and performances.  
CLASS 2, CREDIT 2 (F, W, S)

**Dance Performance II  
Registration #0848-141**

This intermediate-level modern dance course teaches technique, group work, and performance standards. Activities include lectures, discussions, exercises, and performances.  
CLASS 2, CREDIT 2 (F, W, S)  
PREREQUISITE: 0848-140, dance experience, or permission of instructor

**Sign Dance  
Registration #0848-142**

In this basic dance class that includes warm-up, barre, center, and cross-the-floor movement, sign language and modern dance become the basis from which students make compositions. Students do not need to know sign language to take the course. Activities include lectures, demonstrations, and performances.  
CLASS 2, CREDIT 2

**Special Topics in Dance  
Registration #0848-143**

This course teaches different styles of dance. Possible topics include Afro-Caribbean dance, ballet, jazz, and tap. This course may be taken more than once.  
CLASS 2, CREDIT 2

**Music Introduction/Instruction Practicum  
Registration #0848-150**

This course helps students develop musical skills in one or more of the following areas: piano, guitar, electric bass, percussion, brass, woodwinds, strings, organ, and voice. Students may begin with basic instruction and progress to more advanced levels. Lessons are offered on an individual or small-group basis. This course may be taken more than once.  
CLASS 2, CREDIT 2 (F, W, S)

**Play Production I  
Registration #0848-200**

This course covers the areas of script analysis, acting for the stage, and stage direction. Through lectures, demonstrations, class discussions, projects, and films, students encounter a fundamental concern of all theater artists — how to transform the printed word into living theater? The topics presented not only acquaint students with stage practices, but through contrast and comparison, clarify those areas in which television and motion picture production require different imaginative techniques than are used for stage production.

CLASS 4, CREDIT 4 (W)

**Independent Study  
Registration #0848-399**

CLASS 3-9, CREDIT 1-3

## Pre-Baccalaureate Studies

### College of Liberal Arts Courses

#### Language, Literature, Communication

##### English Composition

###### Registration #0502-220

This course develops the language skills needed to write effectively. It should be taken the freshman year.

CLASS 3, CREDIT 4 (F, W, S, Su)

#### Social Work

##### The Professional Social Work Role

###### Registration #0516-210

This course explores social work as a profession, the various fields in which social workers practice, and the differing job philosophies of human services and social work approaches, also covered are strategies for developing self-awareness and professional self-assessment.

CLASS 3, CREDIT 4 (F)

##### Self-Awareness in the Helping Role

###### Registration #0516-212

This course helps to develop students' helping skills in essentially three broad areas: skills in noticing or observing, observing one's professional use of self in the helping relationship and evaluating the appropriateness of such behavior, and observing the client and evaluating the effect one's response has on her/him. Students are expected and required to increase their awareness skills, and this course offers a unified learning experience where students can concentrate on the theory and practice of awareness skills.

CLASS 3, CREDIT 4 (W)

### Pit-Baccalaureate Studies, Social Work

#### Typical Course Sequence

##### Fall Term

##### Winter Term

##### Spring Term

##### First Year

| Fall Term |                                   | Winter Term |          | Spring Term                        |          |
|-----------|-----------------------------------|-------------|----------|------------------------------------|----------|
|           | Cr. Hrs.                          |             | Cr. Hrs. |                                    | Cr. Hrs. |
| 0817-140  | Fundamentals of Mathematics I     | 3           | 0516-212 | Self Awareness in the Helping Role | 4        |
| 0847-100  | Freshman Seminar                  | 2           | 0516-216 | Community Service I                | 4        |
| 0847-218  | Written Communication I           | 4           | 0817-141 | Fundamentals of Mathematics II     | 3        |
|           | Communication                     | 2           | 0847-219 | Written Communication II           | 4        |
|           | General Education Bridging Course | 3           |          | or                                 |          |
|           | General Education Elective        | 2-3         |          | General Education Bridging Course  | 2        |
|           | Physical Education                | 0           |          | Physical Education                 | 0        |
|           |                                   | 16-17       |          |                                    | 16       |
|           |                                   |             |          |                                    | 17       |

##### Community Services I

###### Registration #0516-216

This course is designed as a beginning social work practice course. Its purpose is to introduce social work students to basic generalist helping skills. Students become more aware of their current skills in attending, responding, personalizing, and initiating. They further develop these skills by learning the theory behind the skills, doing worksheets related to these skills, and practicing the skills in class through role plays and direct experience. These skills will later be developed in the course Interviewing and the Helping Relationship.

CLASS 3, CREDIT 4 (W)

##### Community Services II

###### Registration #0516-217

This beginning social work practice course is designed to develop students' basic helping skills, and introduce them to service delivery systems and client systems. As volunteers, students have the opportunity to observe professional practice, be exposed to a social work setting, and interact with agency clientele.

CLASS 3, CREDIT 4 (S)

# College of Science Courses

## Biology

### General Biology

#### Registration #1001-201

This course describes the characteristics and origin of life; basic principles of modern cellular biology, including cell organelle structure; chemical basis and functions of life, including enzyme systems, respiration, and photosynthesis; and nutrient procurement in plants and animals.

CLASS 3, CREDIT 3 (F)  
COREQUISITE: 1001-205

### General Biology

#### Registration #1001-202

This course is a study of the physiological processes of gas exchange, internal transport, osmoregulation, excretion, and hormonal control in plants and animals. The nervous system and behavior in animals also are studied.

CLASS 3, CREDIT 3 (W)  
COREQUISITE: 1001-206

### General Biology

#### Registration #1001-203

This course includes a study of cellular and organismal reproduction; the principles of genetics and developmental biology; and an introduction to evolution and ecology.

CLASS 3, CREDIT 3 (S)  
COREQUISITE: 1001-207

### General Biology Laboratory

#### Registration #1001-205, 206, 207

Laboratory work complements the lecture material of General Biology (1001-201, 202, 203). The experiments are designed to illustrate concepts; develop laboratory skills and techniques; and improve ability to make, record, and interpret observations.

LAB 3, CREDIT 1 (1001-205, F; 1001-206, W; 1001-207, S)

COREQUISITES:  
1001-201 for 1001-205  
1001-202 for 1001-206  
1001-203 for 1001-207

## Chemistry

### Introduction to Chemical Analysis I

#### Registration #1008-261

This course offers an introduction to quantitative analysis, solubility of ionic compounds and the equilibria involved, activity concepts, and statistical treatment of data. Laboratory experiments include gravimetric and precipitation methods.

CLASS 2, LAB 5, CREDIT 3 (F)  
COREQUISITE: 1010-251

### Introduction to Chemical Analysis II

#### Registration #1008-262

This course discusses systematic treatment of acid-based equilibria, titrations, analytical oxidation-reduction processes, and complexometric methods.

CLASS 2, LAB 5, CREDIT 3 (W)  
PREREQUISITE: 1008-261  
COREQUISITE: 1010-252

## Pre-Baccalaureate Studies, Engineering

### Typical Course Sequence

#### Fall Term

#### Winter Term

#### Spring Term

#### First Year

|          | Cr. Hrs.'                |    | Cr. Hrs. |                          | Cr. Hrs. |          |  |    |
|----------|--------------------------|----|----------|--------------------------|----------|----------|--|----|
| 0847-218 | Written Communication I* | 4  | 0847-219 | Written Communication II | 4        | 0502-220 | English Composition                                | 4  |
| 0853-100 | Freshman Seminar**       | 2  | 0853-105 | Learning Strategies' **  | 2        | 0853-200 | Reading and Thinking in Science and Technology***! | 3  |
| 1011-208 | Chemistry                | 4  | 1016-252 | Calculus II              | 4        | 1016-253 | Calculus III                                       | 4  |
| 1016-251 | Calculus I               | 4  | 1017-311 | University Physics I     | 3        | 1017-312 | University Physics II                              | 3  |
|          | Communication            | 2  | 1017-371 | University Physics Lab I | 1        | 1017-372 | University Physics Lab II                          | 1  |
|          | Physical Education       | 0  |          | Communication            | 2        |          | Physical Education                                 | 0  |
|          |                          | 16 |          | Physical Education       | 0        |          |  | 15 |

\*All 100- and 200-level NTID courses are acceptable for credit in registered NTID A.S. programs. The 200- and 300-level courses in the Colleges of Science and Liberal Arts cited on pages 61-64 are acceptable for credit in College of Engineering programs.

\*\*Students judged as proficient, those having Michigan Test scores higher than 80 and California Reading Test scores higher than 10.0, start the English Composition series assigned by the NTID Liberal Arts Placement Test (LAPT). Students judged as provisionally qualified take at least one quarter of NTID English.

\*\*\*Cross listed under 0847-100, 0847-105, and 0847-220 respectively. Descriptions can be found under General Education Programs, page 57.

{Chemistry 1011-209 may be included in student's schedule if he/she is deferred from Reading and Thinking in Science and Technology during the spring term.

### Introduction to Chemical Analysis III

#### Registration #1008-263

This course introduces electrochemical and spectroscopic methods and potentiometric and spectrometric titrations. Electrodeposition and pH measurements are included in the laboratory.

CLASS 2, LAB 5, CREDIT 3 (S)  
PREREQUISITE: 1008-262  
COREQUISITE: 1010-253

### General Chemistry I

#### Registration #1010-251

This course includes a detailed study of fundamental tools of chemistry, atomic theory and nuclear chemistry, stoichiometry (elements, compounds, reactions), and properties of gases and thermochemistry (first law).

CLASS 3, CREDIT 3 (F)  
COREQUISITE: 1008-261

### General Chemistry II

#### Registration #1010-252

This course describes structure and properties of the atom; periodic relationships; basic concepts of chemical bonding, kinetics, and equilibrium; and thermodynamics (free energy, second and third laws).

CLASS 3, CREDIT 3 (W)  
PREREQUISITE: 1010-251  
COREQUISITE: 1008-262

### General Chemistry III

#### Registration #1010-253

This course describes oxidation-reduction and electrochemistry; descriptive chemistry of selected elements; properties of liquids and solids; chemical bonding theories; transition elements and coordination chemistry; introduction to organic chemistry, biochemistry, and polymers; and introduction to the use of chemical literature.

CLASS 3, CREDIT 3 (S)  
PREREQUISITE: 1010-252  
COREQUISITE: 1008-263

### College Chemistry I

#### Registration #1011-208

This course is primarily for, but not limited to, engineering students. Topics include an introduction to some basic concepts in chemistry, stoichiometry, first law of thermodynamics, thermochemistry, electronic theory of composition and structure, and chemical bonding.

CLASS 4, CREDIT 4 (F, W)

### College Chemistry II

#### Registration #1011-209

This course is a continuation of College Chemistry I. Topics include chemical equilibrium, properties of acids and bases, aqueous equilibria, free energy, entropy and equilibrium, electrochemistry, nuclear chemistry, and the chemistry of metals.

CLASS 4, CREDIT 4 (S)  
PREREQUISITE: 1011-208

## Mathematics

### College Algebra and Trigonometry

#### Registration #1016-204

Topics in this course include a review of the fundamentals of algebra; solution of linear, fractional, and quadratic equations; functions and their graphs; polynomial, exponential, logarithmic, and trigonometric functions; and systems of linear equations.

CLASS 4, CREDIT 4 (F, W, S)  
PREREQUISITE: Two years of high school algebra



**Introduction to Calculus I****Registration #1016-214**

This course is a non-rigorous introduction to the study of differential calculus. The following topics will be covered: functions and graphs, limits, continuity, the derivative and its significance, the algebra of derivatives, chain rule, related rates, and maxima and minima.

CLASS 3, CREDIT 3 (F, W, S)

PREREQUISITE: 1016-204 or equivalent

**Introduction to Calculus II****Registration #1016-215**

This course, a continuation of Introduction to Calculus I, deals with an introduction to integral calculus. The following topics will be covered: definite integral, area, work and distance problems, volumes, fundamental theorem of calculus, approximation techniques, exponential and logarithmic functions, applications, and introduction to differential equations.

CLASS 3, CREDIT 3 (W, S)

PREREQUISITE: 1016-214

**Calculus I****Registration #1016-251**

This standard first course in calculus is intended for mathematics, science, or engineering students, with the major emphasis on understanding the concepts and using them to solve a variety of physical problems. The

subject matter includes two-dimensional analytic geometry, functions, limits, continuity, the derivative and its formulas, and applications of the derivative.

CLASS 4, CREDIT 4 (F, W, S, Su)

PREREQUISITE: Three years of high school mathematics

**Calculus II****Registration #1016-252**

This standard course in calculus is intended for mathematics, science, or engineering students, with the major emphasis on understanding the concepts and using them to solve a

variety of physical problems. The subject matter includes anti-derivatives by various methods, the definite integral with applications to calculation of area, arc length, volumes of revolution, transcendental functions, and numerical integration.

CLASS 4, CREDIT 4 (F, W, S, Su)

PREREQUISITE: 1016-251

**Calculus III****Registration #1016-253**

This standard course in calculus is intended for mathematics, science, or engineering students, with the major emphasis on understanding the concepts and using them to solve a

variety of physical problems. The subject matter includes improper integrals, formal limits of sequences, infinite series, Taylor series, polar coordinates, and conic sections.

CLASS 4, CREDIT 4 (F, W, S, Su)

PREREQUISITE: 1016-252

**Pre-Baccalaureate Studies, Science****Typical Course Sequence****Fall Term****Winter Term****Spring Term**

First Year

|          |                                      | Cr. Hrs.* |          |  | Cr. Hrs. |          |   | Cr. Hrs. |
|----------|--------------------------------------|-----------|----------|--|----------|----------|---|----------|
| 0817-126 | Algebra IIA<br>or                    | 3         | 0817-127 | Algebra IIB<br>or                      | 3        | 0817-204 | Pre-Calculus<br>or                                    | 3        |
| 1016-204 | College Algebra and<br>Trigonometry" | (*)       | 1016-214 | Introduction to<br>Calculus<br>or      | (4)      | 1016-215 | Introduction to<br>Calculus II<br>or                  | <b>m</b> |
| 0817-204 | Pre-Calculus<br>or                   | (3)       | 1016-252 | Calculus II                            | (*)      | 1016-253 | Calculus III  | (•)      |
| 1016-251 | Calculus I                           | 10        | 0847-219 | Written<br>Communication II            | 4        | 0502-220 | English Composition                                   | 4        |
| 0847-218 | Written<br>Communication I**         | 4         | 0853-105 | Learning Strategies****                | 2        | 0853-220 | Reading and Thinking<br>in Science and<br>Technology" | 3        |
| 0853-100 | Freshman Seminar****                 | 2         | 1010-252 | General Chemistry<br>or                | 3        | 1010-253 | General Chemistry<br>or                               | 3        |
| 1010-251 | General Chemistry<br>or              | 3         | 1001-202 | General Biology and                    | (3)      | 1001-203 | General Biology and                                   | (3)      |
| 1001-201 | General Biology and                  | (3)       | 1001-206 | General Biology Lab<br>or              | (1)      | 1001-207 | General Biology Lab<br>or                             | (1)      |
| 1001-205 | General Biology Lab<br>or            | (1)       | 1017-311 | University Physics I<br>and University | (3)      | 1017-312 | University Physics<br>II and                          | (3)      |
| 1017-200 | Physics<br>or                        | (2)       | 1017-371 | Physics Lab I                          | (1)      | 1017-372 | University Physics<br>Lab II                          | (1)      |
|          | Communication                        | 2         |          | Communication                          | 2        |          |   |          |
|          | Physical Education                   | 0         |          | Physical Education                     | 0        |          |   | 13-15    |
|          |                                      | 13-16     |          |  | 14-16    |          |   |          |

\*All 100- and 200-level NTID courses are acceptable for credit in registered NTID A.A.S. programs. The 200- and 300-level courses in the Colleges of Science and Liberal Arts cited on pages 61-64 are acceptable for credit in College of Science programs.

\*Credits shown in parentheses ( ) are substituted for those directly above without parentheses, depending on which course is taken by the student.

\*\*\*Students judged as proficient, those having Michigan Test scores higher than 80 and California Reading Test scores higher than 10.0, start the English Composition series assigned by the NTID Liberal Arts Placement Test (LAPT). Students judged as provisionally qualified take at least one quarter of NTID English.

\*\*\*\*Cross listed under 0847-100, 0847-105, and 0847-220 respectively. Descriptions can be found under General Education Programs, page 57.

**Physics****Physics Orientation****Registration #1017-200**

This course is an introduction to the nature and scope of physics for freshmen interested in physics as a profession. Topics include what is physics, professional opportunities in physics, the physics profession, literature of physics, and communicating in physics. Laboratory includes safety instruction, measurement and recording techniques, graphics analysis, error analysis, and report writing. Each student presents a formal written or oral report on some topic of interest at the end of the course.

CLASS 1, LAB 2, CREDIT 2 (F)

**University Physics I****Registration #1017-311**

This intensive course in general physics, using calculus, is for students in the sciences and engineering. Mechanics: kinematics and dynamics of a particle and rigid body; work and energy; momentum and impulse; rotational motion; oscillatory motion; and gravitation are studied.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE OR COREQUISITE: 1016-251

COREQUISITE: 1017-371

**University Physics II****Registration #1017-312**

This course discusses fluids and elastic properties, heat and thermodynamics, wave motion, sound, and geometrical and physical optics.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 1017-311

PREREQUISITE OR COREQUISITE:  
1016-252

COREQUISITE: 1017-372

**University Physics III****Registration #1017-313**

This course discusses electrostatics, Gauss' Law, electric field and potential, dielectrics, DC circuits, magnetic fields, Ampere's Law, Faraday's Law, inductance and capacitance, magnetism in matter, and AC series circuits.

CLASS 4, CREDIT 4 (F, W, S)

PREREQUISITE: 1017-312

PREREQUISITE OR COREQUISITE:  
1016-253

COREQUISITE: 1017-373

**University Physics Lab I****Registration #1017-371**

This laboratory course includes experiments related to the principles and theories discussed in corresponding lectures.

LAB 3, CREDIT 1 (F, W, S)

PREREQUISITE OR COREQUISITE:  
1017-311

**University Physics Lab II****Registration #1017-372**

This laboratory course includes experiments related to the principles and theories discussed in corresponding lectures.

LAB 3, CREDIT 1 (F, W, S)

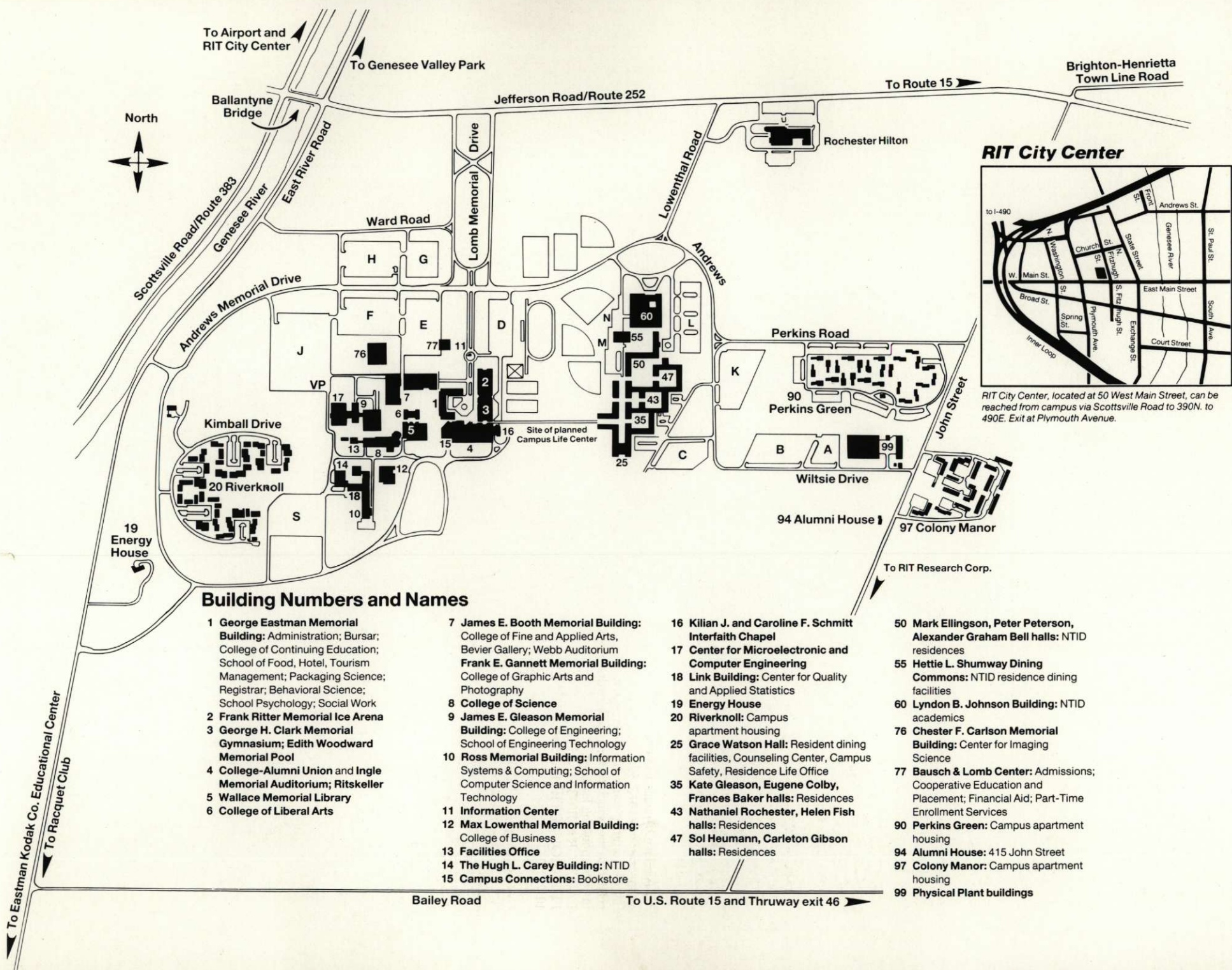
PREREQUISITE OR COREQUISITE:  
1017-312

**University Physics Lab III****Registration #1017-373**

This laboratory course includes experiments related to the principles and theories discussed in corresponding lectures.

LAB 3, CREDIT 1 (F, W, S)

PREREQUISITE OR COREQUISITE:  
1017-313



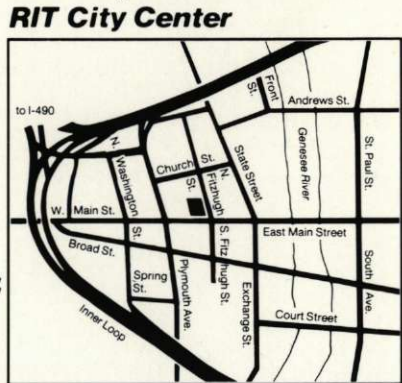
**Building Numbers and Names**

- 1 **George Eastman Memorial Building:** Administration; Bursar; College of Continuing Education; School of Food, Hotel, Tourism Management; Packaging Science; Registrar; Behavioral Science; School Psychology; Social Work
- 2 **Frank Ritter Memorial Ice Arena**
- 3 **George H. Clark Memorial Gymnasium; Edith Woodward Memorial Pool**
- 4 **College-Alumni Union and Ingle Memorial Auditorium; Ritskeller Wallace Memorial Library**
- 5 **Wallace Memorial Library**
- 6 **College of Liberal Arts**

- 7 **James E. Booth Memorial Building:** College of Fine and Applied Arts, Bevier Gallery; Webb Auditorium
- Frank E. Gannett Memorial Building:** College of Graphic Arts and Photography
- 8 **College of Science**
- 9 **James E. Gleason Memorial Building:** College of Engineering; School of Engineering Technology
- 10 **Ross Memorial Building:** Information Systems & Computing; School of Computer Science and Information Technology
- 11 **Information Center**
- 12 **Max Lowenthal Memorial Building:** College of Business
- 13 **Facilities Office**
- 14 **The Hugh L. Carey Building:** NTID
- 15 **Campus Connections:** Bookstore

- 16 **Kilian J. and Caroline F. Schmitt Interfaith Chapel**
- 17 **Center for Microelectronic and Computer Engineering**
- 18 **Link Building:** Center for Quality and Applied Statistics
- 19 **Energy House**
- 20 **Riverknoll:** Campus apartment housing
- 25 **Grace Watson Hall:** Resident dining facilities, Counseling Center, Campus Safety, Residence Life Office
- 35 **Kate Gleason, Eugene Colby, Frances Baker halls:** Residences
- 43 **Nathaniel Rochester, Helen Fish halls:** Residences
- 47 **Sol Heumann, Carleton Gibson halls:** Residences

- 50 **Mark Ellingson, Peter Peterson, Alexander Graham Bell halls:** NTID residences
- 55 **Hettie L. Shumway Dining Commons:** NTID residence dining facilities
- 60 **Lyndon B. Johnson Building:** NTID academics
- 76 **Chester F. Carlson Memorial Building:** Center for Imaging Science
- 77 **Bausch & Lomb Center:** Admissions; Cooperative Education and Placement; Financial Aid; Part-Time Enrollment Services
- 90 **Perkins Green:** Campus apartment housing
- 94 **Alumni House:** 415 John Street
- 97 **Colony Manor:** Campus apartment housing
- 99 **Physical Plant buildings**



RIT City Center, located at 50 West Main Street, can be reached from campus via Scottsville Road to 390N. to 490E. Exit at Plymouth Avenue.

~~DEBUCK, JEAN  
OFFICE OF VP/DIRECTOR  
BLDG LBJ ROOM 01225 X 6506~~



**Rochester Institute of Technology**

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