

**Central Ohio Technical College
Course Description Listing
2000-2001 Academic Year**

GENERAL EDUCATION: 1000

ALL STUDENTS MUST TAKE PLACEMENT TESTS PRIOR TO SCHEDULING THEIR FIRST COMMUNICATIONS OR MATHEMATICS COURSE.

1005 Student Career Development and Leadership Training

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite. None. S/U Graded Course.

This course will provide an overview of the theory and skills necessary for the practice of effective leadership as an integral component of a student's career and life plan. The course will be graded Satisfactory/Unsatisfactory.

1006 Critical Thinking

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 1502.

This course, an introduction to logic, teaches students to analyze the media, advertising, and everyday problems -- career, academic, and personal. It aims at equipping students with the basic skills and discipline necessary to make valid judgements.

1007 Career Explorations

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

Career Explorations provides opportunities for students to build confidence and to develop self-reliance while they relate their educational experience to the importance of career planning. The course focuses on self-awareness, job market research, career services and options at COTC, and team building. Students will experience contact with working professionals, class and team discussions, lectures, videos, handouts, readings, on-site visitations, and individual reports.

1008 Ethics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 1502.

This course studies basic ethical theories. The course balances theory and practice, using case studies and open discussion, and intends to afford students with the necessary knowledge, attitudes, and processes to make appropriate moral decisions.

1011 Career Planning I

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: 1007, or documented enrollment in a technology program, or permission of the Division Chair, or

current employment.

This course develops the student's ability to prepare resumes, cover letters, and employment applications. Students examine authentic job materials with emphasis on writing job objectives, using action words, as well as focusing on the benefit factor. Professional appearance of documents is stressed.

1012 Career Planning II

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: 1007, or 1012, or documented enrollment in a technology program, or permission of the Division Chair, or current employment.

Technology Career Planning II prepares the student for the three stages of the interview process: pre-interview planning, interview management, and post-interview follow-up. Specific topics include: 1) company research; 2) interview questions and responses; 3) employer evaluation criterion; 4) positive image; 5) skill reinforcement; and 6) interview reassessment. Emphasis is given to professionalism and persuasive communication. This course is taught through employer contacts, role play, small group discussion, lectures, videos, and videotaped interviews.

1013 College Success Skills

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None; however, this course is required of all students scoring below 85 on the COMPASS reading skills test or below 44 on the ASSET reading skills test. 1013 will count neither for elective credit nor toward meeting minimum credit hours for graduation.

Skills developed in this course include basic organizational techniques such as time management, memory and concentration, prioritizing tasks, goal setting. Academic skills include identifying individual learning styles, note taking, and test taking skills.

1017 Service Learning

2 credit hours, 10 contact hours (0 hours lecture, 0 hours lab and 10 hours miscellaneous applications). Prerequisite: None. S/U Graded Course.

The purpose of the community service class is to identify a broad variety of students from the campus community who have demonstrated an interest in assuming greater leadership and service roles; to educate them through programs that broaden and deepen their knowledge of the area=s challenges and service opportunities; and to inspire them to commit their future volunteer activities individually and/or collectively to areas that will result in advancing the welfare of the people of our community. This course is graded on a Satisfactory/Unsatisfactory basis.

More information about the 1017 Service Learning course may be found by logging onto

the Newark Campus Web page (www.newark.ohio-state.edu), clicking on the OSU Faculty icon, clicking on Robert Klingensmith, and clicking on the Service Learning Program.

1023 Pre-Technical Reading Skills

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None; however, this course is required of all students scoring below 85 on the COMPASS reading skills test or below 44 on the ASSET reading skills test. S/U Graded Course. 1023 will count neither for elective credit nor toward meeting minimum credit hours for graduation.

Critical reading skills necessary for successful use of college level reading materials are the focus of this course. Critical reading and vocabulary building skills covered include features of textbooks, interpreting graphics, identifying main ideas and supporting details, textbook marking and annotating, vocabulary building, dictionary usage, and reading systems. This course may be taken concurrently with College Success Skills. The course is graded Satisfactory/Unsatisfactory.

1200 Basic Mathematics

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None. Not open to students with credit for 3000 or 3002. Course is required for all students scoring below 41 on the ASSET numerical skills test or below 44 on the COMPASS numerical skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

Basic Mathematics is designed to develop the student's potential to succeed in other college mathematics courses. The basic arithmetic skills involving whole numbers, fractions, and decimals are reviewed. Also covered are signed numbers, percents, dimension analysis, and the rudiments of algebra.

1201 Business Mathematics

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course is not open to students with credit for 2010.

The course is a study of basic business arithmetic. It presents the concepts and applications of percentages, payroll, insurance, consumer interest, loans, and other common business computations.

1203 Introduction to Geometry

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course will count neither

for elective credit nor toward meeting minimum credit hours for graduation.

CRIMINAL JUSTICE STUDENTS, PLEASE NOTE: If a Criminal Justice student has not taken Geometry within the last five (5) years receiving a "C" (2.00) grade or better, 1203 must be taken prior to enrollment in 5215. Students who have not met the geometry requirement will be removed from 5215 class rosters.

This course is an introduction to elementary geometric concepts. It includes the study of lines, angles, triangles, polygons, circles and solids. Right triangle trigonometry and classic geometric constructions are also explored. This course is problem-solving oriented rather than proof-oriented.

1205 Introduction to Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. This course is not open to students with credit for 1210.

This course is an introduction to elementary algebraic concepts. It includes operations with real numbers, exponents and radicals, variable expressions, first degree equations, word problems, formulas and graphing. The student will develop the ability to use a scientific calculator efficiently.

1210 College Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1205, or score of at least 10 on COTC Algebra Skills test, or score of at least 43 on COMPASS Elementary Algebra test. This course is not open to students with credit for 3010.

This course is a study of intermediate algebraic operations. It includes solving equations and inequalities, factoring, rational expressions, radicals, systems of equations, and graphing.

1223 Basic Chemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1205 or 1210, or score of at least 10 on COTC Algebra Skills test, or score of at least 43 on COMPASS Elementary Algebra test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

An introduction to the basic concepts of chemistry designed to serve as a foundation (or refresher) for the student about to enter the study of allied health sciences.

The course includes the following topic areas: metrics; elements, compounds and mixtures; atomic structure; bonding; chemical reactions, energy of reactions; oxidation-reduction; gas laws, solids and liquids; liquid mixtures; acids, bases and salts; and a brief look at fluid-electrolyte balance.

1225 General Chemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1205 or equivalent, and high school chemistry or 1223.

This course will help to prepare the student for further courses in advanced chemistry. The student will study states of matter, solutions, kinetics, acids, bases, and chemical equilibrium with problem solving. The student will also study basics of organic chemistry. The student will have the opportunity to apply these principles learned through lecture in a lab setting.

1240 Basic Science

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

This Basic Science course is designed for students who need additional skills or background in science to be successful in college level science courses. In this course, the student will develop an understanding of what science is, the scientific method of investigation, measurements and units, use of scientific equipment, types of energy, motion and forces, elements and matter, chemical transformation, matter and life forms, and plant and animal cells. Successful completion of this Basic Science course will prepare the student to enter chemistry or biology courses.

1381 Sociology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. This course is not open to students with credit for 1380, 1387, 1390 or 1391.

Sociology is the study of social groups and social issues with emphasis on their effects on modern workers. Topics will be presented through lectures, films, and classroom discussion. This course is not open to students with credit for 1380 or 1390.

1384 Psychology for Nurses

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Acceptance into the COTC Nursing Technology program plus an ACT score of 22 or higher or ASSET score of 44 or higher or COMPASS score of 85 or higher or satisfactory completion of 1023 or permission of the instructor.

This course will provide an introduction to basic research methods in psychology, theoretical systems, principles of learning, information processing, intelligence and intelligence testing, motivation and emotion, personality theories, and social psychology.

1385 Organizational Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

Organizational Psychology is an introduction to the application of the methods, facts, and principles of psychology of human behavior within work organizations. Topics include history and use of applied psychology, causation and purpose in behavior, leadership, group problem solving and group leadership, evaluating individual abilities, motivating workers for optimum performance, job fatigue, and counseling skills for managers. Course objectives are achieved through lecture and discussion, role-playing exercises, and written projects.

1386 General Psychology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: ASSET score of 44 or higher or COMPASS score of 85 or higher and satisfactory completion of 1023 or permission of the instructor or Division Chair. This course is not open to students with credit for 1396.

General Psychology provides an introduction to the areas of basic theoretical constructs, nervous system functioning, perception, learning, memory, emotion, cognition, intelligence, personality theories, stress, social psychology and psychology.

1389 Cultural Diversity

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 1502 or permission of the instructor or Division Chair. This course is not open to students with credit for 1392 or 1399.

This course focuses on the differences and similarities among racial, ethnic, and other diverse populations in the United States and includes historical, religious, and sociocultural issues and current conflicts.

1393 Psychology of Personal Growth and Adjustment

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

The course deals with a number of issues pertinent to personal growth and adjustment. Among these are the conflicting views of human behavior offered by psychoanalytic, trait, learning, and phenomenological theories; scientific methodology; self-perception; attraction and love; marriage; contemporary sexual behavior; adjustment problems; stress; handling fear, depression, and anger; and substance abuse. Course goals are achieved through

lectures/class discussions, class activities and films.

1397 Abnormal Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 1393 or 1386 (or permission of the instructor).

Abnormal psychology is the study of maladaptive behaviors with emphasis on etiology, classification and symptom recognition. Major areas of study include general theoretical perspectives, anxiety disorders, sexual variations and dysfunctions, personality disorders, schizophrenia and substance-use disorders. Topics will be presented through lecture/class discussion, structured class activities and films.

1398 International Relations

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 1502.

International Relations is the study of the geography, history, culture, religion, and political and economic processes of significant modern nations. Topics will be presented through lectures, films, classroom discussion and individual research.

1399 Cultural Diversity for Law Enforcement

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 1502 and current enrollment in the Criminal Justice Technology Law Enforcement Academy or permission of the instructor or Division Chair. This course is not open to students with credit for 1389 or 1392.

This course focuses on the differences and similarities among racial, ethnic, and other diverse populations in the United States and includes historical, religious, and sociocultural issues and current conflicts.

1400 Basic Writing Skills

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None. However, 1400 is required of all students scoring below 75 on the COMPASS writing skills test or below 42 on the ASSET writing skills test. Course is not open to students with credit for 1110, 1500, 1501 or 1510. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation.

This course provides the opportunity to strengthen written language skills with emphasis on the writing process, sentence structure, unified paragraphs, word usage, capitalization, punctuation, and spelling. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is not open to students with credit for 1110, 1501, 1510 or 1500. This course is required for all students scoring in the designated range of the writing section of ASSET or COMPASS.

1502 Composition I

4 credit hours, 4 contact hours (4 lecture and 0 lab). Prerequisite: C grade (2.00) or better in 1400 [or 1500](or a score of at least 75 on the COMPASS writing skills test or a score of at least 42 on the ASSET writing skills test); C grade (2.00) or better in 1013 and a grade of Satisfactory in 1023 (or a score of at least 85 on the COMPASS reading skills test or a score of at least 44 on the ASSET reading skills test). This course is not open to students with credit for 1111, 1508, 1511 or 1520.

This course presents the fundamentals of college writing, emphasizing the writing process and the improvement of one's personal writing style. Students read and write narrative and descriptive essays and reports. Also included is a unit on basic research skills.

1503 Composition II

4 credit hours, 4 contact hours (4 lecture and 0 lab). Prerequisite: 1502. This course is not open to students with credit for 1111, 1508, 1511, 1520, or 1521.

This course is a continuation of 1502 Composition I, focusing on reading and writing expository and argumentative essays and reports. The student will further develop his/her writing style and ability to use research skills.

1504 Public Speaking

3 credit hours, 4 contact hours (2 lecture and 2 lab). Prerequisite: 1502. This course is not open to students with credit for 1112, 1509, 1509.1, 1512, or 1521.

This course emphasizes instruction and practical experience in public speaking. Students learn to analyze audiences, select topics, apply research learned, organize, and present a series of extemporaneous speeches. This course introduces other interpersonal and intrapersonal communications skills, including listening, non-verbal communications, and small group communications.

1505 Technical Writing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 1502 and (1503 or 1514). This course is not open to students with credit for 1113, 1513, or 1522.

Technical writing trains students in writing techniques used in business, industry, and public service. Students prepare, edit, and submit memoranda, letters, reports, and resumes.

1514 Contemporary Fiction

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: 1502 or equivalent. 1514 may be taken in place of 1503.

This course acquaints the student with various pieces of contemporary fiction. The student reads noteworthy novels and short stories and write essays demonstrating his/her analysis and understanding of these texts.

1516 English as a Second Language (ESL) I

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: TOFEL score of 450. S/U Graded Course. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

English as a Second Language (ESL) I focuses on basic sentence structure and the writing process, developing a reflective writing portfolio, and basic reading comprehensive skills. ESL I is a technology-assisted instruction course that utilizes a constructivist humanistic methodology in developing basic English skills required for successful entry into college level technology courses. This course is graded Satisfactory/Unsatisfactory.

1517 English as a Second Language (ESL) II

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: TOFEL score of 500 or successful completion of 1516. S/U Graded Course. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

ESL II builds upon ESL I in developing greater depth in writing and reading skills. Academic reading and writing is emphasized. The writing process is linked to the critical reading process necessary for success in college-level courses. ESL II is a technology-assisted instruction course using a constructive humanist methodology in developing basic English skills. This course is graded Satisfactory/Unsatisfactory.

1518 Communications Seminar

1-3 credit hours, 1-3 contact hours (1 to 3 hours lecture and 0 hours lab). Prerequisite: None.

Possible areas of study include vocabulary development, current technical literature, public speaking, the large conference, specific grammar studies, and local business/industrial communication problems. Course content is subject to change in response to student need and may be individualized in nature.

1523 Small Group Communications

3 credit hours, 3 contact hours (3 lecture and 0 lab). Prerequisite: 1502. Course is not open to students with credit for 1115 or 1515.

Students practice the techniques of defining, researching, planning, and group decision making in a series of five conferences, stressing leadership, participation, and

responsibility.

1531 National Issues

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 1502. This course is not open to students with credit for 1530.

The course explores the economical, historical and geo-political nature and ramification of several current issues facing the people of the United States. Each issue will be studied in depth. It requires synthesis and fine tuning of the basic communicative skills--thinking, listening, speaking, reading, and writing. Frequent oral and written reports are required.

1800 Foundation Art 2D

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: None.

This is a beginning studio course in two-dimensional art, dealing with line, form, composition, and color with exploration in several media.

1990 Community Service

1-3 credit hours depending upon the amount of work experience per week (1 credit hour per 5 hours work experience). Prerequisite: Permission of the Division Chair. S/U Graded Course.

Students perform non-paid work (five hours a week per credit hour of directed practice in a real-world problem) for an organization and be involved in a seminar with others pursuing this experience. A directed practice hour is one during which a student receives individual instruction and then is observed and critiqued by the instructor. Assignments will be with organizations having a working agreement with the College. Appropriate health insurance must be obtained by the student. The coordinating faculty member, with employer input, will be responsible for grading on a satisfactory/unsatisfactory basis.

1991 Special Topics in Cultural Diversity

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: 1502 or permission of the Division Chair or the instructor. This course is not open to students with credit for 1392.

This course focuses on the differences and similarities among racial, ethnic, and other diverse populations in the United States and includes historical, religious and sociocultural issues and current conflicts.

BUSINESS TECHNOLOGIES: 2000

2014 Principles of Business

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This introductory course presents the principles, terminology and concepts necessary for understanding our business system. It covers such key topics as business formation and ownership decisions, management and organization, the various functional Divisions within the business and the interaction of business and society.

2016 Business Law

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

The course encompasses common and statutory law as it applies to the business world. Topics of study include the environment of business, factors influencing the legality of contracts, and the various kinds of contracts. The course also includes a study of sales, bailments, agency, commercial paper, partnerships and corporations.

2017 Team Building

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course allows students to discover group development. Students will learn group-process skills vital to effective teamwork, including communication, decision making, problem solving, and conflict resolution. An understanding of the effect of individual behavior on group productivity will also be explored.

2018 Project Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course is designed to examine the key elements in the project management process. This process will include: characteristics of a well-defined project; successful project organization; managing the project team; planning; scheduling; and controlling. Effective project planning will include gathering budget information and scheduling data. Techniques for scheduling projects will include GNATT chart schedules and reports.

2019 Strategic Management

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

Strategies an organization pursues have a major impact upon its performance relative to that of competitors. This class identifies and describes the various strategies a company

can pursue to achieve superior performance. Strategies apply to all types of organizations. A thorough understanding of the analytical techniques and skills necessary by managers to identify and exploit strategies successfully will be applied.

2020 International Business

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course explains the how and why of world countries and how they differ with a thorough review of economics and politics involving international trade and investment. This involves learning the functions and forms of the global monetary system. There is also emphasis on the strategies and structures of international businesses.

2021 Principles of Management

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

The basic functions of management are planning, organizing, leading/motivating and controlling. The course examines these four functions in considerable detail, and attempts to give the student insight and perspective on management in action. There is an emphasis on current case material so the student can relate principles to real world management problems.

2022 Principles of Marketing

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This course is designed to introduce the student to the field of marketing in its broadest concepts, from the viewpoint of both the seller and the buyer. The student will be exposed to the various careers in marketing and will learn how managers manipulate the four variables of marketing (price, product, distribution, promotion) to achieve organizational goals.

2024 Economics

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

Dealing with both micro-economics and macro-economics, the course is designed to give the student a basic understanding of our economic system, the role of supply and demand in determining prices, comparison of competition versus monopoly, the role of money and its effect on the economy, the current methods of economic analysis, the development of economic policies that are used to stabilize the level of economic activity, and the relationship of international economics to our domestic economy.

2031 Business Statistics

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1205 or a score of at least 43 on the COMPASS Elementary Algebra Test or score of at least 10 on the COTC Algebra Skills Test. This course is not open to students with credit for 2030.

This course develops skills and knowledge relative to the fundamental concepts and methods of statistics, particularly as it applies to the fields of business and industry. It focuses upon presentation of data, dispersion, probability theory, sampling, and regression analysis and decision theory.

2113 Principles of Accounting I--Financial

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None.

The meaning, purpose and function of accounting in business are presented through studying the concepts and theories of accounting. Basic accounting procedures covered in this course include journalizing transactions, posting, trial balances, adjusting and closing entries and preparation of financial statements. Other topics of study include the preparation and use of working papers, internal control, special journals, and the voucher system. The course focuses on the sole proprietorship form of business organization for both service and merchandising operations.

2123 Principles of Accounting II--Financial

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in 2113; Other Majors: 2113.

Continuing the study of the concepts and theories presented in Accounting 2113. Topics of study include inventory methods, plant and equipment and depreciation, payroll accounting, generally accepted accounting principles, formation and operation of partnership, formation and operation of a corporation.

2130 Principles of Finance

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2123.

This course begins with an examination of the goals and functions of financial management. In addition, the course covers the following topics: financial analysis and planning, financial forecasting, operating and financial leveraging, working capital management, the time value of money and how it relates to the valuation process, the cost of capital, and the capital budgeting process.

2133 Principles of Accounting III--Managerial

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 2123.

This course continues development of the techniques presented in Accounting 2113 and 2123. The topics introduced include consolidated financial statements, statement of cash flows, analysis and interpretation of financial statements, accounting for manufacturing operations, and cost accounting systems.

2147 Cost Accounting I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: 2133.

Presents basic cost accounting and cost management concepts along with a description of activity cost behavior. This course includes both product and service costing in a job-order and a process-system environment. Other important components of this course are: support department cost allocations; joint product and by-product costing; activity-based costing; strategic cost management; life cycle cost management; JIT; cost-volume-profit analysis; and international issues in cost management.

2148 Cost Accounting II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2147.

This course is a continuation of 2147 Cost Accounting I. Traditional and contemporary decision making and planning and control systems are presented and analyzed. The following topics are examined: relevant costing; capital investment decisions; inventory management; the theory of constraints; pricing and revenue analysis; and profitability analysis. Other critical components of this course include: budgeting; standard costing; contemporary responsibility accounting; and productivity measurement and control.

2150 Computer Aided Accounting I

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2113 and 2123.

This course uses a general ledger software program to solve selected accounting problems. The program demonstrates the immediate effects of each transaction and helps students understand the use of computers in a real world accounting environment. The student will journalize transactions, prepare adjusting entries, close temporary accounts, prepare classified financial statements, prepare a bank reconciliation, prepare perpetual system inventory records, journalize payroll transactions, and work with partnership accounting entries.

2153 Accounting for Not-for-Profit Organizations

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: 2133.

This course will introduce students to fund accounting and the accounting practices of not-for-profit organizations. The basic accounting and recording procedures for governmental units and other not-for-profit organizations will be discussed. Specific topics introduced include: development and use of budgetary data, accounting for general fund operations, other funds and account groups, interfund relationships and combined financial statements, federal government accounting, accounting for other organizations, and interpreting non-profit organization financial statements.

2160 Computer Aided Accounting II

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2150.

This course utilizes an accounting package to provide experience to the student in operating a computerized, integrated accounting system. The student will work with the general ledger, accounts receivable system, accounts payable system, financial statement analysis, inventory system, and payroll system individually, and then as an integrated whole. In this way, the student's knowledge of accounting principles and the accounting cycle learned in previous courses will be reinforced and given a practical focus.

2161 Auditing

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: 2133.

This course covers the theory and processes of auditing. Areas of study include: generally accepted auditing standards, reports on audited statements, audit work papers, audit planning, internal control evaluation, audit sampling, and fraud awareness auditing. Audit applications will be discussed relating to the revenue and collection cycle and the acquisition and expenditure cycle.

2172 Intermediate Accounting I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2133.

This course continues development of the theory and processes of accounting. Accounting functions emphasized include: balance sheets; income and retained earnings statements; analysis of working capital; and methods of valuations.

2173 Intermediate Accounting II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2172.

This course is a continuation of 2172 Intermediate Accounting II and presents in-depth study in the following areas of the balance sheet: inventories, cost measurement, flow

assumptions, and special valuation issues: acquisition, disposal, depreciation and depletion of property, plant and equipment; intangibles; and investments.

2174 Intermediate Accounting III

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2173.

This course is a continuation of 2173 Intermediate Accounting II and concludes the in-depth study of the balance sheet in the following areas: current liabilities and contingencies; long-term liabilities and receivables; contributed capital; earnings per share and retained earnings; accounting for leases. In addition, the statement of cash flows will be explored.

2175 Taxation I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 2133.

This course covers the theory and practice of federal income taxation and presents an in-depth study of gross income inclusions and exclusions, deductions and losses, business expenses, depreciation and cost recovery, and employee expenses.

2176 Taxation II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 2175.

This course is a continuation of 2175 Taxation I and presents the study of itemized deductions, passive activity losses, tax credits and withholding treatment of gains/losses, taxation of partnerships and corporations; state and city income tax returns for individuals; corporate franchise tax; personal property tax; and city business income tax returns.

2178 Accounting Problems, Issues and Cases

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 2148, 2173 and 2175.

This capstone course is designed to equip accounting students with the analysis skills necessary to compete in the accounting field. Comprehensive cases requiring critical thinking, communications skills, analysis, interpretation and decision making will be utilized. Students will apply skills acquired in prior coursework to solve accounting problems involving practical applications.

2179 E-Commerce and Business

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 2113.

This course is designed to provide an introduction to electronic commerce and a survey of business transactions on the Internet. Although subject to change, topics could include: the cottage industries of electronic commerce, e-cash, web sites of professional business associations, Internet security, and the Edgar Database of Corporate Information maintained by the Securities and Exchange Commission.

2203 Word Processing I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 2225 or typing 25-30 wpm.

Students work toward increased speed and accuracy in keyboarding. Emphasis is on the development of skill for use in a variety of applications including personal and business correspondence, tables, topical outlines, and professional reports. The goal is for the student to be able to keyboard alpha-numeric data at 40-45 words per minute.

2204 Word Processing II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 2203 (or equivalent) and 2229.

This course is designed primarily to develop skill in keying a wide variety of business correspondence. Letter styles, including many commonly used special features, interoffice memorandum format, and administrative communications are emphasized. Punctuation and grammar are stressed. The self-paced learning concept provides the student with personalized and individualized instruction. The goal is for the student to be able to keyboard alpha-numeric data at 50-55 words per minute.

2205 PowerPoint I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2900.

This Microsoft PowerPoint course is designed to teach students to prepare a PowerPoint presentation and use various methods for editing and formatting a presentation. Students gain experience in adding animation, using WordArt, creating organizational charts for use in presentations, as well as ways in which PowerPoint interacts with Windows and the Internet. Students need some prior computer experience and familiarity using Windows.

2206 PowerPoint II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2205.

This course is a continuation of 2205 MS PowerPoint I. The course covers adding visual elements to a PowerPoint presentation and modifying it; importing data and exporting data from a presentation; customizing a presentation and creating a slide show; and creating

output and delivering a presentation. Approved courseware for the Microsoft Office User Specialist Program (MOUS) will be used. The MOUS program is used to test and validate a student's skills and thereby supply objective proof to an employer or prospective employer that the student knows how to use a program efficiently and productively. This course teaches all the skills that the student will need to master to pass the Core Certification MOUS exam and/or Expert Certification MOUS exam in Microsoft PowerPoint.

2209 Medical Machine Transcription and Word Processing

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2218, 2266 and 4028 (or concurrent enrollment in 4028).

This specialized medical transcription and word processing course introduces a broad base of medical terms and phrases, provides medical transcription practice, and the experience of working with various common medical specialty reports used in medical institutions. Realistic patient cases and histories will be covered. Word processing equipment will be utilized in transcribing the medical dictation from cassette tapes.

2210 Medical Information Coding

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2294 and 4028 (or concurrent enrollment in 4028).

This medical coding course is designed to teach students how to find, use, and apply the codes of the ICD-9-CM (International Classification of Diseases) in order to classify medical documents efficiently, accurately, and effectively to optimize reimbursements of medical practices or medical facilities.

2218 Introduction to Microsoft Word I

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2203.

This introductory Windows-based program is designed especially for beginners who want to learn Microsoft Word for Windows. It provides a practical and focused approach where the student begins immediately to interact with Windows in the business office. The student will perform a variety of tasks and create documents. Continued emphasis is placed on developing grammar and communications skills.

2225 Keyboarding

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None.

This course introduces the basic touch system for keyboarding/inputting alpha-numeric data on the keyboard and keypad. Accuracy is stressed in keyboarding/inputting and proofreading. The goal is for students to be able to keyboard/input alpha-numeric data on the computer at 25-30 words per minute and to input numeric data on the computer keypad

at 125 c.p.m.

2229 Business Language Skills

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This course is designed to refine the basic language skills that relate to business and to assist students in the preparation of written business documents through the use of realistic learning materials. Major punctuation, grammar, capitalization, and number usage principles are emphasized and reinforced through the introduction of the proper use of the required reference manual.

2230 ACCESS I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This course is the study of principles and procedures of how records are created, stored, retrieved, retained, and disposed of; procedures for the operation and control of manual and automated storage systems; alphabetic, geographic, numeric, and subject filing systems; principles of the selection for record storage methods, personnel, equipment, and supplies. Access database is used to reinforce the alphabetic storage method and adapts it to geographic, numeric and subject filing.

2266 Machine Transcription I

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2218.

This introductory course is designed to provide general knowledge of machine transcription equipment. Laboratory experience includes continuous keying from the transcriber. Language arts skills are an integral part of this course.

2267 Office Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: 2209, 2230, 2266, 2268 (or concurrent enrollment in 2268), 2290 and 2298.

This course is designed as a capstone, integrated activity simulation that presents students with a variety of challenges. Students will prepare documents and complete tasks like those required in today's high performance, technologically advanced office. The simulation is intended to be culminating activity at the end of the Office Administration degree program of study. Microsoft Office Professional is the software that is used for this simulation.

2268 Integrated Office Applications

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2209, 2230, 2266, 2290 and 2298.

This course integrates several office applications. It emphasizes the basic touch system for keyboarding/inputting and proofreading numeric data on the calculator, and/or the microcomputer keyboard. This course stresses the fundamentals of effective telephone communications in business. It is designed to familiarize the student with effective ways of using the telephone in a variety of business situations. This course also accents preparation, personal effectiveness, and office etiquette through the study of basic secretarial problems and procedures. The course closes instructing the student on job seeking and interviewing skills. Special projects will enable the student to analyze and establish priorities.

2290 Excel I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2900.

This course provides the student the opportunity to further develop the skills necessary to increase productivity and efficiency in the creation of spreadsheets. It is designed to take the student step-by-step through the features of Microsoft Excel for Windows. Numerous practical in-depth spreadsheets will be completed which build on previously presented concepts.

2294 Patient Billing

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 2113, 2204 and 4028 (or concurrent enrollment in 4028).

This course will help prepare the student to master many of the medical billing skills that are highly regarded and sought after in the health care profession. The student will learn how to use Medisoft (a widely used patient accounting program) to perform the following tasks: add new billing codes, input patient information, process patient transactions, produce various reports, print statements and insurance forms, and process claims.

2296 Excel II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2290.

This course is a continuation of 2290 Excel I. The course covers formatting worksheets with advanced techniques; working with templates and workbooks; using advanced spreadsheet functions; working with lists and analysis tools in Excel; managing and auditing worksheets; and collaborating with workgroups. Approved courseware for the Microsoft Office User Specialist Program (MOUS) will be used. The MOUS program is used to test and validate a student's skills and thereby supply objective proof to an employer or prospective employer that the student knows how to use a program efficiently and productively. 2290 Excel I and 2296 Excel II teach all the skills that the student will need to master to pass the Core Certification MOUS exam and/or Expert Certification MOUS exam in Microsoft Excel.

2297 Access II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2230.

This course is a continuation of 2230 Records and Database Management I (Access). The course is designed to build upon the foundation as students master more advanced features in Microsoft Access. The student will learn about building and modifying tables and forms, refining queries, producing reports, defining database relationships, utilizing web capabilities, and using Access tools. In addition, the student will learn how Access interacts with Windows and the Internet and how to link Access data to an Excel spreadsheet and a Word document. Approved courseware for the Microsoft Office User Specialist Program (MOUS) will be used. The MOUS program is used to test and validate a student's skills and thereby supply objective proof to an employer or prospective employer that the student knows how to use a program efficiently and productively. 2230 Access I and 2297 Access II teach all the skills that the student will need to master to pass the Core Certification MOUS exam and/or Expert Certification MOUS exam in Microsoft Access.

2298 Microsoft Word II

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2218.

This course is a continuation of 2218 Introduction to MS Word I. The course covers formatting documents with special features; merging documents and sorting and selecting data; inserting graphic elements; creating tables, columns and indexes; creating and applying styles; and using and creating templates. Approved courseware for the Microsoft Office User Specialist Program (MOUS) will be used. The MOUS program is used to test and validate a student's skills and thereby supply objective proof to an employer or prospective employer that the student knows how to use a program efficiently and productively. 2218 MS Word I and 2298 MS Word II teach all the skills that the student will need to master to pass the Core Certification MOUS exam and/or Expert Certification MOUS exam in Microsoft Word.

2300 Personal Finance

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

This course will provide fundamentals in money management. Financial planning will include: budgeting, interest rates and credit care use; financing of short-term and long-term assets; insurance; market investment opportunities; and retirement planning.

2302 Business Financial Institutions

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

This course presents the role of money in a financial system, financial institutions and their services, the Federal Reserve system, interest rate concepts, the money market, and monetary policy.

2306 Analyzing Financial Statements

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 2416 or permission of the instructor.

This course provides students the opportunity to further develop the skills necessary to conduct a comprehensive and effective financial analysis of a business borrower in order to assess repayment capacity. Upon successfully completing this course, students will have a practical understanding of the importance of financial analysis in commercial lending, types of business borrowers, how to analyze a company's income statement and balance sheet, how to calculate and develop key ratios used in the commercial lending process, and various other analytical techniques used in this area of banking.

2310 Cases in Finance

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 2031, 2123, 2130 and 2306.

This course is designed as a capstone course in the finance option. The student will enhance and demonstrate his or her ability to define and solve a variety of problems in the broad areas of financial analysis. This will entail situation analysis, problem identification, and the selection and application of concepts and practical solutions. The student will present cases in written and oral forms that will detail how managers use quantifiable information to solidify decision-making strategies in order to achieve organizational goals. Emphasis will be on bridging the gap between classroom training and the workplace.

2407 Advertising

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2022.

This course approaches advertising and promotion from an integrated marketing communication perspective that integrates theory with planning, management, and strategy. The course is designed to acquaint the student with the real world of advertising - - Atelling it the way it is@ -- not just for the 100 leading advertisers, but for the hundreds of thousands of retailers, regional manufacturers, and small business persons. The student will gain experience in copyrighting, preparing radio and TV commercials, producing direct mail pieces, designing outdoor advertising, and preparing other sales promotion materials.

2409 Advanced Marketing

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2022.

This course will cover more advanced topics in marketing. More emphasis is given to influence to the competitive environment from the global competition and the necessary positioning strategies that apply to both domestic and international markets. Distribution strategies will focus on the nature of distribution in retailing and wholesaling. Review of distribution systems will be covered along with the global implications of larger logistical systems. Finally, the course will cover the pricing strategies and tactics required in the global economic system and the role that price plays in the marketing mix.

2410 Market Research

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2701.

This course offers a unique, practical insight into trends, technology, and methodology found in contemporary marketing research practice. The student is challenged to become a user of research in furthering decision making as well as gain knowledge of the research process and proper statistical applications to research data. This process includes defining the problem and identifying what information is required to solve the problem, designing the method for collecting information, managing, implementing and collection of data, analyzing the results, and communicating the findings and their implications.

2416 Managerial Accounting I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2113. This course is not open to Accounting Technology students without permission of the Division Chair.

In this last of the first year sequence of accounting courses, the Business Management student is introduced to a variety of managerial accounting techniques used by businesses to analyze and control their operations. The course begins with an analysis of cost behavior from a managerial standpoint, and covers topics such as break-even analysis and leverage, analysis and control of decentralized business operations, business uses of standard costing and variance analysis. The emphasis throughout will be on analyzing and problem solving.

2417 Managerial Accounting II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2113. This course is not open to Accounting Technology students without permission of the Division Chair.

This course is a continuation of 2416 Managerial Accounting I and begins with coverage of additional areas in managerial accounting: pricing of products and services, relevant costs and financial statement analysis techniques. Several topics in financial management are then discussed (working capital management and financing, time value of money, valuation and rates of return, cost of capital and capital budgeting).

2423 Cases in Marketing

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2407, 2409 and 2410.

This course is designed as a capstone course in the marketing option. The student will enhance and demonstrate his or her ability to define and solve a variety of problems in the broad areas of consumer and industrial marketing. This will entail situation analysis, problem identification, and the selection and application of concepts and practical solutions. Students will present cases in written and oral forms which will detail how managers can change a firm's product, price, place and promotional strategies in order to achieve organizational goals. Emphasis will be on bridging the gap between classroom training and the workplace.

2464 Personal Computer Applications in Business

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This course is designed to give students standardized, progressive, detailed, hands-on instruction in the most popular personal computer software used today by business and industry. The student will demonstrate the ability to integrate word processing, spreadsheets, and graphic design through group projects. The course combines demonstration and self-paced instruction. Students will be tested and the course will be graded.

2500 Introduction to Information Technology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab)

Prerequisite: None; HOWEVER, STUDENTS WITH NO COMPUTER OR INTERNET EXPERIENCE SHOULD REGISTER FOR 2936 INTRODUCTION TO WINDOWS.

This is an introductory course in understanding the development of information technology (IT). The student will become acquainted with basic computer hardware components and computer application software. The basics of the Window Operating System, Internet, multimedia, and hardware/software troubleshooting will be introduced in this course.

STUDENTS WITH NO COMPUTER OR INTERNET EXPERIENCE SHOULD REGISTER FOR 2936 INTRODUCTION TO WINDOWS.

2516 AS/400 CL Programming

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 2575.

This course is designed to introduce the student to CLP (Command Language Programming) - the language that interfaces with the AS/400 operating system. The

student will write both interactive and batch control programs. The course will emphasize the language's programming constructs and will provide the student with an introduction to the language's capabilities in object creation and manipulation; system, process, and device management and control; and error trapping and handling.

2553 Mathematics for Programming

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: High school algebra (or equivalent) or 1201 or 1205.

Areas of study include numeration systems, matrix and boolean algebra, probability, mathematics of finance, and other mathematical topics used in programming.

2569 Systems Design

4 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 2555.

This is an advanced study of structured systems development. Emphasis is on strategies and techniques of structured design for producing logical methodologies for dealing with complexities in the development of information systems. File design concepts, hardware considerations, and the design of program specifications utilizing structured tools and techniques are emphasized. Data security and integrity techniques are covered.

2575 Principles of Programming with Visual Basic

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: None.

This course introduces the student to computer hardware and software. Hands-on lab exercises help to give the student an understanding of computer programming. The basic theories of algorithm development and programming logic are included. Students write and execute programs in Visual Basic.

2576 Visual Basic

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 2575.

This course is a continuation of 2575 Principles of Programming with Visual Basic. The student will design and write complex programs using Visual programming skills which include the ability to create and integrate text and graphics in an interactive environment. File handling will include the creation and the maintenance of sequential and indexed files, as well as accessing databases. Object-oriented programming concepts are introduced and structured programming techniques are emphasized.

2577 RPG Programming

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 2575.

This course introduces the student to RPG programming concepts and techniques through a series of programs illustrating typical business applications. The student will use the RPG programming language on an IBM AS/400 computer to write and execute their programs.

2578 Advanced RPG

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 2577.

This course is a continuation of 2577 RPG Programming. The student will write complex RPG programs for business applications with an emphasis on sequential and indexed-sequential access files. The course includes coverage of processing techniques for systems of programs for batch and interactive environments. RPG III and RPG/400 enhancements are included.

2579 Systems Analysis

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: 2576.

This course is an overview of the system development life cycle. Emphasis is on current system documentation through the use of both classical and structured tools/techniques for describing process flows, data flows, data structures, file designs, input and output designs, and process descriptions. Information gathering and reporting activities, feasibility analysis, and the transition from analysis to design are discussed.

2580 Visual Basic II

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2514.

This course expands on the fundamentals of database access, manipulation, report generating, and design. Preference will be given to current commercial methods, engines, and components. PC, Mainframe, Internet, and Intranet database solutions will be covered. The course also covers the fundamentals of graphing and charting techniques; communications via high speed RS ports and Internet Winsock ports; advanced programming techniques such as API calling procedures, Windows registry and NT services, OLE and DDE implementation, classing and sub classing, and application deployment.

2581 Internet Programming and Design

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2587.

This course is an introduction to Web page design and development with static and dynamic contents. The student will be introduced to HTML, CGI programming, and Java. The course includes communication mechanisms.

2582 Database with RPG

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 2578.

An introduction to database development with an emphasis in creating, loading, modifying, and querying the database. Data structure and various file structures supporting direct and relational experience by programming the high-level language, RPG, utilizing a relational database.

2583 Database and Integration with Micros

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 2576.

This course will introduce the student to the concepts, terminology, and consideration of database development. The student will use database tools to create, populate, extract, update, and report integrated data. The student will learn to develop customized screen displays and formatted reports. This course will provide the basic in programming with ANSI SQL as well as an introduction of VBA and integration tools.

2584 COBOL

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2575 (or concurrent enrollment in 2575).

This is an introduction to computer programming in a business environment. Emphasis is on the fundamentals of structured program design, development, testing, implementation, and documentation of common business-oriented applications using COBOL. Top-down design strategies and structured programming techniques for designing and developing problem solutions are discussed and applied. Language syntax, data and file structures, input and output devices, and operating system facilities for implementing batch programs for report generation, input editing, and sequential file creation and access are covered.

2585 Data Communications

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2900.

This course introduces the principles, design approaches, and standards involved in computer data communications. Networking considerations, communication architecture, data encoding and transmission, switching, network access protocols, and transport

protocols will be emphasized as well as an overview of the concepts of Integrated Services Digital Network. Lab work will involve hands-on experiences dealing with communications software and hardware.

2586 Object Oriented Programming with C++

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 2576.

This course offers a basic introduction o Object-Oriented concepts and programming techniques. Issues such as declaring, defining, and using classes, declaring and defining objects and functions in the context of classes are covered. The concepts and techniques of Object class hierarchy and inheritance are applied. Using pointers as a means of creating dynamic arrays and for using strings is covered. The process of building Object algorithms is also emphasized.

2587 Advanced C++

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 2586.

This course is a continuation of 2586 Object Oriented C++. The course provides hands-on experience in the design and writing of more complex business oriented programs.

2588 Directed Studies with RPG

6 credit hours, 8 contact hours (4 hours lecture and 4 hours lab). Prerequisite: 2569 and 2582.

This is the application of computer programming using a relational database and systems development concepts, principles, and practices to a comprehensive systems development project. The approach is for the student to analyze, design, program, test, and document realistic systems of moderate complexity. The student will work on an independent study basis with the guidance of faculty.

2589 Directed Studies with Micros

6 credit hours, 8 contact hours (4 hours lecture and 4 hours lab). Prerequisite: 2569 and 2583.

This is the application of computer programming using a relational database and systems development concepts, principles, and practices to a comprehensive systems development project. The approach is for the student to analyze, design, program, test, and document realistic systems of moderate complexity and implement those systems on a microcomputer using a specified current database technology. The student will work on an independent study basis with the guidance of faculty.

2632 Real Estate Principles & Practices

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This is the first course in the real estate series and is the foundation for further study in the field. The principles, practices, and terminology of real estate are introduced and the topics studied include economics, marketing, production, and administration of real estate.

2633 Real Estate Appraisal

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course presents the factors influencing the value of real estate, rates, and income capitalization methods as well as farm and development land appraisal techniques. Actual appraisal of property will be done by the students.

2643 Real Estate Law

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

The duties and responsibilities of a real estate salesperson or broker as related to the law are discussed. Topics of study include the classification and types of estates, fee simple, fee detail, freehold estates, working of deeds, rights in land, titles, interest, and the inheritability and disinheritability in estates and wills.

2652 Real Estate Finance

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

The major instruments used in financing, the borrowing practices, and the procedures used in the purchase of real estate are discussed. Topics included in the course work are the mortgage market, fund flows, financial institutions in the real estate market, government influence in the mortgage market, evaluation of risks in real estate lending, and the financing of income properties.

2655 Real Estate Investments

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course focuses on a detailed analysis of real estate as an investment. Students will learn to distinguish among various investment choices and objectives and to discern benefits and risks involved in real estate investing. The mechanics of real estate investing, tax aspects, property management and the "value added" concept, rate of return and cash flow, and steps in actually making a real estate investment are covered in depth.

2700 Introduction to Entrepreneurship

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This course introduces the various skills involved in running a successful business. It also examines various methods of starting a small business, including franchising.

2701 Small Business Market Research

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

It is imperative that the small business entrepreneur know his/her market and be able to accurately target that market. The Market Research course examines various techniques of conducting market research. Also covered are the topics of copyright, patent, or trademark protection.

2702 Small Business Market Planning

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: 2701 (or concurrent enrollment in 2701).

This course introduces the student to the marketing considerations surrounding product and price for the small business person. During this course the student will commence the development of a marketing plan, which shall be completed in Small Business Marketing Mix.

2703 Small Business Marketing Mix

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: 2701 and 2702 (or concurrent enrollment in 2701 and 2702).

As a continuation of 2702 Small Business Market Planning, the course examines the marketing considerations of place, packaging, and promotion. The student will also continue and complete the marketing plan started in 2702.

2704 Money and Finance in Small Business

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

One of the major reasons for the failure of any small business is adequate financial planning. In order to prepare the student to better deal with these concerns, this course examines various techniques of financial forecasting and various methods of financing new ventures.

2705 Small Business Record Keeping/Budgeting

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

This course identifies and discusses the fundamentals of financial record keeping as applied to a new venture. This course also focuses upon the development of various budgets for the new venture.

2706 Small Business Operations

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

This course discusses various operational concepts, such as purchasing, inventory management, taxation, and insurance as they apply to a small business.

2707 Human Resource Management in a Small Business

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

Specifically addressed in this course are the concerns of recruiting, selection, and training as they apply to the small business. Also examined are the record keeping requirements in these areas.

2708 Supervision in Small Business

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

This course examines and discusses the issues of leadership and supervision as they apply to the small business.

2709 Development of a Business Plan

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: 2701, 2702, 2703, 2704 and 2705.

As the culmination of the offerings in Small Business and Entrepreneurship, the student will develop a Business Plan for the new venture.

2727 Leadership

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This workshop course will develop the individual, group, and one-on-one skills a person needs in an evolving management structure dealing with changing roles and responsibilities.

2728 Productivity and Quality

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This workshop course will explore the fundamentals of Total Quality Management. Course objectives will include the goals for quality and increasing internal and external satisfaction.

2729 Conflict Resolution and Negotiation

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This workshop course will provide tools on managing disagreement constructively. This process will include helping managers understand why performance problems occur and how to resolve them.

2730 Performance Appraisal

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

Many managers find it difficult to evaluate employees. Learn why most reviews fail after being used a short period of time. Then learn steps to establish an environment of trust and create a system that achieves the goal of improved performance.

2731 Customer Service

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This workshop course provides for a usable process for developing skills, attitudes, and thinking needed to win customer satisfaction and loyalty. This includes the tools for dealing with unhappy customers and providing skills to lead, expand, and empower the service process.

2732 Managing People

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This workshop course will show a student how to manage for commitment with today's more independent workforce. Included in this course will be a step-by-step checklist for establishing performance goals and measuring progress.

2846 Compensation and Benefits

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This course will provide an in-depth study of the history, principles, and theory of both monetary and non-monetary compensation. The course will also examine the laws governing compensation, and the processes and methods used to develop compensation and benefit packages, and policies.

2850 Employee Relations

4 credit hours, 4 contact hours (4 hours lecture, 0 hours lab). Prerequisite: 2859 or permission of instructor.

The course deals with both the traditional areas of labor relations (history of the labor movement, labor legislation, collective bargaining, contract administration) and with issues that arise in today's white collar, service oriented workforce and economy. Students will simulate actual collective bargaining, grievance procedures and arbitration cases. Emphasis is placed on negotiation objectives, strategy and tactics, and students will develop skills suitable for advancing the objectives of either management or of a labor union.

2855 Problem Solving and Managerial Decision Making

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: 2021, 2022, (2416 or 2417) and 2859.

This course will provide an opportunity for the student to integrate knowledge and skills gained in previous courses in management, marketing, human resources, and finance. Emphasis is placed upon familiarization with the types of decisions that managers must make and the development of skills necessary to make them.

2859 Introduction to Human Resource Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. This course is designed to familiarize the student with the vital roles of human resource management in determining the success of an organization. Students will develop an awareness of the complexity of the issues surrounding the management of today's employee. Employee rights, employee responsibilities, Equal Employment Opportunities, right-to-work laws benefits, legal environments, performance appraisal, and the training and development of employees will be explored.

2860 Personnel Interviewing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course will examine the six types of personnel interviews (selection, performance, appraisal, counseling, career development, disciplinary and exit). Legal aspects of interviewing will be studied to provide the student insights into the personnel functions. There will be an emphasis on developing usable interviewing techniques and skills from the management and employees or probable employee prospective.

2865 Customer Service

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course helps students understand customer expectations and develop skills necessary to providing any and all types of quality service. Customer service skills will focus on change, communication, data usage, excellence, negotiations, perception, problem solving, and teamwork toward action plans for continuous improvement.

2870 Health, Safety and Security

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

Employees are every business's most important asset and resource. Therefore, businesses have a vested interest in a safe and healthy work environment economically, physically and mentally. Health connotes a state of well being free of illness or disease. Health management focuses on the well being of employees,. Safety relates to freedom from danger, risk injury, and programs focusing on prevention. Security is the reduction or elimination of risks or losses pertaining to the organizational assets.

2875 Training and Development

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None.

Training and Development work to support organizational goals and to solve performance problems throughout an entire organization. This incorporates assuming a number of roles with a full range of competencies. The Training and Development roles include needs analyst, program designer, instructional writer, media specialist, instructor, facilitator, change agent, program administrator and evaluator. In assuming these roles, especially in society today, one must be able to do more using fewer resources. In addition, due to developing technology and growing work requirements, organizations have to invest in the retraining and reassignment of existing as well as new employees.

2900 Introduction to the Personal Computer

2 credit hours, 20 total contact hours. (2 hours lecture and 0 hours lab) Prerequisite: None.

The student will become acquainted with the basic computer hardware components, some computer application software, some of the more popular commands, some basics of Windows Operating System, some basics of multimedia, and basic hardware and software troubleshooting.

This course is designed for the individual who is just starting to learn about PC's. Both hardware and software are explored on a basic, introductory level. Persons interested in general PC knowledge, fixing simple software and hardware problems, and purchasing a new or used PC will all greatly benefit from this course. Windows, networks, multimedia, and DOS concepts are all introduced.

2905 Test Prep Workshop for Word MOUS Certification

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Proficient in Advanced MS Word.

This test preparation workshop provides help to prepare the student for the MOUS certification Word exam. This workshop starts with a prescriptive pretest. This assessment software is designed to simulate the topics and testing environment for the actual MOUS certification exam. Weak skill areas are pinpointed to inform students of exactly what skills the student needs to learn to pass the test. The Word MOUS certification validates a student's skills and thereby supplies objective proof to an employer or prospective employer that the student knows how to use Word software efficiently and productively. By attending this workshop, the student will have a much better success rate on the MOUS certification Word exam.

2906 Test Prep Workshop for Excel MOUS Certification

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Proficient in Advanced MS Excel.

This test preparation workshop provides help to prepare the student for the MOUS certification Excel exam. This workshop starts with a prescriptive pretest. This assessment software is designed to simulate the topics and testing environment for the actual MOUS certification exam. Weak skill areas are pinpointed to inform students of exactly what skills the student needs to learn to pass the test. The Excel MOUS certification validates a student's skills and thereby supplies objective proof to an employer or prospective employer that the student knows how to use Excel software efficiently and productively. By attending this workshop, the student will have a much better success rate on the MOUS certification Excel exam.

2907 Test Prep Workshop for Access MOUS Certification

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Proficient in Advanced MS Access.

This test preparation workshop provides help to prepare the student for the MOUS certification Access exam. This workshop starts with a prescriptive pretest. This assessment software is designed to simulate the topics and testing environment for the actual MOUS certification exam. Weak skill areas are pinpointed to inform students of exactly what skills the student needs to learn to pass the test. The Access MOUS certification validates a student's skills and thereby supplies objective proof to an employer or prospective employer that the student knows how to use Access software efficiently and productively. By attending this workshop, the student will have a much better success rate on the MOUS certification Access exam.

2908 Test Prep Workshop for PowerPoint MOUS Certification

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Proficient in Advanced MS PowerPoint.

This test preparation workshop provides help to prepare the student for the MOUS certification PowerPoint exam. This workshop starts with a prescriptive pretest. This assessment software is designed to simulate the topics and testing environment for the actual MOUS certification exam. Weak skill areas are pinpointed to inform students of exactly what skills the student needs to learn to pass the test. The PowerPoint MOUS certification validates a student's skills and thereby supplies objective proof to an employer or prospective employer that the student knows how to use PowerPoint software efficiently and productively. By attending this workshop, the student will have a much better success rate on the MOUS certification PowerPoint exam.

2926 Introduction to the Internet

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. S/U Graded Course.

This course covers the skills and concepts needed to effectively use Internet resources. Concepts covered: Internet fundamentals, connecting to the Internet, browsing the Internet, Hypertext Links, Bookmarks, News and Discussion Groups, e-mail, downloading from FTP sites, Telnet, Web search engines, the World Wide Web, Netscape Navigator. This course is graded on a Satisfactory/Unsatisfactory basis.

2927 Introduction to Networking

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. S/U Graded Course.

This course introduces the student to Networking fundamentals. Concepts covered: LAN fundamentals, connecting LANS to other computing resources, token rings, Ethernet, installing a typical application, managing network printing, providing network access and maintaining security, shared resources, server utilities, workstation utilities, administrative tools. This course is graded on a Satisfactory/Unsatisfactory basis.

2936 Introduction to Windows

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: None. Software Version: 4.0 or higher. S/U Graded Course.

This course covers the skills and concepts a student would need to know to use Windows based programs effectively and efficiently. This course starts with the basics of how to name files, use the mouse, and understand the desktop. Then the course introduces running applications, My Computer, Explorer, Control Panel, and some multimedia features. This course is graded Satisfactory/Unsatisfactory.

2937 Advanced Windows

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software version: 4.0 or higher. S/U Graded Course.

This course continues concepts introduced in 2936 by covering them in more detail. Procedures and trouble shooting techniques are introduced for adding and removing software and hardware from a Windows Operating system. This course is graded Satisfactory/Unsatisfactory.

2945 MS Word I

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: 6 for Windows. S/U Graded Course.

This course covers the basic, Student Level, skills necessary for using a Windows-based word processor. Concepts covered: spell-checking, using a thesaurus, using a grammar checker, margins, line spacing, special characters, saving, retrieving, printing, and using templates. This course is graded Satisfactory/Unsatisfactory.

2946 MS Word II

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2945. Software Version: 6 for Windows. S/U Graded Course.

This course covers the intermediate, Business Level, skills necessary for using a Windows-based word processor. Concepts covered: paragraph formatting, page layout, tables, graphics, columns. This course is graded Satisfactory/Unsatisfactory.

2947 MS Word III

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2946. Software Version: 6 for Windows. S/U Graded Course.

This course covers the advanced, Professional Level, skills necessary for using a Windows-based word processor. Concepts covered: Tables, Equations, Data Embedding, Mail Merging, Columns, Macros. This course is graded Satisfactory/unsatisfactory.

2948 Essentials of Desktop Publishing

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: Varies. S/U Graded Course.

This course introduces the student to desktop publishing concepts. Students use the very popular WordPerfect for Windows program to create brochures, flyers, newsletters, and advertisements as they learn basic desktop publishing skills. This course is graded

Satisfactory/Unsatisfactory.

2949 PageMaker I

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: 5 for Windows. S/U Graded Course.

This course covers the basic, Student Level, skills necessary for using PageMaker. Concepts covered: page layouts, page designs, importing text, printing, templates, fonts, sizing, moving, and object and action terminologies. This course is graded Satisfactory/Unsatisfactory.

2950 PageMaker II

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2949. Software Version: 5 for Windows. S/U Graded Course.

This course covers the intermediate, Business Level skill necessary for using PageMaker. Concepts covered: creating publications, page layouts, using master pages, rules/guidelines used in DP, threading and unthreading, indents, tabs, layers, grammar tools, and using simple graphic objects. This course is graded Satisfactory/Unsatisfactory.

2951 PageMaker III

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2950. Software Version: 5 for Windows. S/U Graded Course.

This course covers the advanced, Professional Level skill necessary for using PageMaker. Concepts covered: complex graphic objects, clip-art, contouring text, style sheets and templates, advanced column features, professional publications. This course is graded Satisfactory/ Unsatisfactory.

2956 MS EXCEL I

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: 5 for Windows. S/U Graded Course.

This course covers the basic, Student Level, skills necessary for using a Windows-based spreadsheet package. Concepts covered: open/save/print, typing data, copy/move/format data, simple formulas, data entry skills, uses for spreadsheets. This course is graded Satisfactory/Unsatisfactory.

2957 MS EXCEL II

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2956. Software Version: 5 for Windows. S/U Graded Course.

This course covers the intermediate, Business Level, skills necessary for using a Windows-based spreadsheet package. Concepts covered: column/row operations, graphics, charting, database features, macro buttons, spell checking, data importing and exporting, and additional more complex formulas. This course is graded Satisfactory/Unsatisfactory.

2958 MS EXCEL III

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2957. Software Version: 5 for Windows. S/U Graded Course.

This course covers the advanced, Professional Level, skills necessary for using a Windows-based spreadsheet package. Concepts covered: 3D spreadsheets, more macros, program data exchanging, analyze tools, advanced spreadsheet designs, user selected topics. This course is graded Satisfactory/Unsatisfactory.

2959 Quattro Pro I

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: 6.01 for Windows. S/U Graded Course.

This course covers the basic, Student Level, skills necessary for using a Windows-based spreadsheet package. Concepts covered: Open/Save/Print, typing Data, Copy/Move/Format Data, Simple Formulas, Data Entry Skills, Uses for spreadsheets. This course is graded Satisfactory/Unsatisfactory.

2960 Quattro Pro II

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2959. Software Version: 6.01 for Windows. S/U Graded Course.

This course covers the intermediate, Business Level, skills necessary for using a Windows-based spreadsheet package. Concepts covered: Column/Row operations, Graphics, Charting, Database Features, Macro Buttons, Spell Checking, Data Importing and Exporting, and additional more complex formulas. This course is graded Satisfactory/Unsatisfactory.

2963 PowerPoint I

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: 4 for Windows. S/U Graded Course.

This course covers the basic, Student Level, skills necessary for a Windows-based graphics package. Concepts covered: create/edit different types of charts (bar, pie, text, area), add symbols (clip art) to charts, create simple slide shows, spell-checking, chart outlining. This course is graded Satisfactory/Unsatisfactory.

2964 PowerPoint II

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2963. Software Version: 4 for Windows. S/U Graded Course.

This course covers the intermediate, Business Level, skills necessary for using a Windows-based graphics package. Concepts covered: documenting charts, page layouts, adding graphs/tables to charts, creating professional video presentations. This course is graded Satisfactory/Unsatisfactory.

2965 MS ACCESS I

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936. Software Version: 2 for Windows. S/U Graded Course.

This course covers the basic, Student Level, skills necessary for using a Windows-based database package. Concepts covered: creating a table/database of information, database information entry, terminologies used, creating queries and forms and reports, sorting data in a database. This course is graded Satisfactory/Unsatisfactory.

2966 MS ACCESS II

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2965. Software Version: 2 for Windows. S/U Graded Course.

This course covers the intermediate, Business Level, skills necessary for using a Windows-based database package. Concepts covered: more complex queries and forms, filters, searching crosstabs, customizing forms and reports, graphics and graphs, and macro basics. This course is graded Satisfactory/Unsatisfactory.

2967 MS ACCESS III

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2966. Software Version: 2 for Windows. S/U Graded Course.

This course covers the advanced, Professional Level, skills necessary for using a Windows-based database package. Concepts covered: creating professional looking and functional databases, forms, reports, and queries; macros; linking; and user selected topics. This course is graded Satisfactory/Unsatisfactory.

2970 Students in Free Enterprise

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Repeatable up to 3 credit hours. Prerequisite: None. S/U Graded Course.

Professional experience is incorporated for business student to complete a voluntary program within an industry, agency or school. This assignment will be supervised by an instructor and employer and is evaluated by the Student in Free Enterprise program. This course requires the student to account for 10 to 15 hours of voluntary service per quarter. Recommendations to take this course may be obtained through the faculty advisor for SIFE or Division Chair. Students may repeat up to three credit hours of this course. This course is graded on a Satisfactory/Unsatisfactory basis.

2971 Special Topics in Business

5 credit hours for 35 contact hours per week Independent Study [Miscellaneous Applications Course]. Prerequisite: Approval of the Division Chair.

This course provides a thorough presentation of financial material covered in a series of other courses leading to graduation. It is designed to be a capstone course.

2973 Special Topics in Business Management

1 credit hour for 7 contact hours per week Independent Study [Miscellaneous Applications Course]. Prerequisite: Approval of the Division Chair.

This course is designed to allow the Business student the opportunity to choose a topic for independent study related to management. The student will work closely with the Business faculty or Division Chair in determining the appropriate of the topic area.

2974 Special Topics in Accounting

1 credit hour for 7 contact hours per week Independent Study [Miscellaneous Applications Course]. Prerequisite: Approval of the Division Chair.

This course is designed to allow the Accounting student the opportunity to choose a topic for independent study related to accounting. The student will work closely with the Business faculty or Division Chair in determining the appropriate of the topic area.

2975 Management Cases

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This special topics study course is designed to provide the student with the opportunity to work on special topics within the field of business under the directive of the Business Division faculty. This course may be substituted for a business technical elective if the course is applicable. The course may be repeated.

2980 Introduction to Visual Programming

1 credit hour, 10 total contact hours (1 hour lecture and 0 hours lab). Prerequisite: 2936,

or a working knowledge of Windows v3.x or Windows 95, or two quarters of programming experience or equivalent. S/U Graded Course.

This course is designed for those who have some programming experience (BASIC, COBOL, Fortran, C, C++, Pascal, etc.) who would like to learn about the new visual programming aspects of writing programs. While Visual BASIC for Windows v4 (or higher, 16 and 32-bit versions) will be the program used, the features covered will lend to most other visual languages. Users will be able to write/debug programs for Windows, Windows 95, and Windows NT. Topics covered: event programming, object-oriented programming, using forms, graphics and icons.

2985 Paradox I

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: 2936.

This course covers the basic, Student Level, skills necessary for using a Windows-based relational-database management system. Concepts covered: Tables, forms, queries, and reports. Good database design techniques are covered in detail in the course.

2990 Field Experience - Business

1-3 credit hours depending on the amount of work experience per week (1 credit hour per 12 hours work experience). Repeatable up to 12 credit hours. Prerequisite: Permission of Division Chair upon recommendation of academic advisor. S/U Graded Course.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Technical or basic elective credit is awarded on a Satisfactory/Unsatisfactory basis.

29XX Special Topics in Business

1-5 credit hours for 7 contact hours per week per credit hour Independent Study [Miscellaneous Applications Course]. Prerequisite: Permission of the Division Chair.

Special topic study is designed to provide a student with the opportunity to work on special topics within the field of business under the directive of the Business faculty. This course may be substituted for a business technical elective if the course is applicable. The course may be repeated.

ENGINEERING TECHNOLOGIES: 3000

3001 Principles of Engineering Technologies

2 credit hours, 3 contact hours (1 hours lecture and 2 hours lab). Prerequisite: None.

This course introduces different fields of engineering and their area(s) of specialization including the varying roles of engineering technicians in industry. Topics of study include the concepts and terminology used in the field of engineering, basic concepts of mathematics, use of scientific calculators, problem solving techniques, and units and dimensional analysis used in measuring force, power and energy.

3012 Computers for Engineering Technicians

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None.

This course introduces the student to PC hardware and system software including recent versions of the DOS and the Windows operating systems. Laboratory exercises emphasize connecting the hardware subsystems, installing and using system software, customizing systems, and loading application software. The student is introduced to the use of printers, networks, and the Internet.

3013 Drafting I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None.

This is the first course of a series introducing the principles, techniques, and terminology of drafting. Emphasis is on the development of sketching techniques, multi-view drawings, dimensioning, sections, and blueprint reading.

3017 Circuits I

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: 1210 or a score of at least 76 on the COMPASS Elementary Algebra test.

This introductory course presents the terminology and concepts necessary for understanding electrical units and laws and circuit analysis. Topics of study include direct current sources, series and parallel circuits, Ohm's law, Kirchoff's Laws, resistance, power, capacitance and inductance. Laboratory sessions include experiments verifying the lecture material through the proper use of voltmeters, ammeters, ohmmeters, and dc power supplies.

3018 PC Hardware: Troubleshooting and Maintenance

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 3012 (or

equivalent computer operation experience).

This course offers a detailed study of microcomputer systems hardware modules. Combining theory and practice the course will cover module level maintenance, repair, replace, and retrofit and upgrading trade-off decision parameters; and introductory troubleshooting, with a focus on software troubleshooting. Students will remove and replace defective modules, perform hardware upgrades, and install software with attendant hardware boards. Students will gain experience in the assembly and disassembly of microcomputer stems.

3019 Electronic Drafting and Fabrication

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None.

This is a basic course that introduces electronic components, schematic symbols and basic drafting skills to electronic technology students. By assembling a small electronic instrument, students learn planning and design, component identification, breadboarding, printed circuit board technology, soldering, chassis assembly, troubleshooting approaches, calibration and meter use. Safety is emphasized throughout the course. Students are also introduced to software used for drawing schematics, circuit simulation, and PCB design. Fundamental drafting concepts and skills are also covered.

3020 Trigonometry

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: 1210 or a score of at least 76 on the COMPASS Elementary Algebra test.

Concepts of trigonometry including the graphing of trigonometric functions. Radicals, exponential functions, and logarithms are discussed.

3025 Physics--Mechanics

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: 3020 (or concurrent enrollment in 3020) or a score of at least 46 on the COMPASS Trigonometry test.

Introduces the fundamental concepts of force, motion, statics, dynamics, and gravity. The study of energy, work, and power, with applications to basic machines and the practical effects of friction are included.

3026 General Physics

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1210.

This course will prepare the student for more complex courses in Forensic Science. The student will learn fundamental ideas of measurements, motion, energy, electricity,

magnetism and heat. The student will be introduced to atomic and nuclear physics including basic protection. The student will apply these principles in a lab setting.

3027 Circuits II

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: 3017 and 3020 (or a score of at least 46 on the COMPASS Trigonometry test).

The concepts introduced in 3017 are reviewed and applied to AC circuits. New concepts introduced include AC phasers, series and parallel AC networks, impedance, resonance, transformers, and 3 phase power. Laboratory experience emphasizes constructing circuits, troubleshooting, and using the oscilloscope to verify lecture material.

3031 Calculus

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3020 or a score of at least 46 on the COMPASS Trigonometry test.

An introduction to the principles of Analytic Geometry to develop an understanding of graphic functions. These concepts are expanded to the calculus or rate of change expressed through algebraic functions, derivatives, maximum and minimum velocity, temperature, costs and the applications of the integral in areas, volumes, pressure, power, electrical charge, and work; with the emphasis on their application as related to the engineering technician.

3032 Physics of Heat, Light, Sound

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3025.

Fundamental concepts of matter including the properties of solids, liquids and gases. Temperature scales and the effect of heat on matter. The gas laws and change of state. Simple harmonic motion and the nature of sound. The nature of light and illumination, including applications of light: reflection, refraction, and dispersion.

3043 Electric Fundamentals

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 3001 and 3020 (or a score of at least 46 on the COMPASS Trigonometry test), or permission of the instructor or Division Chair).

This is a survey of basic electrical and electronic circuitry for non-electric majors. Elementary concepts of AC, DC, motors, transformers, power distribution, controls, rectifiers and wiring are presented. Emphasis is on practical applications. Laboratory exercises include connecting circuits and equipment, use of voltmeter, ohmmeter, oscilloscope, and troubleshooting.

3101 Multimedia I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Completion of the Network Certificate or permission of the Division Chair.

This course covers the architectural concepts of a multimedia system. Specifically, the student will learn such things as effective placement of microphones, speakers, cameras, video displays, projection systems, and proper lighting and acoustics. The lecture material will be augmented by hands-on laboratory exercises.

3102 Multimedia II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3101.

This course covers the operational and maintenance aspects of a multimedia system. Specifically, the student will learn such things as the operation and maintenance of lighting systems, projection systems, image capture systems, and various communication media, including traditional cabling arrangements and wireless configurations. The lecture material will be augmented by hands-on laboratory exercises.

3103 Systems Troubleshooting

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3102.

This course covers troubleshooting of complete systems, including the hardware, software, and networking components. Specifically, the student will learn how to isolate system troubles and implement appropriate solutions and fixes. The lecture material will be augmented by hands-on laboratory exercises.

3131 Electronics

5 credit hours, 8 contact hours (3 hours lecture and 5 hours lab). Prerequisite: 3027.

Includes the theory and the operation of semiconductor diodes and transistor circuit configurations. Equivalent circuits, large and small signal analysis, and biasing circuits are also discussed. Laboratory sessions emphasize the use of the transistor as an audio amplifier.

3132 Communications Electronics I

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 3131.

Includes the theory and operation of power supplies, oscillators, AF and RF amplifiers, AM Transmitters and Receivers, SSB, Testing and Alignment, and Troubleshooting of Communication Systems. Laboratory experiences consist of construction of basic circuits, test and repair of commercial units, and the use of specialized test equipment.

3144 Linear Integrated Circuits

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 3031 and 3131.

Includes semi-conductor devices and circuits, junction field effect transistors, MOSFET, linear integrated circuits, operational amplifiers and optoelectronic devices.

3152 Communications Electronics II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 3132.

Continues the concepts presented in 3132 and introduces AM-FM broadcasting, stereo, wave propagation, antennas, directional antennas, transmission lines and special communication techniques, satellite, fiber optic, microwave and data communications. The laboratory work consists of testing and troubleshooting existing equipment and systems.

3154 Digital Electronics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 3012 (or concurrent enrollment in 3012) or permission of the instructor or the Division Chair.

Students pursue the study of digital logic elements such as logic gates, flip-flops, counters and shift registers. The study of math as used in digital circuits is covered in laboratory and lecture.

3164 Digital Electronics II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 3012 and 3154 or equivalent.

The architecture of a microprocessor is studied in this course. The buss architecture of several common busses will be discussed. The programming of a microprocessor in both machine and assembly language will be introduced.

3167 Digital Electronics III

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 3164.

The study of circuit elements used in microprocessor systems. Includes the study of microprocessor busses, memory devices, series and parallel output devices and programmable peripheral interface devices. Laboratory projects focus on the application of these devices and the associated control software.

3243 Hydraulics and Pneumatics

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 3025.

This course covers hydraulic and pneumatic fluid power systems. First, basic principles and laws and their influence are described. Types of pressure, flow, and directional control valves are presented and analyzed. Students learn to select and size pumps and actuators for specific applications. Complete circuits are studied and analyzed, and basic electrical control of fluid power circuits is introduced.

3244 Industrial Power

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 3027.

This course covers the use and control of industrial electronic power. Control of AC loads with semiconductor devices used in conjunction with phase-shift, timing, and optoelectronics is explored and reinforced with laboratory experiments. Types of DC and AC single and three phase motors and their operating characteristics are studied. Basic motor control devices and circuits as well as current electronic motor control technology are studied and then used in the lab. During these laboratory experiences, students will also learn wiring practices and how to select and apply proper protection devices.

3252 Programmable Logic Controllers

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 3154.

This course includes electrical control of Fluid Power/Electrical systems with relay ladder diagrams, but concentrates mainly on PLC's and their use for control of on/off electrical devices. Sensing devices such as limit and temperature switches and control switches and their use in ladder circuits are reviewed. Timing and counting devices as well as event-driven and time-driven sequencing schemes are studied. Architecture, use, and programming of PLC's are covered and reinforced in practically oriented laboratory projects.

3253 Mechanical Components and Mechanisms

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 3020 (or a score of at least 46 on the COMPASS Trigonometry test) and 3025.

Mechanical elements of power transmission including gears, levers, chains, belts, and pulleys are introduced and the student will learn basic design rules for these elements. The course also includes analysis of simple power trains and linkage devices, and the study of the nature of gear tooth contact.

3257 Statics and Strength of Materials I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 3020 (or a

score of at least 46 on the COMPASS Trigonometry test) and 3025.

Includes the study of static forces and equilibrium and the resultant stress, strain, deformation, failure and strength requirements in straight line tension structures, compression and bearing members, shear elements, torsion elements, and angled structures.

3258 Statics and Strengths of Materials II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 3257.

Includes the study of static forces and equilibrium and the resultant stress, strain, shear and bending considerations in the design and selection of trusses, rectangular beams, built up beams, and standard structural members.

3260 Electromechanical Systems

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: 3252.

Concepts and applications of sensors, controllers, actuators, and industrial processes used in closed loop process control are studied in this course. System stability and controller tuning are explored. The use of PLC's for analog process control is also covered. Students will make use of material from previous courses to complete design projects typical of industrial process control applications.

3262 Industrial Instrumentation

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: (3017 or 3043) and 3032.

Students will measure various physical quantities by using industrial sensors. Specifications and suitable applications as well as calibration procedures for different types of sensors will be discussed. Process and Instrumentation Drawings (P&ID) are introduced.

3303 Project and Certification

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisites: Second year standing in Electronic Engineering Technology.

This course is divided into two components; the first consists of information on various technician certification and licensing, application for testing and practice testing. The second component is the preparation and planning for the TET project. The project should involve original research, if possible, or design of a circuit or process to satisfy a data communication problem.

3304 Video Systems

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3152.

This course emphasizes modern aspects of electronic communication systems and an in depth study of fiber optics, television systems, microwave equipment, satellite receiver equipment, CATV, DBS, HOTV, and systems design and analysis.

3306 Local Area Networks

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 3012 (or equivalent computer operation experience).

This course is an introduction to local area networking with personal computers in small environments such as offices. Subjects covered includes planning a LAN, selecting hardware and software, net management, installation, troubleshooting, and Internet working. Laboratory exercises involve constructing and operating a LAN. No knowledge of electronics is necessary, but familiarity with personal computer operation would be helpful, particularly the IBM PC and DOS.

3308 Telecommunications Capstone Course

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: 3303.

This course follows 3303 and is the implementation of the plan developed there. The student will construct, perfect, and demonstrate the project to the faculty and students and will submit a final report.

3316 Local Area Networks - Novel

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: 3306.

This course teaches the student to set up and maintain Novel networks. The student will install a Novel network and set up the working environment. The student will also learn how to detect and correct software and hardware errors associated with the network components.

3320 Data Communications

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 3167 and 3306 or permission of the instructor.

This course introduces basic fundamentals related to data communication: analog and digital communication, multiplexing telephone systems, codes and formats, and error detection and correction.

3326 Local Area Networks - NT

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: 3306.

This course teaches the student to set up and maintain Microsoft NT networks. The student will install a NT network and set up the working environment. The student will also learn how to detect and correct software and hardware errors associated with the network components and applications.

3412 Materials of Manufacturing

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None.

This course explores the properties and uses of various Ferrous and Non-Ferrous metals used in the manufacturing process. Some basic testing processes are introduced.

3416 Machine Tool Practices

3 credit hours, 6 contact hours (1 hour lecture and 5 hours lab). Prerequisite: C grade (2.00) or better in 1205 (or concurrent enrollment in 1205), or a score of at least 10 on the COTC Algebra Skills test or a score of at least 43 on the COMPASS Elementary Algebra test, and 3013 (or concurrent enrollment in 3013).

The student will learn to use precision and non-precision measurement tools and when each tool is appropriate to use, basic turning on a lathe, basic milling, drilling, hand threading, hand tools, saws, grinders. The student will develop skills through laboratory activities and project development.

3417 Forming Processes

3 credit hours, 6 contact hours (1 hour lecture and 5 hours lab). Prerequisite: 3416 and 3712.

This course covers forming processes used in industry. In the plastics area; injection molding, extrusion, blow molding, thermoforming, and spray-up are studied. Students also study metal casting, bending and stamping processes.

3418 Welding

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: 3013 or equivalent.

This course covers the basics of gas cutting and welding, inert gas (MIG,TIG) stick, and production welding. Also covered are weld symbols, basic design and testing.

3419 Production Planning and Control

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: 3422.

This course covers systems and controls within the manufacturing process, which will provide the most efficient transformation of raw materials into useful goods. Specifically the student will learn to evaluate the manufacturing functions and learn how the elements can be integrated into the best possible system. The student will develop quantitative means for evaluating the manufacturing function.

3422 Production Management

3 credit hours, 6 contact hours (1 hour lecture and 5 hours lab). Prerequisite: 3013, 3416 and 3712.

This course introduces the student to the industrial organization and technology of managing a production facility. The students will organize themselves into a production company and mass-produce a product.

3432 Manufacturing Management

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3419.

This course explores the manufacturing organization, with specific emphasis on the basic skills required to practice successful management of people. It will provide the student with an understanding of labor/management relations and the influence of government regulations on issues concerning hiring, safety, health, and the environment.

3444 Building Mechanical Systems

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 3765 or permission of instructor.

Mechanical systems for residential buildings are the focus for this course. Topics covered include plumbing supply and drain, waste, vent design, heat loss and gain calculations, furnace and air conditioner sizing using the psychometric chart, and electric distribution including placement of service entrance, outlets, switches, and lighting. Students are also introduced to standard drawing symbols by adding these systems to house plans and reading sample prints.

3457 CNC Mill

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: 3020 (or concurrent enrollment in 3020), 3416 and 3422.

This course introduces the student to the basic processes needed to control a CNC mill for production using programming techniques including canned cycles. The student will also have introductory exercises in the use of a CAD/CAM system.

3458 CNC Lathe

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: 3457.

This course introduces the student to the basic processes needed to control a CNC lathe for production using programming techniques including canned cycles. The student will also have introductory exercises in the use of a CAD/CAM system.

3502 Statistical Quality Control

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: 1210 or a score of at least 76 on the COMPASS Elementary Algebra test.

A broad overview of the quality control function in industry. The philosophy of modern quality control, basic probability, control chart applications, acceptance sampling plans, frequency distributions, process capability studies, and other economic considerations are presented.

3701 Civil Cad

2 Credit Hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3708 and (3729 [or 3724] or 3733) or permission by instructor.

This course will introduce the student to the use of CAD in preparation of civil drawings and calculations. Includes subdivision layout, contours, profiles, highway layout, and earthwork.

3704 3-D Design and Animation

2 credit hours, 3 contact hours (1 hours lecture and 2 hours lab). Prerequisite: 3706.

An introduction to the construction of three-dimensional forms and environments with scripted movement through those environments by digital methods.

3705 Basic Web Site Construction

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3012 or equivalent computer experience.

In this course the student will learn the skills necessary to construct a basic Internet website for personal or business use. Hyper Text Mark-Up Language (HTML) coding fundamentals are described and each student will be able to explore these concepts by creating a site with their own material. Topics include: Introduction to the Internet; Text and Heading Formatting; Lists; Linking Documents and Other Objects; Using Backgrounds, Images and Animation and Sound; Tables; Frames; and Site Management.

3706 Introduction to CAD

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Previous drafting experience preferred.

This is the first course in a series of Computer Aided Drafting courses. The students will gain familiarity with the system hardware, peripherals and software. They will learn to construct a basic dimensioned orthographic drawing with the CAD system.

3707 Intermediate CAD

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3013 (or previous drafting experience) and 3706 (or a passing grade on the pre-test).

This is the second in a series of CAD courses building on a foundation of Introduction to CAD. Advanced concepts in CAD will be explored including symbol libraries, isometric and 3D constructions, using the block commands, creation of bill of materials and MS-DOS usage.

3708 Advanced CAD

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3707 within the last year (or a passing grade on the pre-test).

This course, the third in a series, builds on the concepts established in the first two CAD courses in which the student uses LISP routines to create custom menus, and to manipulate system variables. The concepts of 3-D drawing are taught include wire-frames, surfaced models, solid models, and rendering.

3710 Advanced Architectural Software

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3708 within the last year (or a passing grade on the pre-test).

This advanced CAD course is the fourth in the CAD sequence, structured for students in the Drafting and Design Technology, Architectural Major. It focuses on the use of a third party software program which enhances the CAD program for use in architectural applications. The students will use the computer systems to produce both 2D and 3D architectural plans, details, schedules, roof forms, elevation drawings, and equipment layouts.

3712 Mechanical Design I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 3013 (or concurrent enrollment in 3013).

The drafting techniques required for the complete communication of the manufactured

objects are presented. Basic machine detail drafting techniques are practiced and then applied to practical design problems. Basic design calculations and assembly drawings are also practiced.

3726 Plant Installation and Maintenance

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisite: Concurrent enrollment in 3747.

This course deals primarily with plant installation and maintenance in the field; and the construction of features such as decks, patios, steps, walks and streams.

3727 Landscape Design I

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: 3749 and 3755.

A beginning course in landscape drafting, design ,and planning; emphasizing proper planning procedures, drafting techniques, and design representation, and the functional and aesthetic use of landscape material.

3728 Drafting II

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: 3013.

Developing the techniques learned in 3013, continues the study of drafting with the main emphasis on orthographic projection, sectioning, isometric drawings, perspectives, geometric constructions, auxiliary views, and lettering. Correct use of drafting instruments in the production of these types of drawings is stressed.

3729 Landscape Design II

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: 3727.

The second course in landscape drafting, design ,and planning; with emphasis on the drafting, design and planning of grading, construction, drainage and irrigation techniques.

3731 Introduction to Civil Drafting/Design

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: 1210 (or concurrent enrollment in 1210) and 3013 (or concurrent enrollment in 3013).

This course is an introduction to the methods and practices of civil drafting. Includes surveying fundamentals, mapping, plot plans, contours, profiles, and highway layouts.

3732 Civil Soils

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 1210.

This is a course in the identification and classification of soils. Topics covered include the Unified and American Association of State Highway and Transportation Officials methods.

3733 Civil Drafting/Design II

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: 3707, 3732 and 3755.

This course, the second in a series of three civil drafting and design courses, focuses on site grading/earthwork and storm and wastewater systems.

3734 Civil Steel

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3733, 3748 and 3758 (or concurrent enrollment in 3258).

This is a course covering the fundamentals of structural steel drafting and design. Topics covered include practices and methods used in the graphical representation of steel structures. Basic stress calculations and design concepts are studied for use in either a simplified design, detailing, or inspection role.

3735 Civil Concrete

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3733, 3748 and concurrent enrollment in 3258.

This is a course covering the fundamentals of reinforced concrete design and drafting. Topics covered include practices and methods used in the graphical representation of concrete structural elements. Basic stress calculations and design concepts are studied for use in either a simplified design, detailing, or inspection role.

3736 Civil Drafting/Design III

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: 3734 and 3735.

This course, the third in a series of three civil drafting and design courses, focuses on transportation systems and subdivision design. Topics covered include highways, urban roadways and railroads, and survey controls used in the design and layout of subdivision plats.

3739 Drafting III

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: 3706 and 3728 (or concurrent enrollment in 3706 and 3728).

This is the third in a series of drafting courses using both manual and CAD drafting methods. This course develops concepts in geometric dimensioning and tolerancing, threaded fastener designation and use. Also covered is welding symbols and joint design, structural steel detailing and piping layout.

3740 Graphics

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: 3020 (or a score of at least 46 on the COMPASS Trigonometry test), 3708 and 3728.

This course introduces descriptive geometry to the students by presenting practical problems which are solved using this graphic method work on CAD. The methods of constructing shades and shadows are taught and applied to both mechanical and architectural drawing projects.

3743 Mechanical Design II

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3416, 3707, 3712 and 3738.

The second in the series of Mechanical Design courses, this course specializes in mechanical design involving the principles of production, fasteners, with an emphasis on tolerances in the design and detail drawings of basic machines. Computer Aided Design is introduced in this course and its use is carried through all the mechanical design courses.

3747 Landscape Design III

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: 3729.

The third course in a series of three; which deals primarily with plan presentation, cost estimates, specifications and contracts.

3748 Materials of Construction

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: 1210 (or a score of at least 76 on the COMPASS Elementary Algebra test) and 3755.

An overview of the fundamental characteristics of the most frequently used materials in modern construction is presented. Proper use of materials, construction methods, and detailing practices are investigated.

3749 Landscape Plants

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: None.

The identification, cultural practices, and use of woody trees, shrubs, and vines and herbaceous perennial plants. Includes selection, growth habits, pests, diseases, and planting techniques.

3752 Mechanical Design III

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3257, 3708 and 3743.

This course includes an introduction to the calculation and design of dies, jigs, fixtures, and the study of gauges for dimensional control. The design of a major machine project is required of each student.

3755 Architectural Design I

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3001 (or concurrent enrollment in 3001), 3013 and 3728.

This course, the first in a series of four, presents the theories and practices used in architectural drafting and design. Emphasis is on developing skills required in the production of a set of architectural working drawings. The theories and techniques used in surveying are presented and practiced and survey drawings are produced. Detail design, basic structural design, and material's take-offs and cost estimating are also introduced.

3762 Mechanical Design IV

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3752.

This is the final course in a series. This course includes product designs, solution of vector and rotational forces, linkage and joint design, and bearing selection, through a format of real life projects.

3765 Architectural Design II

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3706 and 3755.

In this course, the second of a series of four, students are given a sequence of drafting and design projects involving residential construction. Computer Aided Drafting is introduced and carried through the remaining Architectural Design series.

3775 Architectural Design III

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3707 and 3765.

The focus of this course, the third in the Architectural Design sequence, is on commercial construction. Both manual and CAD drafting are employed to produce a series of working drawings representative of each type drawn for a commercial building. The Ohio Basic Building Code is reviewed as it relates to the design of a specific project.

3780 Advanced Design

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Second year standing, 45 credit hours in the Engineering Division, and 1505, 3257 and 3708.

This is a capstone course structured to aid the student in applying many of the skills they have learned to the solution of a real world engineering problem. The students must work in teams to design, build and test their solution. The culmination of the course is a report documenting the design, and testing of the prototype.

3785 Architectural Design IV

5 credit hours, 10 contact hours (0 hours lecture and 10 hours lab). Prerequisite: 3708 and 3775.

The final in a series of four, this course reinforces the concepts and techniques covered in the preceding Architectural Design courses by providing the student the experience of working on an actual building project. Site investigation, building and site design, zoning and building code research, material selection, and production of architectural design and working drawings are all actively practiced by the student.

3790 Graphic Design Capstone

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: 20 credit hours toward the Graphic Design Certificate, 2 credit hours of page layout, and 1800.

This course is an application course in which the student will complete several real world projects in graphic design.

3820 Design Fundamentals

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: 1800 (or concurrent enrollment in 1800).

Orientation to the visual communications and printing industries, including principles and practices of visual design through the studies of historic and contemporary sales communication.

3821 Desktop Publishing I

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3012 (or

concurrent enrollment in 3012) or permission of the instructor or the Division Chair.

This is the first in a series of two desktop publishing courses. This course focuses on the effective use of industry standard page layout software. The student will learn the most common commands.

3822 Photography for Communications

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: 1800.

An introduction to the techniques and theories of photography to achieve design effects. Photographic shooting, processing, and printing and the composition are stressed. Students to supply their own cameras (35mm, 120), film and paper. Digital imaging will be introduced.

3823 Desktop Publishing II

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: 3821.

The second in a series of two desktop publishing courses, this course focuses on the effective use of industry standard photo-editing and illustration software.

3824 Color Theory and Practice

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: 1800 and 3820.

An introduction to the theory of color and color perception, color separation, calibration, and registration, emphasizing CYMK and RGB color.

3826 Typography

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: 3821.

An introduction to the history, use and skills of typographical design and its functional, aesthetic applications.

3828 Digital Video/Audio Production

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: 3012 and 3705.

An introduction to the creation, editing, and production of digital video and audio sequences.

3830 Design Applications

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: 1800, 3820, 3822 and 3824.

A studio course in which students will apply skills learned from previous courses to solve real world problems from the community. Projects may include signage, corporate identity, brochures, or ad campaigns.

3832 Multimedia Production

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: 3828 and 3830.

This course is an exploration into the integration of multiple media in the creation of a production, meant to inform or persuade.

3910 Cooperative Work Experience/Architectural

5 credit hours, 20 contact hours (0 hours lecture and 0 hours lab, 20 hours co-op directed practice). Prerequisite: 3706, 3728, 3755 (or concurrent enrollment in 3755), a grade point average of 2.75 or greater, and permission of faculty advisor.

This course, to be taken toward the end of the two-year Drafting and Design Technology, Architectural Major curriculum, is designed to give the student a real-world, office, work experience which uses the skills acquired earlier in the program. The course acts as a capstone, tying the concepts of the technology together and giving the student valuable job experience before graduation.

3990 Field Experience - Engineering

1-3 credit hours depending on the amount of work experience per week (1 credit hour per 12 hours work experience). Repeatable up to 12 credit hours. Prerequisite: 1505, 45 credit hours completed, and permission of Division Chair. S/U Graded Course.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Elective credit is awarded on a satisfactory/unsatisfactory basis.

39XX Special Topics in Engineering

1-5 credit hours. Prerequisite: Permission of instructor and Division Chair.

Special topic study is designed to provide a student with the opportunity to work on special topics within the field of engineering under the directive of the Engineering faculty. This course may be substituted for an engineering technical elective course if it is applicable. The course may be repeated.

ALLIED HEALTH AND NURSING TECHNOLOGIES: 4000

4003 Microbiology for the Health Professions

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in high school chemistry (or 1223) **and in a general College biology course or in 4016**. Open to any student not enrolled in Nursing or Allied Health programs on a space available basis.

A survey of the microbial world including types of microbes, microbial metabolism, microbial genetics, microbial growth, host/microbe interactions, immunology, and infectious diseases of the body systems. The laboratory portion of this course enhances the theories and concepts presented in the didactic portion of the course.

4004 Elementary Microbiology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in high school chemistry (or 1223) or completion of 4081 with a C grade (2.00) or better. Not open to students with credit for 4003.

Introduction to microbiology, surveying the basic types of microscopic organisms. Classification, structure, culturing, transmission, microbial control, and selected diseases are studied.

4005 Introduction to Human Biology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Not open to students with credit for 4016 or 4081. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

A basic introduction to biology through study of the human body. The course is designed for students planning entry into a technology requiring an understanding of human structure and function or familiarity with anatomical and physiological terminology.

4006 Basic Science for Nutrition

3 credit hours, contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

Basic Science for Nutrition is a pre-technical review of the science essential to understanding nutrition. Students who must take college level nutrition courses and who have had no chemistry or general biology will benefit from this course.

4007 Ethics: Introduction and Application in Modern Medicine

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Enrolled in Nursing Technology or Allied Health Technologies courses; Honors status [3.5 GPA or membership in Phi Theta Kappa]. This course is offered every other year.

This course will cover both general ethical theory, and discussion of difficult issues in modern medicine, questions at the frontiers of modern society. Special emphasis will be placed on ethical matters involved in reproduction, informed consent, genetic engineering, experimentation with children, experimentation with fetuses and death with dignity. The reading material will consist of essays by philosophers on ethical theory and practice, essays of physicians on moral problems, and case studies. After the section of the course devoted to theory, the class will be divided into groups, with each group responsible for presenting one of the issues.

4015 Basic Health Care Skills

5 credit hours, 8 contact hours (3 hours lecture, 3 hours lab and 2 hours clinical). Prerequisite: None.

This course prepares a basic health care worker with skills required by the Training and Competency Evaluation Program (TCEP) prior to gaining eligibility to become a State Tested Nurse Aide (STNA) and/or to employment as a home health aide. Content includes communication, infection control, safety and emergency procedures, promoting residents=clients= independence, respecting residents=clients= rights, basic nursing skills, personal care skills, providing care in a home setting, mental health and social service needs and basic restorative services. College lab permits development of various basic nursing skills. These skills are then implemented during a 20 hour clinical experience in a local health care facility.

4016 Human Anatomy and Physiology I

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in high school biology (or 4005) and high school chemistry (or 1223). Students may not be concurrently enrolled in 4005 and 4016. Open to any student not enrolled in Nursing or Allied Health Technologies programs on a space available basis.

Introduction to the study of the anatomy and physiology of the human, including standard terminology, chemistry review, cells and tissues, with the structure and function of the integumentary system, skeletal system, muscular system, nervous system, excretory system, and reproductive system. Laboratory includes the study of human cadavers.

4026 Human Anatomy and Physiology II

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4016 or equivalent.

Continued study of the anatomy and physiology of the human, including the structure and

function of the receptors, gastrointestinal system, cardiovascular system, lymphatic system, respiratory system, endocrine system, genetics and embryology. Laboratory includes the study of human cadavers.

4027 Medical Terminology I (Video)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. Credit for this course is not accepted for graduation for Nursing programs [Nursing students must enroll in 4037 and 4038]. The 4027/4028 Medical Terminology I/II video sequence and 4037/4038 Medical Terminology I/II non-video sequence CANNOT be intermixed.

This course considers the structure of medical words including their spelling and definition. The student will learn common prefixes, suffixes, and root words and how to combine them to form medical terms. Commonly used medical abbreviations are also included. This course is taught with video.

4028 Medical Terminology II (Video)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Allied Health Technologies students: C grade [2.00] or better in 4027; Other Technologies students: 4027. Credit for this course is not accepted for Nursing programs [Nursing students must enroll in 4037 and 4038]. The 4027/4028 Medical Terminology I/II video sequence and 4037/4038 Medical Terminology I/II non-video sequence CANNOT be intermixed.

During this course the student will continue to develop a medical vocabulary. The student will become familiar with terms used to describe common diseases, medical specialties, and operative procedures. This course is taught with video.

4036 Nutrition

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None.

Students will learn about the fundamental principles and practices that are essential in nutritional care to maintain health, to prevent illness, and to provide support and therapy during illness. The focus will be on the composition and function of foods; the nutritional needs during the life cycle; and the ways in which variations in caloric content, consistency, and nutrient composition may be employed to meet individual diet requirements.

4037 Medical Terminology I (Non-Video)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. The 4027/4028 Medical Terminology I/II video sequence and the 4037/4038 Medical Terminology I/II non-video sequence CANNOT be intermixed.

This course considers the structure of medical words including their spelling and definition. The student will learn common prefixes, suffixes, and root words and how to combine them to form medical terms. Commonly used medical abbreviations are also included.

This course is taught non-video.

4038 Medical Terminology II (Non-Video)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Allied Health Technologies students: C grade [2.00] or better in 4037; Other Technologies students: 4037. The 4027/4028 Medical Terminology I/II video sequence and the 4037/4038 Medical Terminology I/II non-video sequence CANNOT be intermixed.

During this course the student will continue to develop a medical vocabulary. The student will become familiar with terms used to describe common diseases, medical specialties, and operative procedures. This course is taught non-video.

4044 Patient Care in Allied Health

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in Diagnostic Medical Sonography Technology; C grade [2.00] or better in the following: 4016 and 4026, and concurrent enrollment in 4511.

During this course, the Allied Health Student is introduced to the basic aspects of patient care in the health care setting. Students are acquainted with the different types of patient care situations they may encounter while working in a health care facility. Topics include evaluating and meeting the physical needs of patients, infection control practices, assisting with the administration of medication, medications and their administration, dealing with acute situations and special care unit patients.

4045 Human Development

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: 1384 or 1386 or by permission of the Division Chair or instructor.

Students study human development as a dynamic, multi-dimensional process from conception through death. Emphasis is placed on the inter-relationship of the many biopsychosocial factors influencing human development, general principles of growth and development, major developmental tasks encompassing each stage of the life cycle, and health and development problems common to each stage. Course requirements include a project focusing on the application of human development theories, concepts, principles, and tasks.

4046 Current Issues in Allied Health

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Second Year status in Diagnostic Medical Sonography Technology or Radiographic Technology.

This course presents current issues relevant to imaging departments and personnel. During the course topics such as ethics, professionalism, death and dying, organ and

tissue donation/transplantation, medical research, and new techniques and procedures will be reviewed.

4048 Pathophysiology I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4016 or its equivalent.

Study of pathological imbalances including cellular adaptation and injury, fluid compartment exchanges with edema and dehydration, electrolyte functions, control and imbalances, acidosis and alkalosis, nervous system injuries and responses, sensory imbalances, skeletal system injury and repair, soft tissue injury and repair, and muscle injury and dysfunction.

4049 Pathophysiology II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4026 (or equivalent) and 4048 (or equivalent).

Study of pathological imbalances including blood pressure, homeostasis, shock, cardiac malfunction, respiratory malfunction, hematopoiesis with anemias and leukemias, gastrointestinal imbalances, liver malfunction, renal failure, bladder injury and control, and endocrine hypersecretions and hyposecretions.

4052 First Aid

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: None. This course is not open to students with credit for 4042, 5140 or 5205.

This course is designed to help the student make appropriate decisions regarding first aid care and to act on those decisions. Students will recognize when an emergency has occurred and the plan of action needed for the emergency until professional medical help arrives.

4054 Principles of Pathophysiology for Radiographers

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and a C grade (2.00) or better in 4152.

This course discusses the principles of human pathophysiology, the signs, symptoms, diagnosis and treatment of numerous pathological processes. Topics will include the imaging implications and methods to best demonstrate various pathologies.

4056 Pathophysiology Seminar for Medical Imaging

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology or the Radiographic Technology

programs and a C grade (2.00) or better in 4152 or 4516 or permission of the instructor.

This course is designed to correlate medical modalities utilized to diagnose various disease processes. The student will have an opportunity to observe and discuss sonographic, radiographic, computed tomography, magnetic resonance imaging, and nuclear medicine images.

4060 Environmental Science

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: None.

An introduction to the principles of ecology and the environment with a special emphasis on environmental problems related to the impact of human activities on the ecosystem. Issues affecting business and industry are highlighted.

4070 General Biology

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: High School Biology or equivalent or 1240. High School Chemistry or equivalent is strongly recommended but not required. Recommended strongly as preparation for the student who must take 4016 Human Anatomy and Physiology I and 4026 Human Anatomy and Physiology II.

General Biology introduces the major concepts and principles of biology, emphasizing cell structure and function, heredity, plant and animal organization, taxonomy, and ecology.

4081 Human Biology

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: High school science, or 1240.

An introduction to biology through the study of the human body. Laboratory studies use human cadavers. The course is designed for students planning entry into a technology requiring a basic understanding of human structure and function or familiarity with anatomical and physiological terminology. This course **does not** course or substitute for credit for 4016 Human Anatomy and Physiology I or 4026 Human Anatomy and Physiology II, both of which are required for students in Diagnostic Medical Sonography Technology, Nursing Technology, Physical Therapist Assistant Technology, and Radiographic Technology.

4101 RT Anatomy and Procedures I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Must be accepted into the Radiographic Technology program.

The student will be introduced to the basic radiographic positioning principles and

terminology. This course also covers radiographic imaging of the chest, abdomen, and upper and lower extremities. Emphasis is on the anatomy, routine positioning, and common pathologies demonstrated.

4102 RT Anatomy and Procedures II

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Must be enrolled in the Radiographic Technology program. C grade (2.00) or better in 4016 and 4101.

This course covers radiographic imaging of the bony thorax, vertebral column, digestive and urinary systems and cranium. Emphasis is on the anatomy, routine positioning, common pathologies, and contrast media utilized.

4110 Advanced Clinical Education in Radiology

2 credit hours, 8.5 contact hours (0.5 hours lecture, 0 hours lab and 8 hours clinical). Prerequisite: Enrollment in the Radiographic Technology program, C grade (2.00) or better in 4148, successful achievement of Radiographic Technology program clinical competency requirements and permission of the faculty.

This course will provide the student with the opportunity to observe medical imaging and radiotherapeutic modalities in an alternative clinical setting. The student will integrate previous knowledge and formulate assessments relative to the overall health care plan for patients= medical conditions.

4126 Departmental Administration

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in Radiographic Technology or Diagnostic Medical Sonography Technology. (Concurrent enrollment in 4056 and 4183) or (C grade [2.00] or better in the following: 4544 or 4562 and concurrent enrollment in 4546 or 4563).

This course is designed to introduce the student to basic principles of hospital administration and organization and relates those principles to the management of the radiology department. Students will have the opportunity to review the concepts of hospital organization, financing, employment practices and quality control. Upon completion of this course, students gain an insight into the overall administration of hospitals and departments within the hospital. This course provides basic management skills and knowledge for those students interested in pursuing a supervisory position in the radiology department.

4130 Clinical Radiology I

1 credit hour, 5 contact hours (0 hours lecture and 5 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and concurrent enrollment in 4101. S/U Graded

Course.

This course provides an orientation to the clinical environment. Topics covered are designed to prepare the student for safe practice in the clinical setting. Topics include radiation safety, OSHA standards, policies and procedures, code of ethics, departmental organization, and the health care team. This course will be taught as a term course (contact hours will be doubled over a five week period). This course is graded Satisfactory/Unsatisfactory.

4139 Radiobiology and Radiation Protection

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in Radiographic Technology. C grade (2.00) or better in 4184 or permission of the instructor.

This radiographic technology course presents the study of radiobiology, radiation protection and safety and methods of minimizing radiation exposure to occupational workers and patients. The radiobiology portion of the course includes the following topics: molecular and cellular radiobiology, early and late effects of radiation exposure and theories related to the effect of ionizing radiation on humans. During the radiation protection and safety segment students will be introduced to state and federal regulations and discuss various methods of minimizing radiation exposure.

4140 Clinical Radiology II

1 credit hour, 8 contact hours (1 hour lecture and 0 hours lab, 7 hours clinical). Prerequisite: Enrollment in the Radiographic Technology program and a grade of Satisfactory in 4130. S/U Graded Course.

This is an introductory experience into the clinical setting in which students have the opportunity to observe concepts and techniques related to radiographic imaging and patient care. Students will function under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty.

The course will be taught as a term course (contact hours will be doubled over a five week period). This course is graded Satisfactory/Unsatisfactory.

4146 Clinical Radiology III

2 credit hours, 17 contact hours (1 hour lecture and 0 hours lab, 16 hours clinical). Course is repeatable up to a maximum of 4 credit hours. Prerequisite: Enrollment in the Radiographic Technology program and a grade of Satisfactory in 4140.

During this clinical experience students will gain practical experience and begin to apply cognitive, psychomotor, and affective skills in the clinical setting. Students will function under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty.

4147 Clinical Radiology IV

3 credit hours, 31 contact hours (1 hour lecture and 0 hours lab, 30 hours clinical). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4146.

This course is designed to provide students with extensive clinical experience in all areas of the radiology department. Students will develop individual techniques and skills in radiographic procedures under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty.

4148 Clinical Radiology V

2 credit hours, 17 contact hours (1 hour lecture and 0 hours lab, 16 hours clinical). Course is repeatable up to a maximum of 6 credit hours. Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4147.

This course provides advanced experience in the clinical setting. It is designed to allow students to apply previously learned theories and techniques for radiographic imaging. Students will have the opportunity to observe angiography and specialized procedures. Student radiographers will function under the supervision and guidance of the clinical radiographers and physicians in the health care setting. Hospital computer systems will be discussed. This course will meet for one hour weekly on campus with the program faculty.

4149 Clinical Radiology VI

2 credit hours, 16 contact hours (0 hours lecture and 0 hours lab, 16 hours clinical). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4148.

This final clinical experience emphasizes mastery of skills in all areas of radiographic technology. The course is designed to challenge students to function independently within the supervised environment of the clinical setting. Students will have the opportunity to observe several imaging modalities. This course will be taught as a term course (contact hours will be doubled over a five week period).

4152 Special Radiographic Procedures

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4147 and 4182.

This Radiographic Technology course is the study of advanced radiographic procedures, angiography and interventional radiology. Topics to be covered include equipment requirements, anatomy visualized, radiographers role, indications, contraindications, pre and post procedural care and pathologies demonstrated.

4154 Radiographic Seminar I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4146, 4158, and 4184.

This course provides the student with the opportunity to discuss the principles of radiographic imaging. Application of previously learned concepts will be discussed relative to the clinical setting.

4155 Radiographic Seminar II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4148 and 4183.

This course provides the correlation between previously learned radiographic concepts and clinical application. It is designed to aid in the transition from student to entry level radiographer. General topics of discussion include: radiation protection, equipment operation, image production and evaluation, radiographic positioning, and patient care procedures. Requirements for ethical and legal practice of radiography in Ohio are discussed. This course will be taught as a term course (contact hours will be doubled over a five week period).

4157 Radiation Physics I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and a grade of Satisfactory in 4140.

This course discusses the principles of physics as they relate to radiation. Topics to be covered include electromagnetic and particulate radiation, electrostatics and magnetism, and electromagnetism.

4158 Radiation Physics II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4157.

This course is a continuation of 4157 Radiation Physics I. The student will apply knowledge to the construction and use of the radiographic equipment. Special emphasis will be placed on the effects on radiographic techniques and image formation.

4164 Patient Care in Radiology I

0.5 credit hours, 1 contact hour (0 hours lecture and 1 hour lab). Prerequisite: Enrollment in the Radiographic Technology program and a grade of Satisfactory in 4130.

During this introductory course to the Patient Care sequence, the student is introduced to universal precautions, patient transfers and body mechanics, fire safety, and guest relations. Students will also learn basic patient assessment procedures and policies and study the communication process as it applies to patients and the health care team. This course will be taught as a term course (contact hours will be doubled over a five week period).

4165 Patient Care in Radiology II

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiographic Technology program, a C grade (2.00) or better in 4164 and a grade of Satisfactory in 4140.

During this second course in the Patient Care sequence, the student is introduced to surgical and medical asepsis, patient advocacy, contrast and oxygen administration, general pharmacological principles, and medico-legal aspects of radiography. Principles of conflict management and the impact of values and beliefs on patient communication will be discussed.

4166 Patient Care in Radiology III

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4146 and 4165. During this Patient Care course, the student is introduced to the principles of mobile, surgical, and trauma radiology. Special patient situations encountered with critical care, orthopedic and geriatric patients will also be discussed. The student will also evaluate his/her listening skills relative to patient care.

4167 Patient Care in Radiology IV

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4147 and 4166.

During this Patient Care course the student will study basic pharmacology and radiopharmaceuticals. Recognition and acute care in specific emergency situations will be discussed. Other topics include special needs of the pediatric and disabled patients and patient education techniques.

4168 Patient Care in Radiology V

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4148 and 4167.

The final course in the Patient Care sequence is designed to provide the student with knowledge of Electrocardiograms and monitor indications, common laboratory procedures,

patient record keeping, and forensic radiology. Phlebotomy techniques will be discussed and practiced.

4180 Mammography and Breast Health

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in Radiographic Technology. C grade (2.00) or better in the following: 4152 and 4185, or proof of registration with the ARRT, or permission of the instructor.

This course provides a complete overview of breast health, and the theory and practice of diagnosing and treating the patient with breast disease. Topics to be covered include the following: pathology, mammographic positioning, patient education, diagnostic intervention. Students will have the opportunity to apply classroom theory in the laboratory setting. The assurance of quality and the selection of radiation parameters will also be discussed.

4182 Imaging Modalities I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4147 and 4158.

This course will discuss the basic principles of fluoroscopy, tomography, and image intensification. Digital imaging and computed radiography and other advancements in related technology will be discussed.

4183 Imaging Modalities II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4148 and 4182.

This course is an overview of the imaging modalities of Computed Tomography, Magnetic Resonance Imaging, Ultrasonography, Radiation Therapy and Nuclear Medicine. Emphasis will be on general operating principles of the modality, image production and its integration into patient diagnosis.

4184 Principles of Radiographic Exposure

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4146 and 4157.

This course is the study of the science of determining diagnostic radiographic exposure factors. Topics to be covered include: film processing, intensifying screens and cassettes, grids, scatter radiation, contrast, density, detail, distortion, and human pathology influence.

4185 Advanced Exposure and Quality Assurance

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in 4139, 4158, and 4184.

The importance of quality assurance programs in the radiography department is discussed in this course. Students will be introduced to basic testing procedures of x-ray equipment. Students will analyze the finished radiograph and identify all factors which alter quality.

4196 Bone Densitometry

1.5 credit hours, 1.5 contact hours (1,5 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and a C grade (2.00) or better in 4185 or proof of registration with the ARRT or permission of the instructor or the Division Chair.

This course provides the basic principles of bone densitometry. Topics to be covered include, examination objectives, patient preparation, examination procedures and protocols, data analysis, patient education and the pathophysiology of osteoporosis. Various types of equipment, methods of data collection and radiation protection procedures will be discussed. The student will become knowledgeable about dietary and pharmacological procedures for prevention, treatment and maintenance of the disease.

4203 Family Health and Health Alterations

7 credit hours, 13 contact hours (4 hours lecture and 3 hours lab, 6 hours clinical). Prerequisite: C grade (2.00) or better in the following: 4045 (or concurrent enrollment in 4045), 4219 and 4226.

The student will utilize the nursing process as a framework of care for clients across the life span groups experiencing the need for health care related to sexuality or the reproductive system. Principles of communication, interpersonal skills, biopsychosocial and pathophysiological and caring concepts are integrated during clinical experience. The student will have some clinical experiences, which will include clients exhibiting gynecological and male reproductive health alterations. Clinical experiences with obstetrical clients and the family are also included. These concepts will be applied while adhering to the legal and ethical standards of the profession. Emphasis is placed on the functional health patterns of health management, nutrition, role identity, sexuality, coping and value. Childhood illnesses and immunization schedules are included.

4205 Health Alterations I

8 credit hours, 16 contact hours (4 hours lecture and 2 hours lab, 10 hours clinical). Prerequisite: C grade (2.00) or better in the following: 4026, 4049 (or concurrent enrollment in 4049), 4203 and 4220 (or 4221 for LPN to RN Plan of Study).

This course is designed to provide the student with opportunities to develop concepts, skills, and communication techniques necessary for providing therapeutic care to the

mentally, physically, and cognitively impaired geriatric client as well as the client experiencing alterations in psychosocial, neurological and/or musculoskeletal functioning. Students will utilize the nursing process in writing, with emphasis on implementing and evaluating individualized plans of care for clients of all ages alterations in the following health patterns: cognitive-perceptual, coping and activity. While caring for the client in psychiatric, extended care and acute facilities, the student will demonstrate accountability, serve as a client advocate, be culturally informed and sensitive, and adhere to the legal and ethical standards of the nursing profession. Availability for clinical experience assignment is required.

4206 Health Alterations II

8 credit hours, 16 contact hours (4 hours lecture and 2 hours lab, 10 hours clinical). Prerequisite: C grade (2.00) or better in the following: 4026, 4049 (or concurrent enrollment in 4049), 4203 and 4220 (or 4221 for LPN to RN Plan of Study). This course is designed to provide the student with opportunities to develop concepts, skills, and communication techniques necessary for providing therapeutic care to culturally diverse clients of all age groups. Emphasis will be placed on clients experiencing common recurring health alterations related to the functional health patterns of nutrition, elimination, and metabolism affecting circulation, oxygenation, fluid and electrolyte homeostasis, and excretion. Students will utilize the nursing process in writing and implementing and evaluating individualized plans of care for clients. While interacting with clients in acute care outpatient settings, the student will demonstrate caring behaviors, accountability, serve as client advocate, and adhere to the legal and ethical standards of the nursing profession. Availability for clinical experience assignment is required.

4207 Health Alterations III

8 credit hours, 16 contact hours (4 hours lecture and 2 hours lab, 10 hours clinical). Prerequisite: C grade (2.00) or better in the following: 4026, 4049 (or concurrent enrollment in 4049), 4203 and 4220 (or 4221 for LPN to RN Plan of Study).

This course is designed to provide the student opportunities to develop concepts, skills, and communication techniques necessary for providing therapeutic care to culturally diverse clients of all age groups. Emphasis will be placed on common recurring health alterations related to metabolism, digestion, elimination, and aberrations of cellular growth that will affect the client's functional health patterns. Students will utilize the nursing process in writing and implementing, and evaluating individualized plans of care for clients. While interacting with clients in acute care settings, the student will demonstrate caring behaviors, accountability, serve as client advocate, and adhere to the legal and ethical standards of the nursing profession. Availability for clinical experience assignment is required.

4209 Transition to Practice

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade

(2.00) or better in 4205, 4206 and 4207 (may be concurrent enrollment in the third Health Alteration course).

This course focuses on role transition from nursing student to beginning associate degree graduate. Emphasis is on the role which includes caring behaviors, functions, and responsibilities of the nurse, legal regulations, management of client care, conflict resolutions, assertiveness, and professional responsibilities. Organizational principles, time management, and decision-making skills are also stressed. Different modalities of delivering health care in a structured environment will also be discussed.

4210 Applied Principles of Practice

4 credit hours, 13 contact hours (1 hour lecture [seminar] and 12 hours lab). (NOTE: The clinical portion of this course is offered in 5 week segments; therefore the clinical contact hours will be 24 hours lab per week for 5 weeks). Prerequisite: C grade (2.00) or better in 4209 (or concurrent enrollment in 4209). S/U Graded Course.

This course promotes utilization of nursing process when meeting self-care needs of diverse clients with common and recurring health problems affecting their self-care ability. Nursing management for these clients creates opportunities for the student to practice complex psychomotor skills in a caring and culturally sensitive manner. The student will examine issues regarding transition into practice and demonstrates knowledge of organizational principles and time-management techniques for client care. The course provides the student the opportunity to function in a variety of nursing roles; provider and manager of client care, communicator, and teacher. Availability for clinical experience assignment is required. This course is graded Satisfactory/Unsatisfactory.

4215 Nursing Informatics

0.5 credit hours, 1 contact hour, (0 hours lecture and 1 hour lab). Prerequisite: Admission into the AD-RN or PN Nursing Program or special permission. S/U Graded Course.

This course introduces the student to computer technology and common uses for computers in nursing. The purpose of this course is to familiarize the student with the types of computers, basic computer terminology, some basic computer programs, hospital information systems, and the Internet as they relate to nursing. The student will be able to use word processing. The student will utilize the Internet as a source of information and tool for communication. The student will also be knowledgeable about ethical issues involved in the use of computers. This course is graded Satisfactory/Unsatisfactory.

4216 Introduction to Nursing

3.5 credit hours, 6.5 contact hours (2 hours lecture, 3 hours lab, and 1.5 clinical). Clinical hours will be held 3 hours per week the second term of the quarter. Prerequisite: Admission into the AD-RN or PN Nursing Program or special permission.

This course introduces the student to the philosophy and conceptual framework of the

nursing program. The past, present, and future roles of nursing are explored by viewing the roles and functions of the nurse as influenced by historical and sociological factors. Concepts of caring, Orem=s theoretical framework, ethical and legal responsibilities, nursing process, functional health patterns, communication techniques, and holistic care across the lifespan are introduced. Emphasis is placed on the functional health patterns of health perception-health management, activity-exercise, sleep-rest patterns, and elimination. The student is introduced to the principles of surgical asepsis. The student will apply the nursing process while caring for clients with needs for hygiene, rest and sleep, elimination and activity. The student is expected to demonstrate characteristics of personal responsibility and legal/ethical standards of the profession.

4219 Fundamentals of Nursing

5 credit hours, 9 contact hours (3 hours lecture and 3 hours lab, 3 hours clinical). Prerequisite: 1502 (or concurrent enrollment in 1502) and a C grade (2.00) or better in the following: 4216 and 4226.

In this course the student continues to gain an understanding about the concepts of Orem=s Theoretical framework, caring, wellness and illness which were first introduced into the first nursing course. The student will apply the nursing process while caring for clients with needs for hygiene, rest and sleep, and activity, and will develop the basic technical skills to provide safe care. The student builds on content presented in the first quarter and begins practicing the principles of surgical asepsis and perioperative care of the client. Emphasis is placed on the functional health patterns of coping/stress, cognitive/perceptual, nutrition/metabolic and elimination. The student is expected to demonstrate personal responsibility and ethical/legal standards of the profession.

4220 Pharmacology for Nursing

4 credit hours, 6.5 contact hours (2.5 hours lecture, 3 hours lab, and 0.5 hours clinical). Prerequisite: C grade (2.00) or better in the following:(4016 or 4081) and 4216.

The student will be introduced to the role of the Registered Nurse and the Practical Nurse in drug therapy for clients of all ages. Drug control laws, methods of administration, calculation of dosage, measurements, and abbreviations will be presented. This course is also designed to introduce the student to the classification of drugs and the utilization of the nursing process in identifying expected actions, common side effects, normal dosage and routes of administration. Prototype examples will be used in each classification. Relevant assessments and teaching of clients will be included. Upon satisfactory completion of this course, the student should be able to utilize the nursing process to administer medications to a client in a safe, effective, and caring manner. In addition, each student shall satisfactorily administer medications to a group of clients.

4221 Applied Pharmacology for LPN to RN Students

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Acceptance

into the LPN to RN Plan of Study.

The student will review the role of the Registered Nurse in intravenous therapy for clients of all ages. Methods of administration, calculation of dosage, measurements, and abbreviations will be presented. This course is designed to discuss the intravenous administration of those drugs frequently administered via the intravenous route. Relevant assessments will be included. Upon satisfactory completion of this course, the student should be able to utilize the nursing process to administer intravenous medications to a client in a safe, effective, and caring manner.

4226 Physical Assessment/Data Collection Across the Lifespan

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: Admission into a Nursing (Registered Nursing or Practical Nursing) Technology program.

This physical assessment course introduces the student to the process of data collection, verification, analysis, and communication. The purpose of this course is for the student to develop the physical assessment and data collection skills used to determine the level of the client's wellness, health practices, past illnesses, related experiences, and health care goals as influenced by cultural and spiritual practices. Students will learn a step-by-step approach to body system observation, how to differentiate normal from abnormal findings, and recognize and support patterns of self-care which promote health for clients across the life span. The roles of the Registered Nurse and the Licensed Practical Nurse in physical assessment/data collection will be discussed and differentiated. This course will introduce the student to the language of medical terminology. The student will be expected to utilize such language, and appropriate medical abbreviations in the classroom, laboratory, and health care settings. The student is expected to obtain and maintain personal responsibility and legal/ethical standards of the profession.

4286 Basic Cardiac Arrhythmia Interpretation

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This course is designed to provide students with ECG monitoring skills. Importance is placed on understanding heart anatomy and electrophysiology, as well as learning the importance of identification of arrhythmias from the atrial, junctional, and ventricle heart sites. Heart blocks and paced rhythms will also be emphasized. Students will be able to differentiate normal, abnormal, and life-threatening arrhythmias.

4289 Maternal/Child Nursing Review

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the third Health Alteration course. Open to any registered nurse who wants to review Maternal-Child Nursing. S/U Graded Course.

This course is designed as a review of Maternal/Child Nursing for both current students and practicing nurses who desire to update their knowledge in this field. Maternal-newborn

content includes fetal development, nursing assessment and care during pregnancy, birth, and post-partum and newborn care. The course focuses on the normal maternal cycle as well as the commonly recurring complications. This course also focuses on commonly recurring deviations during the neonatal period. This course is graded on a Satisfactory/Unsatisfactory basis.

4291 Health Data Collection

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: STNA, 4015, 4025 and MST. Not open to students with credit for 4226.

The student begins to identify data collection as it relates to health care. Concepts introduced include health and wellness, functional areas important to observe, the ability to implement safe observations, and specialized aspects of data collection. The importance of prevention in health care is also explored as it relates to an optimum level of health for individuals.

4293 Phlebotomy for Health Workers

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Licensure as a registered nurse or a licensed practical nurse, completion of 4015 or working in health care.

This course is intended for health care workers, particularly nurses needing additional skills in phlebotomy. As nursing's focus broadens, more preparation in skills becomes necessary to meet new challenges. Phlebotomy will focus on being familiar with obtaining, preparing, labeling, and sending all specimens for analysis. Normal ranges of routine laboratory testing will be discussed and reviewed. Universal precautions as a necessity for future health will be stressed.

4295 Advanced Intravenous Therapy

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Level 2 Nursing Student or Registered Nurse.

This elective course is designed to provide the learner with advanced skills in the care of the client receiving intravenous therapy. Information regarding special intravenous therapies utilized in institutional and home care environment will be presented. The student will be introduced to administration techniques via central venous access devices (Central Venous Catheters, PICC lines, Infusaports, etc.).

4296 Cardiac Arrhythmia Interpretation

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4206 (or concurrent enrollment in 4206).

This course is designed to provide students with ECG monitoring skills, providing a more

advanced level of cardiac care to clients of all ages and cultural groups. Importance is placed on understanding of heart anatomy and electrophysiology, as well as learning about the identification of arrhythmias at the atrial, junctional, and ventricle heart sites. Heart blocks and paced rhythms will also be emphasized. Students will be able to differentiate normal, abnormal, and life-threatening arrhythmias, and by the process of critical thinking, determine the correct treatment for each.

4297 Case Management for the Nursing Professional

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Course is open to registered nurses, licensed practical nurses, graduate nurses, student nurses from Level II of the COTC curriculum, student nurses from other programs as space is available.

This course is designed to provide the student nurse/RN with the concepts and skills needed to function as a case/care manager. The origin and definition of case management will be discussed. Emphasis will be placed on development and use of case management techniques and use of critical pathways. Case management implementation in acute, long term, and community settings will be explored.

4298 Role Socialization

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Admission as an articulation/transfer/LPN to RN student into the COTC Nursing Technology program. Concurrent enrollment in 4226. S/U Graded Course. 4298 will count neither for elective credit nor toward meeting minimum credit hours for graduation.

A course designed for the LPN/transfer student who is admitted to the Nursing Technology program with advanced placement. This orientation program will introduce the transfer student or LPN to the Registered Nurse program of learning and to the role of the registered nurse. The nursing process will be explained and clarified. Charting responsibilities will be discussed. A review/update of selected psychomotor skills will be included. Opportunity will be provided to discuss role overload/stress management. The student is expected to demonstrate characteristics of personal responsibility and ethical/legal standards of the profession. This course is graded on a Satisfactory/Unsatisfactory basis and credit for 4298 will count neither for elective credit nor toward meeting minimum credit hours for graduation.

4299 NCLEX Preparation

1 credit hour, 7 contact hours (Miscellaneous Applications Course--1 credit hour awarded per 7 contact hours of work per week). Prerequisite: Successful completion of all of the Nursing Technology program with the exception of 4209 and 4210. May be concurrently enrolled in 4209 or 4210. S/U Graded Course.

Students will utilize the nursing process as a framework for review of care for clients across the lifespan experiencing the need for health care. Principles of communication,

interpersonal skills, biopsychosocial, spiritual, and pathophysiological and caring concepts will be reviewed. Emphasis will be placed on the functional health patterns and management of health alterations. This course is graded on a Satisfactory/Unsatisfactory basis.

4345 EMS Intermediate

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Current State of Ohio Certification as an EMT-Basic; Asset or Compass scores (reading, writing and mathematics) for placement into college level courses; Selective Admission based upon highest scores on COTC Assessment Tests of EMT-Basic knowledge and skills (written and practical tests) and personal interview.

The EMS Intermediate course will present the medical practice act, rules and responsibilities of the EMS-Intermediate. The course builds upon the skills and knowledge of the EMS-Basic by adding advanced airway management, intravenous fluid therapy, and an introduction to cardiac monitoring, interpretation of electrocardiograms and manual defibrillation.

4346 EMS Intermediate Practicum

1 credit hours, 5 contact hours (1 hour lecture and 0 hours lab, 4 hours practicum). Prerequisite: B grade (3.00) or better in 4345 (or concurrent enrollment in 4345).

This course is designed to provide practical experience in combined clinical experience and prehospital internship. The student will work in a clinical setting and prehospital services where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Intermediate.

4351 EMS Paramedic I

8.5 credit hours, 9.5 contact hours (7.5 hours lecture and 2 hours lab). Prerequisite: Acceptance into the EMS-Paramedic program and concurrent enrollment in 4352.

The student will study the roles, responsibilities, and duties of an EMS-Paramedic including professional ethics and behavior. The preparatory stages relative to the functioning of an EMS-Paramedic will be presented. The course will include instruction in the management and care of trauma emergencies, burns, and respiratory emergencies.

4352 EMS Paramedic Practicum I

2 credit hours, 10.5 contact hours (1 hour lecture, 0 hours lab, and 9.5 hours practicum). Prerequisite: Acceptance into EMS-Paramedic program and concurrent enrollment in 4351 or a C grade (2.00) or better in 4351.

This course is designed to provide practical experience in combined clinical and

prehospital settings where the student will learn agency protocols and procedures. During these practical experiences the student will demonstrate the required emergency medical techniques associated with trauma emergencies, burns, and respiratory emergencies that meet the EMS standards of the State of Ohio for the EMS-Paramedic.

4353 EMS Paramedic II

8 credit hours, 9 contact hours (7 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4351 and 4352 and concurrent enrollment in 4354.

This course will provide instruction in the recognition, management and care of cardiovascular emergencies. The anatomy and physiology of the cardiovascular system, recognition of dysrhythmias, assessment of the cardiac patient, and the pathophysiology of cardiovascular disease will be presented.

4354 EMS Paramedic Practicum II

2 credit hours, 10.5 contact hours (1 hour lecture, 0 hours lab and 9.5 hours practicum). Prerequisite: C grade (2.00) or better in 4351 and 4352 and concurrent enrollment in 4353.

As a continuation practicum experience in combined clinical and prehospital settings, the student will continue to learn agency protocols and procedures. During these practical experiences the student will demonstrate the required emergency medical techniques that meet all EMS standards of the State of Ohio for the EMS Paramedic with emphasis on cardiovascular emergencies. The student will continue to broaden his/her experiences with trauma emergencies, burns and respiratory emergencies.

4355 EMS Paramedic III

8 credit hours, 9.25 contact hours (7.25 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4353 and 4354 and concurrent enrollment in 4356.

The course will provide instruction in the recognition, management, and care of endocrine and metabolic emergencies, nervous system emergencies, gastrointestinal system emergencies, genitorinary system emergencies, reproductive system emergencies, anaphylaxis, toxicology and substance abuse, infectious diseases, environmental emergencies, obstetrical and gynecological emergencies, neonatal emergencies, and behavioral and psychiatric emergencies. Emergency management and care of the elderly patient, the pediatric patient, the neonatal patient, and the psychiatric and behavioral patient will be presented.

4356 EMS Paramedic Practicum III

2 credit hours, 10.5 contact hours (1 hour lecture, 0 hours lab and 9.5 hours practicum). Prerequisite: C grade (2.00) or better in 4353 and 4354 and concurrent enrollment in 4355.

As the final practical experience in the combined clinical and prehospital settings, the student will continue to learn agency protocols and procedures. During these practical experiences the student will demonstrate the required emergency medical techniques that meet all EMS standards of the State of Ohio for the EMS Paramedic. The student will continue to perfect his/her abilities in responding to trauma emergencies, burns, medical emergencies, obstetrical and gynecological emergencies, psychiatric emergencies, and in providing care to a diverse population.

4390 Epinephrine Administration and Cardiac Emergencies

1.5 credit hours, 2 contact hours (1 hour lecture and 1 hour lab). Prerequisite: State certified EMS-Basic which is current at the time of enrollment.

The EMS Intermediate will present the medical practice act, rules and responsibilities of the EMS Intermediate. The course builds upon the skills and knowledge of the EMS Basic by adding advanced airway management, intravenous fluid therapy, and an introduction to cardiac monitoring, interpretation of electrocardiograms and manual defibrillation.

4410 PTA Issues/Trends and Administrative Procedures

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in 4431 and 4453.

The course emphasis will be payers: both private and government sponsored, Medicare and Medicaid guidelines for treatment and billing, medicolegal aspects of the profession, state laws and rule of practice, and current issues in therapy practice. The course will also address other ancillary medical professions as they relate in practice to physical therapy, such as, athletic trainers, respiratory therapists, etc.

4431 Advanced Anatomy

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in the following: 4026, 4443 and 4453.

This course is designed specifically for the Physical Therapist Assistant, to provide detailed study of the anatomy of the neuromusculoskeletal system.

4433 PTA Procedures III

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in the following: 4410 and 4441.

This course is designed to introduce the student to the principles and measurement of

muscle strength; basic skill in measurement of joint range of motion; body alignment; flexibility; measurement and use of assistive ambulation devices; gait training; use of the tilt table; and advanced transfers.

4437 Rehabilitation II

6 credit hours, 8 contact hours (4 hours lecture, 4 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in the following: 4433, 4444, 4448 and 4450.

This a more advanced course covering complex rehabilitative skills, including prosthetic training for amputees; orthotics; facilitation and inhibition techniques for the neurological, spinal cord injured, and pediatric patient; and other special programs.

4441 Kinesiology

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in 4431 and 4454.

This course encompasses the study of human movement. It uses a combination of biomechanics, anatomy, and physiology to describe and define the movements of the body. Through lecture discussion and laboratory demonstration the student will develop an understanding of the nature of human movement, including analysis of human gait.

4443 Musculoskeletal Problems

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in the following: 4016 and 4451.

This course introduces the student to the principles of disease and injury and the effect on the human body as it relates to the musculoskeletal system.

4444 Neurological Problems

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in the following: 4410 and 4441.

This course introduces the student to the principles of disease and injury of the nervous system, including etiology and pathophysiology, and the effects on the human body. Primary emphasis will be on those diseases and injuries commonly treated in physical therapy.

4450 Rehabilitation I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program. C grade (2.00) or better in the following: 4410 and 4441.

This course covers basic rehabilitation skills. Principles of therapeutic exercises will be taught. Through practice the student will apply rehabilitative exercise programs. The course will include several special rehab programs.

4451 Introduction to Physical Therapy

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Admission to the PTA Technology program and must maintain a C grade (2.00) or better in all technology courses.

This course covers the role of physical therapy personnel as they interact within the physical therapy department with emphasis on the physical therapist assistant. Health services resources, their interrelationships, functions and activities as pertinent to the PTA will be discussed. Emphasis will be placed on the role of the PTA in the current U.S. medical system and relationships with personnel in the health care environment, both in government and in the private sector. The variety of delivery systems and methods of payment for health care will also be discussed. The development of the profession of Physical Therapy, the APTA, Code of Ethics, Standards of Practice, and documentation will also be included. The course introduces basic patient care skills including measurement of vital signs, wheelchair safety skills, simple transfer skills, passive range of motion, and treatment techniques performed by the PTA. The S.O.A.P. format of physical therapy documentation will be introduced.

4452 PTA Seminar

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Successful completion of all previous Physical Therapist Assistant Technology courses. S/U Graded Course.

The student will present the in-service that he/she prepared for spring quarter clinical practicum. Treatment protocols for specific disorders will be presented, and based upon clinical experiences, possible modifications will be discussed. Physical therapy documentation and anatomy will be reviewed and several specialized topics will be presented. The student must successfully complete a comprehensive exam. This course is graded Satisfactory/Unsatisfactory.

4453 PTA Procedures I

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 4016 and 4451 as well as all other courses in the Physical Therapist Assistant Technology Plan of Study for Autumn Quarter or permission of the instructor.

As the first of three sequential physical therapist assistant procedure courses, this course is designed to provide the student with basic theory of the physiological effects of heat, cold, light, and massage and the opportunity to develop skill in the therapeutic application of these modalities. Measurement for compressive garments and the use of intermittent compression as a modality will be discussed and practiced in the laboratory.

4454 PTA Procedures II

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: Admission to the Physical Therapist Assistant Technology program and a C grade (2.00) or better in all courses in the PTA Plan of Study, including 4443, 4451 and 4453.

This course is designed to provide the student with basic theories and therapeutic application techniques necessary to develop skill in the use of conservative heating (ultrasound and shortwave diathermy), mechanical traction, and various types of electrical stimulation.

4455 Clinical Organization and Management I

3 credit hours, 13 contact hours (1 hour lecture, 0 hours lab, and 12 hours clinical). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program and C grade (2.00) or better in the following courses: 4410, 4441 and (4037 and 4038) or (4027 and 4028).

An introductory experience in a clinical setting during which the student will be supervised as they perform physical therapy interventions previously taught in class and lab under the supervision of a licensed physical therapist or a PT/PTA team. The student will be mentored in the clinical setting by a clinical instructor and will participate in an assessment process with input from the student, the clinical instructor and other members of the treatment team. Classroom activities focus on communication and documentation in the clinic, professional behavior development and clinical management principles including the role of clinical education.

4456 Clinical Organization and Management II

4 credit hours, 19 contact hours (1 hour lecture, 0 hours lab, and 18 hours clinical). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program and C grade (2.00) or better in the following courses: 4433, 4444, 4450 and 4455.

An intermediate experience in clinical settings during which the student will be supervised as they perform physical therapy interventions previously taught in class and lab under the supervision of a licensed physical therapist or a PT/PTA team. The student will be mentored in the clinical setting by a clinical instructor and will participate in an assessment process with input from the student, the clinical instructor, and other members of the treatment team. Classroom activities focus on communication and documentation in the clinic, professional behavior development, employment and interview preparation and self-

directed learning skills.

4457 PTA Clinical Practicum

5 credit hours, 40 contact hours (0 hours lecture, 0 hours lab, and 40 hours clinical). Prerequisite: Enrollment in the Physical Therapist Assistant Technology program and C grade (2.00) or better in the following courses: 4450 and 4456. S/U Graded Course.

Advanced full time experience in clinical settings during which the student will be supervised by a physical therapist or PT/PTA team as they perform interventions previously taught in the program. The student will be mentored in the clinical setting by a clinical instructor and will participate in an assessment process with input from the student, the clinical instructor, and other members of the treatment team. This course is graded on a Satisfactory/Unsatisfactory basis.

4504 Superficial Small Parts

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4505 and concurrent enrollment in 4510, 4516 and 4544 or permission of the instructor.

This course discusses sonographic imaging of the breast, thyroid, scrotum, popliteal fossa, prostate, eye, peripheral vascular system, and musculoskeletal system. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis and sonographic techniques relative to superficial small parts.

4505 Abdominal Sonography

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Must be accepted in the Diagnostic Medical Sonography Technology program and must maintain a C grade or better in all technology courses. C grade (2.00) or better in the following: 4016, 4026 and 4511, or concurrent enrollment in 4507, 4515 and 4542.

This course covers sonographic imaging of the liver, gallbladder, biliary tree, pancreas, kidneys, adrenal glands, spleen, lymph nodes and abdominal vascular system. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis and sonographic techniques relative to the abdomen.

4507 Gynecological Sonography

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be accepted to the Diagnostic Medical Sonography Technology program and must maintain a C grade (2.00) or better in all technology courses. C grade (2.00) or better in the following: 4016, 4026 and 4511, or concurrent enrollment in 4505, 4515 and 4542.

This course emphasizes the fundamental principles of sonographic imaging of the female

pelvis. Anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis and sonographic techniques relative to the gynecological patient are presented.

4509 Sonography Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4546 and concurrent enrollment in 4549, or permission of the instructor.

This course provides correlation between previously learned sonographic concepts and clinical application. It is designed to aid the transition to entry-level sonographer. General topics include sonographic procedures, image production and evaluation, equipment operation and maintenance, patient care, literature reviews, recent developments in diagnostic techniques and future directions of the profession.

4510 Obstetrical Sonography

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4507 and concurrent enrollment in 4504, 4516 and 4544.

This course provides an extensive study of the anatomy, physiology, pathology, and sonographic appearance of the developing fetus. Specific sonographic protocols for obstetrical sonography are included. Clinical presentation and maternal complications associated with pregnancy are also emphasized.

4511 Cross Sectional Anatomy

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology or the Radiographic Technology programs. C grade (2.00) or better in the following: 4016, 4026 and (4027 and 4028 [or 4037 and 4038] or equivalent), or permission of the instructor.

This course is designed to provide the student with specific knowledge of relational and sectional anatomy of the head, thorax, abdomen, pelvis, and extremities. The college laboratory sessions are utilized to study human material and to correlate with radiologic and/or sonographic images.

4512 Neurosonography

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Current enrollment in the Diagnostic Medical Sonography Technology program as a One-Year Certificate student or a second year Associate Degree student, RDMS, RDMS registry eligibility, or permission of the instructor.

This course provides the advanced sonographer a study of embryology, anatomy,

physiology, and sonographic appearance of the nervous system. Specific protocols for neonatal neurosonography are included. Intraoperative and spinal sonography will also be discussed.

4514 Principles of Diagnostic Sonography

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Must be accepted in the Diagnostic Medical Sonography Technology program and must maintain a C grade (2.00) or better in all technology courses or permission of the instructor.

This is the introductory course to the Diagnostic Medical Sonography sequence. Topics included in the course are the health care delivery system, professional communication and conduct, organizations, history of ultrasound, the sonographer's role and basic scanning protocols.

4515 Sonographic Physics and Instrumentation I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Must be accepted in the Diagnostic Medical Sonography Technology program and must maintain a C grade (2.00) or better in all technology courses. C grade (2.00) or better in 1210 (or equivalent) and concurrent enrollment in (4505, 4507 and 4542) or (4561, 4565 and 4567).

This course deals with the fundamental principles of sonographic physics. Topics such as the nature of waves, wave properties, interactions of ultrasound with tissue, ultrasonic beam parameters and basic Doppler principles are covered. Students will have an opportunity to apply these principles in the college laboratory setting.

4516 Sonographic Physics and Instrumentation II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4515 and concurrent enrollment in (4504, 4510 and 4544) or (4562, 4566 and 4568).

This course applies the fundamental principles of sonographic physics to specific ultrasound instrumentation. Topics such as transducer design, equipment controls, and instrumentation for static, real-time and Doppler systems will be discussed. Students will have an opportunity to apply these principles in the college laboratory setting.

4517 Sonographic Physics and Instrumentation III

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4516 and concurrent enrollment in 4546 or 4563.

This course concludes the sonographic physics and instrumentation sequence. Topics such as artifacts, storage devices, biological effects of ultrasound, and quality assurance

testing will be discussed.

4518 Doppler Physics and Instrumentation

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Permission of the instructor.

This course deals with the fundamental principles of Doppler physics and instrumentation. Topics such as hemodynamics, pulsed wave Doppler, continuous wave Doppler, spectral analysis, color Doppler, power Doppler, Doppler instrumentation, and artifacts will be discussed. This course is designed for the sonography student not completing the 4515, 4516 and 4517 Sonographic Physics and Instrumentation sequence.

4520 Obstetrical Sonography Lab

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4510 or permission of the instructor.

This is a continuation course in the study of anatomy, physiology, pathology and sonographic appearance of the developing fetus. The emphasis will be on hands-on application. A variety of media tools will be used to correlate didactic findings with sonographic views.

4541 Principles of Clinical Sonography

2 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, 8 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in the following: 4026, 4044, 4511 and 4514 and a valid CPR card.

An introductory experience to the clinical setting in which students have an opportunity to observe concepts and techniques related to sonographic imaging and patient care. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4542 Clinical Sonography I

3 credit hours, 17 contact hours (1 hour lecture and 0 hours lab, 16 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. (C grade (2.00) or better in 4541) or (acceptance into the one-year DMS program), concurrent enrollment in 4505, 4507 and 4515 and a valid CPR card.

This initial scanning experience in the clinical setting provides the students with the opportunity to apply learned concepts and techniques related to sonographic imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on

specific case studies will be conducted.

4544 Clinical Sonography II

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical).
Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4542, concurrent enrollment in 4504, 4510 and 4516 and a valid CPR card.

During this clinical course, students will gain practical experience and develop individual scanning techniques related to sonographic imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4546 Clinical Sonography III

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical).
Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4544 and a valid CPR card.

This course provides more advanced experience in the clinical setting in which the student will improve upon previously learned skills and techniques related to sonographic imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4549 Clinical Sonography IV

6 credit hours, 33 contact hours (1 hour lecture and 0 hours lab, 32 hours clinical).
Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4546, concurrent enrollment in 4509 and a valid CPR card.

This final clinical experience emphasizes mastery of skills in all areas of medical sonography. The course is designed to challenge the student to function independently within the supervised clinical setting, tailoring each examination according to the specific guidelines of each case. A weekly one hour seminar focusing on specific case studies will be conducted.

4560 Principles of Cardiovascular Clinical

2 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, and 8 hours clinical).
Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4016, 4026, 4044, 4511 and 4514 and a valid CPR card.

An introductory experience to the cardiovascular clinical setting in which students have an

opportunity to observe concepts and techniques related to cardiovascular imaging and patient care. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4561 Cardiovascular Clinical I

3 credit hours, 17 contact hours (1 hour lecture and 0 hours lab, 16 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. (C grade [2.00] or better in 4560) or (acceptance into the One-Year Cardiovascular DMS program and concurrent enrollment in 4515, 4565 and 4567) and a valid CPR card.

This initial scanning experience in the clinical setting provides the students with the opportunity to apply learned concepts and techniques related to cardiovascular imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4562 Cardiovascular Clinical II

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4561, concurrent enrollment in 4516, 4566 and 4568 and a valid CPR card.

During this clinical course, students will gain practical experience and develop individual scanning techniques related to cardiovascular imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4563 Cardiovascular Clinical III

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4562, concurrent enrollment in 4041, 4056, 4126 and 4517, and a valid CPR card.

This course provides more advanced experience in the clinical setting in which the student will improve upon previously learned skills and techniques related to cardiovascular imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4564 Cardiovascular Clinical IV

6 credit hours, 33 contact hours (1 hour lecture and 0 hours lab, 32 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4563, concurrent enrollment in 4569 and a valid CPR card.

This final clinical experience emphasizes mastery of skills in cardiovascular sonographic imaging. The course is designed to challenge the student to function independently within the supervised clinical setting, tailoring each examination according to the specific guidelines of each case. A weekly one hour seminar focusing on specific case studies will be conducted.

4565 Echocardiography I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Must be accepted in the DMS program and must maintain a C grade (2.00) or better in all technology courses (C grade [2.00] or better in the following: 4016, 4026 and 4511) and (concurrent enrollment in 4515, 4567 and 4561) or permission of the instructor.

This course will review cardiac anatomy and physiology. B-mode, M-mode, and Doppler testing in the detection of valvular, pericardial and ischemic heart disease will be discussed. EKG and Holter monitoring will also be studied.

4566 Echocardiography II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4565, concurrent enrollment in 4516, 4562 and 4568, or permission of the instructor.

This course will continue the sonographic evaluation of cardiac pathophysiology including the speciality examinations of transesophageal, stress, and contrast studies. An introduction to fetal and pediatric echocardiography will also be discussed.

4567 Vascular Sonography I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Must be accepted in the DMS program and must maintain a C grade (2.00) or better in all technology courses. (C grade [2.00] or better in the following: 4016, 4026 and 4511) and (concurrent enrollment in 4515, 4561 and 4565) or permission of the instructor.

This course emphasizes the sonographic evaluation of the peripheral vascular system. Non-invasive testing of the upper and lower extremity vessels and disease processes will be studied. Plethysmography, duplex, pulsed and continuous wave Doppler testing will be introduced.

4568 Vascular Sonography II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in

4567, concurrent enrollment in 4516, 4562 and 4566, or permission of the instructor.

This course continues the sonographic evaluation of vascular disease including the intracranial and extracranial vascular systems. A comprehensive approach to sonographic technique including transcranial scanning will be studied.

4569 Cardiovascular Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4563 and concurrent enrollment in 4564.

This course provides correlation between previously learned sonographic concepts and clinical application. It is designed to aid the transition to entry-level sonographer and ARDMS preparation. The student must successfully complete a comprehensive examination.

4570 Introduction to Pediatric Echocardiography

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. C grade (2.00) or better in 4565 and 4566 and concurrent enrollment in 4517 and 4563 or permission of the instructor.

This course covers the sonographic imaging of the pediatric heart with emphasis on embryology, anatomy, pathology, physiology, interpretation of clinical data, differential diagnosis and sonographic techniques relative to the pediatric cardiac patient in an adult cardiac facility. Topics such as congenital pathology, acquired pathology, surgical repair of congenital heart disease and fetal echocardiography will be discussed.

4590 Special Topics in Clinical Sonography

2 credit hours, 6 contact hours (1 hour lecture and 5 hours lab). Prerequisite: Acceptance into the Diagnostic Medical Sonography Technology One-Year program; must be a graduate of the COTC Radiographic Technology program and hold a valid CPR card.

A unique experience in various clinical settings in which students have an opportunity to observe concepts and techniques related to ultrasound imaging and patient care. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

4591 Current Issues in Sonography

0.5 credit hours, 6 contact hours (0 hours lecture, 0 hours lab, and 6 hours directed practice). Prerequisite: Second Year Status in DMS. Only open to individuals who have college credit for a general course in Current Issues in Healthcare or have not taken a

current issues course within the past five years.

This course deals with current issues relevant to sonographic imaging departments and personnel. During the course topics specific to Diagnostic Medical Sonography such as lab accreditation, new techniques in sonography, and the profile of a professional sonographer will be reviewed.

4601 Pharmacology for Surgical Assisting

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade or better (2.00) in 4016 and 4026.

The student will be introduced to the study of pharmacology for patients of all ages. The role of the surgical assistant, drug control laws, methods of preparation, and abbreviations will be presented. This course is designed to introduce the student to the classifications of drugs, identification of expected actions and uses, common adverse effects, normal dosage ranges, and routes of administration. Prototype examples will be used in each classification. Relevant assessments of patients will be included. Upon satisfactory completion of this course the student should be able to understand and prepare medications for the safe administration to patients.

4602 Fundamentals of Surgical Technology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Admittance into the Surgical Technology program.

This course is an introduction to surgical technology. Different types of health care facilities, the roles of the different surgical team members and aspects of the physical environment of the surgical suite are studied. The history of the development of surgery as well as ethical, moral, and legal responsibilities are discussed. In this course the student will also discuss communication skills, interpersonal and interdepartmental relationship skills needed. Included in this course will be an opportunity to shadow a surgical technologist in surgery.

4604 Basic Case Preparation

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4005 and 4602.

Basic instrumentation, surgical equipment and supplies, sutures and stapling devices will be discussed and demonstrated. Students will learn the proper care, handling, use and assembly of instruments and equipment. Also discussed during this course will be draping techniques and maintenance of the sterile field.

4610 Professional Trends and Issues in Surgical Technology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4026, 4605, 4606 and 4607.

This course is designed to prepare the student for the workplace. Topics discussed will be: factors that affect the student=s personal life, professional relations and organizations, preparation for the national certification examination, types of health care delivery agencies, accrediting agencies and job seeking skills.

4611 Surgical Technology Skills Review

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite:

The purpose of this elective course is to emphasize the importance and maintenance of Surgical Technology skills. Since the learners are not engaged in the academic plan during summer quarter, they may tend to lose skills that were taught earlier. This course will give the learners the opportunity to practice skills acquired during the first two quarters in the laboratory settings. In this course, the learners will be exposed to the laboratory practice, specialty instruments, and procedures. As a part of this course, the students will also take field trips to other hospitals and surgery centers.

4612 Fundamentals of Surgical Technology

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: Admittance into the Surgical Technology program.

This course is an introduction to surgical technology. Different types of health care facilities, the roles of the different surgical team members and aspects of the physical environment of the surgical suite are studied. The history of the development of surgery as well as ethical, moral, and legal responsibilities are discussed. In this course the student will also discuss communication skills, interpersonal and interdepartmental relationship skills needed. Included in this course will be an opportunity to shadow a surgical technologist in surgery.

4613 Patient Care Concepts

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 4005 and (4602 OR 4612).

This course is designed to enable the student to become skilled in assisting with the preparation, transportation, positioning, and anesthesia of the surgical patient. Skills included in this course are: aseptic technique, positioning, skin preparation, care of specimens, use of thermoregulatory devices, vital signs, handling of blood replacement components, urinary catheterization, and emergency procedures.

4615 Surgical Procedures I

5 credit hours, 17 contact hours (2 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: C grade (2.00) or better in (4603 or 4613) and 4604 and concurrent enrollment (or C grade [2.00] or better in) 4003 and 4601.

This course is designed to acquaint the student with the operating room procedures and techniques necessary to function as an assistant in the operating room. Discussed during this course will be the relevant anatomy, indications for surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialities: general and gastrointestinal, obstetric and gynecologic, and orthopedic. Students will have clinical experiences in the above areas, functioning as a second scrub, first scrub, or assistant circulator under the supervision of a certified surgical technologist or registered nurse.

4616 Surgical Procedures II

5 credit hours, 17 contact hours (2 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: C grade (2.00) or better in (4605 or 4615).

This course is an extension of Surgical Procedures I. Discussed during this course will be the relevant anatomy, indications of surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialities: ophthalmic, ear/nose/throat, dental/oral/maxillofacial, plastic and reconstructive and neurological surgery. Students will have clinical experiences in the above areas, functioning as a second scrub, first scrub, or assistant circulator under the supervision of a certified surgical technologist or registered nurse.

4617 Surgical Procedures III

5 credit hours, 17 contact hours (2 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: C grade (2.00) or better in 4016 and (4606 or 4616).

This course is an extension of Surgical Procedures II. Discussed during this course will be the relevant anatomy, indications of surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialities: thoracic, cardiovascular, peripheral vascular, and urologic. Students will have clinical experiences in the above areas, functioning as a second scrub, first scrub, or assistant circulator under the supervision of a certified surgical technologist or registered nurse.

4618 Pediatric Surgery

5 credit hours, 17 contact hours (2 hour lecture, 0 hours lab, and 15 hours clinical). Prerequisite: C grade (2.00) or better in 4026, (4605 or 4615), (4606 or 4616) and (4607 or 4617).

This course will be offered as a five week term course designed to acquaint the student

with the pediatric patient and a variety of surgical procedures unique to the pediatric patient. Clinical experiences will emphasize adapting pediatric concepts in the surgical setting.

4619 Advanced Surgical Technician Practice

5 credit hours, 17 contact hours (2 hour lecture, 0 hours lab, and 15 hours clinical). Prerequisite: C grade (2.00) or better in 4026, (4605 or 4615), (4606 or 4616) and (4607 or 4617).

This course will be offered as a five week term course focusing on continuing surgical theory. It provides study of special problems that correlate with the individual needs and interests of the student during clinical practice as well as preparation to write the national certification examination. Clinical supervised practice is an integral part of this course.

4620 Surgical Technology Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: 4610, 4618 and 4619.

This course is designed to provide the correlation between previously learned surgical concepts and clinical application. It is designed to aid in transition from Surgical Technology student to entry level Surgical Technologist. Topics discussed in this course include: general, OB/GYN, vascular, G.U., cardiothoracic, plastic and ophthalmology surgery. Requirements for ethical and legal practice as defined by the National Association of Surgical Technologists will be reviewed and discussed.

4709 Pharmacy Practicum I

1 credit hour, 8 contact hours (0 hours lecture and 0 hours lab, and 8 hours practicum). Prerequisite: (C grade [2.00] or better in 4721, 4722 and 4725) and (concurrent enrollment in 4712, 4726 and 4728).

This assigned practical experience will assist the student in gaining an appreciation and working knowledge of the structural, functional, and interrelational aspects of pharmacy and how patient care is affected. The student will apply pharmacy technician skills as performed at various practicum sites such as retail, hospitals, and long-term health care facilities.

4711 Pharmacy Practicum III

2 credit hours, 16 contact hours (0 hours lecture and 0 hours lab, and 16 hours practicum). Prerequisite: (C grade [2.00] or better in 4710 and 4713) and (concurrent enrollment in 4714).

The final assigned practical experience that will assist the student in gaining an

appreciation and working knowledge of the structural, functional, and interrelational aspects of pharmacy and how patient care is affected. The student will apply pharmacy technician skills as performed at various practicum sites such as retail, hospitals, and long-term health care facilities.

4712 Pharmacy Practicum Seminar I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: (C grade [2.00] or better in 4721, 4722 and 4725) and (concurrent enrollment in 4709, 4726 and 4728).

This seminar is offered in conjunction with 4709 Pharmacy Practicum I and is designed to provide a forum for discussion of pharmacy operations and interrelationships experienced at various practicum sites. The discussions will permit the student to compare and contrast experiences, discuss various drug dispensing procedures, and resolve questions through critical thinking exercises.

4713 Pharmacy Practicum Seminar II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade [2.00] or better in 4712 and concurrent enrollment in 4720.

This seminar is offered in conjunction with 4720 Pharmacy Practicum II and is designed to provide a forum for discussion of pharmacy operations and interrelationships experienced at various practicum sites. The discussions will permit the student to compare and contrast experiences, discuss various drug dispensing procedures, and resolve questions through critical thinking exercises.

4718 Pharmacy Practicum Seminar III

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4713 and concurrent enrollment in 4711.

This seminar is offered in conjunction with 4711 Pharmacy Practicum III and is designed to provide a forum for discussion of pharmacy operations and interrelationships experienced at various practicum sites. The discussions will permit the student to compare and contrast experiences, discuss various drug dispensing procedures, and resolve questions through critical thinking exercises.

4720 Pharmacy Practicum II

3 credit hours, 24 contact hours (0 hours lecture and 0 hours lab, and 24 hours practicum). Prerequisite: (C grade [2.00] or better in 4709 and 4712) and (concurrent enrollment in 4713).

A continuation assigned practical experience that will assist the student in gaining an

appreciation and working knowledge of the structural, functional, and interrelational aspects of pharmacy and how patient care is affected. The student will apply pharmacy technician skills as performed at various practicum sites such as retail, hospitals, and long-term health care facilities.

4721 Pharmacology I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (4027 and 4028) or (4037 and 4038) or equivalent and 4740 (or 4700).

This course presents an introduction to pharmacology. The course will provide an introduction to the scientific basis for the use of drugs in medicine. The drug modules presented in this course are anti-infectives, decongestants, anti-tussives, expectorants, narcotic pain relievers and other nervous system drugs.

4722 Pharmacology II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4721 and 4725.

This course will review additional basic pharmacological concepts. The course will continue with the scientific basis for the use of drugs in medicine. Drug modules presented in this course are nervous system drugs, respiratory, gastrointestinal, renal, and cardiac drugs.

4723 Pharmacology III

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4722.

This is a continuation course. There will be brief review of basic pharmacological concepts and additional discussions of the scientific basis for the use of drugs in medicine. Modules presented are non-narcotic analgesics, muscle relaxers, hormones, topicals, recombinant drugs, chemotherapy and miscellaneous drugs.

4725 Pharmacy Practice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4740 (or 4700) and concurrent enrollment in 4722.

This course is a continuation of 4700 Introduction to Pharmacy Science. Many facets of pharmacy practice are discussed. An introduction to the major drug classifications, drug handling, computers, medication errors, basic pharmacy law and utilizing drug resource books is presented in this course.

4726 Pharmacy Lab I

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in 4721, 4725 and the 2 credit hour computer elective.

This lab course will expose students to a working knowledge of the roles and functions of the pharmacist and pharmacy technician in-patient and out-patient pharmacy operations. Laboratory exercises will simulate both settings.

4728 Pharmacy Calculations

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1210 or higher level math, [(4027 and 4028) or (4037 and 4038) or equivalent], and 4740 (or 4700).

An introduction to those aspects and concepts of pharmacy calculations necessary to perform all pharmacy technical compounding including mathematical problems using Roman numerals, Arabic numerals, fractions, apothecary symbols, decimals, conversion of weights and measures, direct ratio and proportion, reduction and enlargement formulas, specific gravity, percent strength, weight in volume, weight in weight, volume in volume, ratio strength, dilution and concentration, allegation and milliequivalent.

4730 Pharmacy Technology Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 4723 and concurrent enrollment in 4720 (or 4710) and 4713.

This course provides the student with the opportunity to discuss the principles of pharmacy technology. Application of previously learned concepts relative to hospital and retail settings will be discussed.

4740 Introduction to Pharmacy Science

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This class offers an introduction to pharmacy, comparing and contrasting the responsibilities of pharmacists and pharmacy technicians in providing quality patient care services. Various pharmacy opportunities and the roles of pharmacy technicians in the work settings of the hospital speciality health care, long term care, home health care, retail, sales, and research will be addressed.

4801 Health Alterations for Practical Nursing Students

11 credit hours, 21 contact hours (6 hours lecture, 3 hours lab and 12 hours clinical). Prerequisite: C grade (2.00) or better in 4203 and 4220.

This course is designed to provide the PN student with concepts, skills, communication

techniques necessary for providing caring, therapeutic care to culturally diverse clients of all age groups. Emphasis will be placed on clients experiencing common recurring health alterations related to circulation, oxygenation, gastrointestinal, musculoskeletal, neurological, renal and endocrine functioning as well as alterations in mental health. While interacting with clients in acute and long term care facilities, the student will recognize self-care deficits, demonstrate caring behaviors, administer safe care, be accountable, and adhere to the legal and ethical standards of practical nursing practice.

4804 Pharmacology II for Practical Nursing Students

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab) [which includes 20 hours of clinical lab]. Prerequisite: Successful matriculation through the COTC Practical Nursing Plan of Study and concurrent enrollment in 4801. C grade (2.00) or better in 4203 and 4220.

The student continues the learning begun in 4204 about the role of the nurse in drug therapy for clients of all ages. An emphasis on the role of the Licensed Practical Nurse (LPN) in medication administration will be emphasized. Calculation of dosage, measurements, and abbreviations will continue to be an important component. Selected classifications of drugs and utilization of the nursing process in identifying expected actions, common side effects, normal dosage and routes of administration. Prototype examples will be used in each classification. Relevant assessments and teaching of clients will be included. Upon satisfactory completion of this course the student should be able to utilize the nursing process to administer medications to a client in a safe, effective, and caring manner. In addition, organizational skills required to administer medications to a group of patients will be developed.

4809 Trends and Issues for the Practical Nurse

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Concurrent enrollment in 4801.

The purpose of this course is to introduce the PN nursing student to current concepts, trends, and issues in patient care management. as: career development, trends in patient care management Societal influences that affect the development of PN practice and delineate the PN=s scope of practice will be the major focus of this course. The image of the PN in today=s society will be explored, as will the media=s influence on the health care consumer=s opinion of nursing in today=s society. Professional socialization of the PN student will occur through emphasis on such topics, role transition to the workplace, licensure issues in the State of Ohio, management of ancillary personnel, nurse=s rights at work, legal and ethical implications of patient care delivery, approaches to patient care delivery, channels of communication, quality improvement in health care, the organizational process, the role of the PN leader, critical thinking strategies, and how to make the work environment work for you. The PN student builds on previously learned concepts and develops additional learning within the Licensed Practical Nurse scope of practice.

4989 Independent Study: Pathology Correlations

1 credit hour, 2 contact hours (0 hours lecture and 2 hour lab). Prerequisite: Must be enrolled in Radiographic Technology or Diagnostic Medical Sonography Technology or with permission of the instructor.

This course is designed to introduce the Allied Health student to the principles of human pathophysiology. The signs and symptoms, diagnosis and treatment of selected pathological processes are discussed in detail.

4993 Independent Studies in Pathophysiology

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 4016 or its equivalent. S/U Graded Course.

Study of pathological imbalances including cellular adaptation and injury, fluid compartment exchanges, with edema and dehydration, electrolyte functions, control, and imbalances, acidosis and alkalosis, nervous system injuries and responses, sensory imbalances, skeletal system injury and repair, soft tissue injury and repair, and muscle injury and dysfunction. This course is graded Satisfactory/Unsatisfactory.

4995 Independent Study: Application of Pathophysiology

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in Radiographic Technology or Diagnostic Medical Sonography Technology and permission of the instructor.

This course is designed to introduce the Allied Health student to the principles of human pathophysiology. The signs and symptoms, diagnosis and treatment of selected pathological processes are discussed in detail.

4998 Independent Studies in Human Anatomy and Physiology

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: high school biology or equivalent and high school chemistry or equivalent.

Introduction to the study of the anatomy and physiology of the human, including standard terminology, chemistry review, cells and tissues, with the structure and function of the integumentary system, skeletal system, muscular system, nervous system, excretory system, and reproductive system on an independent study basis. Laboratory includes the study of human cadavers.

49XX Special Topics in Allied Health

1-5 credit hours, contact hours to be determined. Prerequisite: Approval of Division Chair.

This course will provide the student an opportunity to work on special topics within the field of Allied Health under the direct supervision of a faculty member. A faculty member and student must obtain approval from the Division Chair prior to initiating this course. Enrollment in this course must be approved by the Division Chair.

PUBLIC SERVICE TECHNOLOGIES: 5000

5204 Physical Conditioning I

1.5 credit hours, 3 contact hours (.5 hours lecture and 2.5 hours lab). Prerequisite: CJT students only (or permission of the instructor). S/U Graded Course.

The emphasis of this course is placed upon the significance of maintaining specific physical condition of the criminal justice officer. Areas of discussion will include ways to improve the student's flexibility, dynamic strength, dietary practices, and physical endurance. Students enrolled in this course will be expected to develop and implement a conditioning process for themselves during the two-year program to satisfy graduation requirements. Students will have to meet specific physical conditioning requirements as described in this course. This course is graded Satisfactory/Unsatisfactory.

5209 Principles of Criminal Justice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

During this introductory course students will examine the criminal justice system, including the role of the police, the courts, and the correctional system. An analysis of the agencies involved and the process of administration of criminal justice is also discussed.

5215 Basic Investigation

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 1200 (or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test) and C grade (2.00) or better in 5210 and all previous CJT courses, acceptance into the OPOTC/COTC Basic Police Academy Program, or permission of the instructor.

Please Note: If a Criminal Justice student has not taken Geometry within the last five (5) years receiving a C grade (2.00) or better, 1203 must be taken prior to enrollment in 5215. Students who have not met the geometry requirement will be removed from 5215 class rosters.

The emphasis of this course will deal with basic investigative techniques and procedures. The student will learn the fundamentals of obtaining evidence from witnesses and crime scene searches. The student will establish corpus delicti and how to prepare the necessary reports associated with the crime scene.

5223 Public Service Practicum

2 credit hours, 14 contact hours (14 hour per week in a practicum setting). Prerequisite: Second year standing in the Criminal Justice Technology with C grade (2.00) or better in all Criminal Justice technical courses. In addition, Criminal Justice Technology, Human

Services Option students must have a C grade (2.00) or better in 5280, 5281, 5284 (or concurrent enrollment in 5284) and 5286 to participate in this course. S/U Graded Course.

Pre-service students gain valuable experience and insight into the practical operations of a public service related agency through work assignments. A seminar (discussion time) will be arranged throughout the quarter to discuss the activity in which the students are participating. This course is recommended to all pre-service students and is offered on a satisfactory/unsatisfactory basis.

5230 Probation and Parole

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5210 or permission of the instructor.

This class will concentrate on the concept of probation and parole in the Criminal Justice system and its relevancy to the offender. Discussion on the changes in the legal and philosophical aspects since their inception and upon the loss and restoration of rights of the convicted will be emphasized.

5233 Adult/Juvenile Corrections

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5230 or permission of the instructor.

This course will cover the various views of corrections prevailing in different parts of the country and among the different specialties within the field. Students will discuss the divergent interpretations of correctional objectives and the means by which those objectives should be achieved and implemented.

5234 Community-Based Corrections

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5233 and 5266.

This course will provide the student with an understanding of alternatives to incarceration in penal institutions. The student will understand the advantages of keeping offenders in the community.

5235 Constitutional Law and Evidence

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (5208 or 5209) and 5262.

This course will provide the student with an understanding of the U.S. Constitution. The focus will be on the Bill of Rights and the Constitutional Law cases that are affected by the Bill of Rights. The Laws of Evidence will also be presented and discussed. The

relationship the Bill of Rights has with the Laws of Evidence will enable the student to prepare cases for prosecution while protecting the rights of the accused. This course will assist the student in understanding the different kinds of evidence that may be collected from various sources.

5237 Basic Jail Training I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5210 or permission of the instructor.

Students will receive the standardized form of jail training for full-service facilities. This first course includes study of the legal issues, role of the corrections officer, facility security and booking, handling and cell searches.

5238 Basic Jail Training II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5237.

This is the second part of the Basic Jail Training course. This is part of the standardized form of correctional officer basic training for the State of Ohio. In this phase students will study interpersonal communications, jail security and emergency procedures.

5239 Human Relations in Criminal Justice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (5208 or 5209) or permission of the instructor.

Good human relations are an integral part of any Law Enforcement or Correctional agency. The purpose of this course is to provide the student with an understanding of what human relations are, how to improve human relations through self-development, and how to apply those skills in dealing with domestic disputes and crisis through role-playing scenarios.

5240 CA and BPA Criminalistics

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Acceptance into the OPOTC/COTC Basic Police Academy Program.

The student will be involved in the study and application of scientific crime detection techniques with emphasis on ballistics, fingerprints, blood tracing, and other on-the-scene forensics techniques. This courses includes photography as applied to investigation with emphasis on techniques and darkroom processing.

5242 Community Policing

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Law

Enforcement experience or permission of the instructor.

Community policing is a new philosophy of policing based on the concept that police officers and private citizens can work together in creating ways to solve contemporary community problems related to crime, fear of crime, social and physical disorder, and neighborhood decay. Students will review new programs and discuss methods of problem solving and implementation. Discussion will also focus on traditional policing.

5243 Proactive Police Leadership

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5242, law enforcement personnel, or permission of the instructor.

This course has been designed to provide the knowledge to lead police agencies into the future. It concentrates on proactive leadership, not necessarily a single rank, from supervisor, mid-level or chief executive officer, but a combination of these titles or ranks. This course first examines the historical management theories, budget and planning, then moves to operational considerations. The need to develop a new breed of realistic leaders (police manager) who can evaluate, critically, and implement selected innovations. Proper applications of those appropriate programs should lead to a more proactive agency.

5244 CA and BPA Investigations

4 credit hours, 12 contact hours (2 hours lecture, 3 hours lab, and 7 hours directed practice). Prerequisite: Enrollment in the College Police Academy (all other CJ students must take 5215) in the second year or permission of the instructor.

The emphasis of this course will deal with basic investigative techniques and procedures. The student will study the fundamentals of obtaining evidence from crime scene searches and from witnesses. During mock crime scenes the student will establish corpus delicti and the preparation of necessary reports, crime scene sketches and photography. 5215 does not substitute for this course.

5245 Security Administration

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Second year Criminal Justice Technology student with a C grade (2.00) or better in all previous Criminal Justice technical courses.

Students will study the role of a security officer and examine the Ohio Revised Code criminal law. The students will learn the laws of arrest and search and seizure. This course provides the proper introduction into the Security Academy.

5246 Loss Prevention and Safety

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Second

year Criminal Justice Technology student with a C grade (2.00) or better in all previous Criminal Justice technical courses.

The student will study different means of providing security for both internal and external sources. The student will also learn practical measures for providing safety to organizations.

5247 Human Relations in Security

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Second year Criminal Justice Technology student with a C grade (2.00) or better in all previous Criminal Justice technical courses.

Students will study general skills required for effective human relations. Students will learn specific skills and techniques for dealing with special situations encountered by the security officer.

5248 Security Operations

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Second year Criminal Justice Technology student with a C grade (2.00) or better in all previous Criminal Justice technical courses.

Students will learn the art of conducting a basic criminal and traffic accident investigation. The student will learn how to gather information for conducting an investigation and writing the necessary reports associated with the investigation.

5249 Security Skills

3 credit hours, 7 contact hours (0 hours lecture and 0 hours lab, 7 hours directed practice). Prerequisite: Second year Criminal Justice Technology student with a C grade (2.00) or better in all previous Criminal Justice technical courses (Security Academy only).

Students will learn the legalities in the use of force. Firearms training, including all safety precautions, will prepare the student in the use of firearms. The student will also learn the techniques of unarmed self-defense.

5253 Unarmed Self-Defense I

1.5 credit hours, 3 contact hours (0.5 hour lecture and 2.5 hours lab). Prerequisite: Criminal Justice Technology students only with C grade (2.00) or better in Criminal Justice technical courses or permission of the instructor. S/U Graded Course.

The student will learn the basic principles and tactics of unarmed self-defense. They will also learn how to defend against physical attack, control aggressive behavior, and the effect on an arrest using the minimum amount of force. Use of the straight baton will also

be discussed. This course is graded Satisfactory/Unsatisfactory.

5254 Unarmed Self-Defense II

1.5 credit hours, 3 contact hours (.5 hour lecture and 2.5 hours lab). Prerequisite: C grade (2.00) or better in 5253 and all previous CUT courses or permission of the instructor. S/U Graded Course.

The student will receive additional practice in the art of unarmed self-defense. During this course the student will be tested for OPOTC certification. This course is graded Satisfactory/Unsatisfactory.

5255 Physical Conditioning II

1.5 credit hours, 3 contact hours (.5 hour lecture and 2.5 hours lab). Prerequisite: C grade (2.00) or better in 5204 or permission of the instructor. S/U Graded Course.

This course is a continuation of 5204 Physical Conditioning I. Students will be involved in their assigned conditioning program. This course is graded Satisfactory/Unsatisfactory.

5258 Public Service Seminar

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Final quarter Criminal Justice Technology students only with C grade (2.00) or better in all Criminal Justice technical courses or by permission of the instructor.

This last quarter course will center on the current events that have a significant impact on the Criminal Justice System. The students will take part in discussing the most current events that have changed the way the system works.

5259 Law Enforcement Seminar

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Final quarter Criminal Justice Technology, Law Enforcement Option students only; students must have successfully completed 5267, 5272 and 5273 with a C grade (2.00) or better.

This course is to be taken in the final quarter of the program. The student will discuss and perform previously learned techniques as recommended for a peace officer in the State of Ohio. At the completion of this course the state examination will be given.

5262 Government and Courts

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

The first quarter Criminal Justice course will examine the federal, state, and local governments and their respective courts. Students will become familiar with the purpose

and functions of our governments and the courts. This course will prepare the student for future courses in law enforcement and corrections.

5263 Criminology

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (5208 or 5209) or permission of the instructor.

This course involves the study of crime and criminal behavior. The student will study the nature and causes of crime and the theories dealing with criminal behavior and delinquency.

5264 Crime Prevention

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5210 or permission of the instructor.

The student will be introduced to the preventive as opposed to the reactive methods of criminal interception through exposure to a variety of programs applicable to crime prevention. Statistical analysis of crime patterns are interpreted and methods for involving citizens and others to become involved are developed in this program.

5266 Juvenile Process

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

The Juvenile System is somewhat similar to the Adult system, yet the study of the system is unique to those who work in the Criminal Justice System. For every similarity between the two systems, there are as many differences. This course will enhance the student's understanding of these differences. Juvenile criminal behavior will be discussed as it relates to the theories of criminal behavior. This course will focus on these theories of criminal behavior, the classifications of juvenile offenders, laws which pertain to juvenile offenders, the court process, and the types of juvenile correctional institutions and diversion programs.

5267 Medical First-Responders

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Criminal Justice Technology students only with C grade (2.00) or better in Criminal Justice technical courses or permission of the instructor.

Students will study the emergency techniques utilized by first responders to an accident or other medical emergencies. The program is recognized by public safety agencies in the State of Ohio.

5268 Victimology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

The student will look at the growing concern for the plight of crime victims and the exploitation of the victimization experience. This course will also cover the losses that burden victims of business and various kinds of street crime.

5269 Sociology of White Collar Crime

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None.

This course will define and identify white collar crime as it operates in our society. A professional code of conduct and ethics of the individual will be emphasized. Discussions will center on various types of white collar crime to include organizational, occupational, professional and organized crime.

5272 CA and BPA Skills I

3 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, 8 hours directed practice). Prerequisite: Acceptance into the OPOTC/COTC Basic Police Academy Program.

The student will learn and practice the basic skills for survival. Subject areas include self-defense, first aid, and physical conditioning. This course is partial fulfillment of the Ohio Peace Officers Training Council=s Certificate Program.

5273 CA and BPA Skills II

3 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, 8 hours directed practice). Prerequisite: Acceptance into the OPOTC/COTC Basic Police Academy Program.

The student will learn the fundamentals of weapon craft with the handgun and shotgun and qualify with each weapon. Also, the course includes defensive driving, pursuit and maneuverability. This course is partial fulfillment of the Ohio Peace Officers Training Council=s Certificate Program.

5275 Criminal Law

3 credit hours, 8 contact hours (2 hours lecture, 0 hours lab, and 6 hours directed practice). Prerequisite: Admitted to the CA or BPA Criminal Justice Technology program with completion of required documents and approved by faculty.

Students will develop an understanding of the Ohio Revised Code. Students will study the criminal code as it pertains to criminal justice procedures. Students will be able to recognize violations of the law and appropriate statutes pertaining to these violations and apply the procedures through practical application. Included in this course are guidelines pertaining to laws of arrest, search and seizure.

5276 Traffic Enforcement

5 credit hours, 11 contact hours (3 hours lecture, 3 hours lab, and 5 hours directed practice). Prerequisite: Admittance to the CA or BPA Criminal Justice Technology program only by faculty.

The student will study the traffic enforcement responsibilities of a peace officer and the purposes of traffic enforcement. This course includes the laws of motor vehicle offenses, commercial vehicle offenses, and traffic accident investigation. Alcohol detection, apprehension and prosecution is included as part of this course.

5277 Human Relations in Law Enforcement

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Admittance to the CA or BPA Criminal Justice Technology program only by faculty.

The student will learn the techniques in responding to situations regarding people with specific problems. This area of study includes handling of special needs population, domestic violence, missing and abused children. Also, the student will learn crisis intervention, victim rights, juvenile justice and crime prevention techniques.

5278 CA and BPA Patrol

4 credit hours, 10 contact hours (2 hours lecture, 1 hour lab, and 7 hours directed practice). Prerequisite: Admittance to the CA or BPA Criminal Justice Technology program only by faculty.

This course is designed to familiarize the student with the police patrol function. The subjects that are covered provide the basic knowledge to enable the student to safely conduct the required tasks. Areas of instruction include patrol, traffic, civil disorders and prisoner booking.

5279 CA and BPA Administration

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Admitted to the CA or BPA Criminal Justice Technology program upon completion of required documentation and approved by faculty.

The student will learn the basics regarding the role of the American Peace Officer, the structure of the system and methods of dealing with the citizens they serve, both ethically and professionally. This course defines Community Policing and establishes guidelines for developing community policing programs.

5280 Principles of Social Work

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Students enrolled in Criminal Justice Technology, Human Services Option or any option of the Human Services program must maintain a C grade (2.00) or better in all courses except science or math.

In this course students are acquainted with the field of human services, social work, and related professions, including history and development, legal and ethical issues, and various settings in which services are provided. The roles and functions of the skilled helper in the field of human services will also be examined.

5281 Interpersonal Skills

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None.

This course presents basic interpersonal and interviewing skills, with special emphasis on techniques relevant to diverse populations and a multicultural society. Topics include rapport building, active listening, and verbal and non-verbal communication skills utilized in helping relationships. Techniques will be practiced through videotaped role-playing.

5282 Counseling Theories

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1386 or by permission of the Division Chair or instructor.

This course presents the major concepts and techniques associated with various counseling theories. Emphasis is on the practical application of techniques, including the advantages and disadvantages of each and the impact on the client-helper relationship.

5284 Group Dynamics in Human Services

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5281 or by permission of Division Chair or instructor. Students enrolled in Criminal Justice Technology, Human Services Option must maintain a C grade (2.00) or better in all technical courses.

This course presents the basic principles of therapeutic group dynamics utilized in the field of human services. Topics include group formation, process, stages of development, leadership skills, and conflict resolution. Students are provided with an experiential awareness of group dynamics and practice of interpersonal skills through participation as a group member in the laboratory setting. Students also practice group leadership skills in this group laboratory setting.

5285 Human Services Seminar

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Criminal Justice students only with a C grade (2.00) or better in Criminal Justice technical courses or by permission of the Division Chair or instructor. Students enrolled in Criminal Justice

Technology, Human Services Option must maintain a C grade (2.00) or better in all technical courses.

This last quarter course will center on the current events and public policy issues that have a significant impact on the human services system. Students will be provided the opportunity to discuss personal experiences in the human services field and will be required to develop a personal assessment portfolio.

5286 Case Management - Human Services

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None.

This course provides the student with basic knowledge and beginning skills in case management. Topics introduced include observation, data collection, documentation, and reporting of client behaviors, as well as identification and referral to appropriate services.

5288 Counseling Skills

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5281.

This course builds on the basic interpersonal and interviewing skills learned in the previous course, with special emphasis on learning advanced skills that are appropriate in a helper/helped relationship. Topics include techniques related to confrontation, focusing, influencing strategies, skill integration, and determining personal style. Techniques will be practiced through videotaped role-playing.

5289 Human Services Practicum I

4 credit hours, 18 contact hours (2 hours lecture and 0 hours lab, 0 hours lab, 16 hours practicum). Prerequisite: Must be enrolled in Human Services program; must have a minimum of 50 quarter hours with a C grade (2.00) or better in EVERY course completed from the Plan of Study except 1201 Business Mathematics and 4081 Human Biology; and must have permission of the Program Director. The student must meet with the Program Director NO LATER THAN the FOURTH week of the quarter PRIOR to when he/she wishes to begin a Practicum. Courses completed must include the following: 1386, 1502, 1503, 4052, 5280, 5281, 5284, 5286, 5288, 5300, and (5302 or 5310 or 5320). Certain conditions, including but not limited to the following, could result in dismissal from the Human Services program and/or failure to qualify for Practicum placement: felony conviction (within last 2 years) and/or pending charges; current relapse from drug and/or alcohol recovery (within last 12 months); conviction and/or pending charges related to child endangerment; falsification of any documents.

This course is designed to provide 160 clock hours of practical experience in the field of human services. Students will be placed in a human service agency where they will learn agency policies and procedures, observe professionals at work, and practice their own human service skills. Supervision will be provided by a qualified professional and an

appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

5290 Behavior Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1386, or by permission of the Division Chair or instructor.

The emphasis of this course is on the fundamental principles of behavior management and the effective use of behavior modification techniques with diverse populations. Relevant terminology, data collection, behavioral analysis, and practical application of techniques will be among the topics covered.

5291 Therapeutic Activity Programming

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None.

This course presents the basic philosophy and use of activities as a therapeutic tool for diverse populations. Activity assessment, planning, development, and delivery will be covered in areas such as art, crafts, drama, music, and recreation. Students will gain experience with development of therapeutic activity programs in the laboratory setting.

5292 Juvenile Delinquency

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1381 (or 1380), or by permission of the Division Chair or instructor.

This course examines the juvenile delinquency situation in the United States and its impact on society. Specific attention is given to theoretical perspectives on the factors influencing delinquency, patterns of delinquency, and intervention strategies for prevention of delinquent behavior. Institutional and/or legal responses to dealing with juvenile delinquents will also be covered.

5293 Community Mental Health Issues

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1397, or by permission of the Division Chair or instructor.

This course surveys the nature of mental illness and mental health as well as the organization of mental health services. Topics covered include current identification and classification systems for mental health disorders, dual diagnosis, community based and residential treatment, the societal impact of deinstitutionalization, and strategies for meeting the individual and community needs of diverse populations.

5297 Crisis Intervention

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade

(2.00) or better in 5281 or permission of the Division Chair or instructor. Not open to students with credit for 5287.

This course emphasizes assessment of diverse crisis situations with emphasis on the use of short-term intervention and problem-solving techniques to help individuals and families de-escalate crisis situations and develop appropriate coping techniques. Students must demonstrate skills in laboratory experiences.

5298 Human Services Practicum II

4 credit hours, 19 contact hours (2 hours lecture and 0 hours lab, 17 hours practicum). Prerequisite: Must be enrolled in Human Services Program, have permission from the Program Director, and have a C grade (2.00) or better 5289.

This course is designed as a continuation of practical experience and provides an additional 170 clock hours in a human services agency. Students will increase their level of responsibility in implementing their human services skills. Supervision will be provided by a qualified professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

5300 Principles of Chemical Dependency

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab)
Prerequisite: None.

This course explores chemical dependency issues from a historical, cultural, and legal perspective. Current theories of addiction are presented, as well as physiological effects and categorization of numerous addictive substances. An overview of treatment and prevention will also be included.

5301 Pharmacology of Chemical Dependency

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1386 and 5300 (or 5270) or by permission of the Division Chair or instructor.

This course extensively examines the composition, uses, and effects of various addictive substances. A comprehensive overview of the central nervous system and drug/neurotransmitter interactions will also be covered.

5302 Prevention and Treatment of Chemical Dependency

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 5300 (or 5270) or by permission of the instructor or Division Chair.

This course covers the theory and practices related to chemical dependency treatment.

Strategies and community resources useful in preventing chemical dependency and/or relapse are also presented.

5303 Family Dynamics and Addiction

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5300, or by permission of the Division Chair or instructor.

This course will survey various addictions and examine the interrelationship between family dynamics and the addiction process. Examples of topics include co-dependency, children of alcoholic parents, compulsive gambling, prescription and non-prescription substance abuse, and eating disorders.

5304 CD Issues with Special Populations

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5300 (or 5270) or by permission of the Division Chair or instructor.

This course will explore the psychosocial aspects of chemical dependency across the lifespan, as well as within particular populations. Examples of populations covered include the elderly; ethnic minority groups; gays and lesbians; adolescents, including juvenile delinquents; persons who are homeless; and persons who are physically and/or mentally challenged.

5308 Practicum in CD Counseling

4 credit hours, 19 contact hours (2 hours lecture and 0 hours lab, 17 hours practicum). Prerequisite: Must be enrolled in the final quarter of the Human Services Program, Chemical Dependency Counseling Option, have permission of the Program Director, and have a C grade (2.00) or better in 5298.

This course is designed as the culmination of practical experience and provides an additional 170 clock hours in a human services agency. Students will be placed in an agency that provides chemical dependency counseling services to clients. Students will implement the specific skills appropriate to this area of specialty with supervision provided by a qualified professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

5310 Foundations of MR/DD

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course presents an overview of past, current and future trends in the MR/DD field. Topics covered include terminology, legal issues, etiology, and provision of services.

5311 Habilitation Programming

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5310, or by permission of the Division Chair or instructor.

The process by which habilitation services are provided is the focus of this course. Topics include evaluation, program plan development, and implementation. Theoretical aspects as well as practical application of techniques will be covered.

5312 Principles of Work for MR/DD

3 credit hours, 3 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5310, or by permission of the Division Chair or instructor.

This course explores the basic principles of providing work experiences and opportunities to persons with disabilities. Topics covered include comprehensive job analysis, application of job techniques, legal issues, and discussion of both community and sheltered work settings.

5318 Practicum with MR/DD

4 credit hours, 19 contact hours (2 hours lecture and 0 hours lab, 17 hours practicum). Prerequisite: Must be enrolled in the final quarter of the Human Services Program, Mental Retardation/Developmental Disabilities Option, have permission of the Program Director, and have a C grade (2.00) or better in 5298.

This course is designed as the culmination of practical experience and provides an additional 170 clock hours in a human services agency. Students will be placed in an agency that provides services to persons who are mentally retarded and/or developmentally disabled. Students will implement the specific skills appropriate to this area of specialty with supervision provided by a qualified professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

5320 Social Work Practice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5280, or by permission of the Division Chair or instructor.

An introduction to the generalist model of social work and its application is provided in this course. Practice method and skills are emphasized, including data gathering, assessment and planning, intervention strategies, evaluation and termination.

5321 Social Welfare and Policy

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5280, or by permission of the Division Chair or instructor.

This course examines the programs and policies of the social welfare system in the United States. Historical development as well as current policies and trends will be analyzed.

5322 Social Gerontology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

In this course the knowledge and principles of generalist social work practice are applied to working with people in late adulthood. The physical, cognitive, and psychosocial aspects of aging will be discussed. Special emphasis will be placed on strategies for meeting the needs of an aging population through community and institutional services.

5324 Social Problems

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5280, or by permission of the Division Chair or instructor.

In this course a variety of selected social problems in contemporary society are studied. Special emphasis is given to the analysis of the problems and evaluation of potential solutions. Social problems to be covered will include both micro-level and macro-level social issues.

5328 Practicum in Social Services

4 credit hours, 19 contact hours (2 hours lecture and 0 hours lab, 17 hours practicum). Prerequisite: Must be enrolled in the final quarter of the Human Services Program, Social Services Option, have permission of the Program Director, and have a C grade (2.00) or better in 5298.

This course is designed as the culmination of practical experience and provides an additional 170 clock hours in a human services agency. Students will be placed in an agency that provides social services and will implement the specific skills appropriate to this area of specialty with supervision provided by a licensed professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

5380 Strategies for Change in Human Services

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be currently employed by a TOPS approved Agency--CDHS or CSEA.

In this course participants begin to develop concepts for program change, explore factors that underlie stress, and examine positive team-building strategies through a variety of learning exercises including group discussion, role-play, brainstorming, and various investigatory activities.

5381 Supervision for CDHS/CSEA Collaboration

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be currently employed by a TOPS approved agency -- CDHS or CSEA.

The course presents methods that aid the human services worker in understanding and coping with the changing human service delivery system including fostering cooperative working relationships between the human services agencies. Through a variety of learning exercises including group discussion, role play, case studies, simulation, brainstorming, problem solving activities and other learning techniques, the student will begin to develop insights and skills necessary for the cultivation of cooperation, collaboration, and team work, the elements required to bring about change.

5382 Maintaining Professional Safety in Human Services

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be currently employed by a TOPS approved agency--CDHS or CSEA.

This course presents the necessity of workplace safety awareness in human services including reducing the chances of being victimized and basic self-defense strategies. Methods of promoting safety by developing rapport, recognizing cultural distinctions and minimizing the risk of threatening situations will be presented. Further, the course will introduce the concepts of mental health awareness as a foundation for safety and safety and the law.

5510 Principles of Forensics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1225 and 5209 or permission of the instructor or the Division Chair.

The purpose of this course is to provide the student with an overview of the various disciplines of forensic science and how they relate to the identification, detection, and solution of crime. The student will learn the significance of crime scene searches including the identification and preservation of potential evidence. The student will be introduced to the role of the criminalistic laboratory in developing and running comparisons of physical evidence from fingerprints to ballistics and toolmarks. Further areas to be introduced will be chemical evidence for drug identification, toxicology testing to reveal the presence of drugs and other chemicals in the human body, and seriological testing to establish the relationship of biological fluids to a suspect or victim. This course provides the framework for the skills needed by the crime laboratory technician.

5515 Forensic Firearms

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Must be accepted in to the Forensic Science Technology program, concurrent enrollment in 5510,

or C grade (2.00) or better in 5510.

The student will learn firearm safety techniques including unloading weapons and transporting them to the lab in the appropriate manner in accordance with all safety measures. The student will be introduced on how to test fire a weapon while maintaining all safety requirements. This course will allow the student to test fire weapons safely for ballistics tests and bullet comparison test.

5520 Legal and Evidentiary Aspects of Forensics

4 credit hours, 5 contact hours (3 hours lecture and 2 hour lab). Prerequisite: C grade (2.00) or better in 5209 and 5510 or permission of the instructor or the Division Chair.

The student will learn the law of search and seizure as it relates to the lawful collection of evidence at a crime scene; constitutional and statutory provisions applicable of forensic testing; and evidentiary rules applicable to testifying as a forensic science expert in court. The student will be able to recognize constitutional and other legal concerns associated with collecting and testing evidence, and thereafter testify as an expert. The student will apply this knowledge in a simulated crime setting. The student will participate in a mock trial or a trip to watch a live trial involving expert forensic testimony.

5522 Forensic Photography I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Acceptance into the Forensic Science Technology program, C grade (2.00) or better in 5215, 5510 and 5515, or permission of the instructor or the Division Chair.

The student will learn the use of a 35mm camera, which will include shutter speeds, f-stops, film speed, depth of field, various lenses, and focus. Both natural light and artificial light will be used in photography techniques as they relate to police and forensic photography. The student will learn to develop their own film and how to produce a finished photograph, enlarge it, and how to use the film dryer.

5523 Forensic Photography II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5522.

The student will learn techniques in lighting, filters, crime scene photography, accident photography, arson scene photography, alternative light photography, and infra red photography. Microscopic, macro, and telephoto techniques will be used in police and crime laboratory settings. Legal aspects and court presentation of photographs will be discussed.

5530 Forensic Criminalistics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5215, 5510 and 5515 or permission of the instructor or the Division Chair.

The student will be involved in the study and application of scientific crime detection techniques with emphasis on collection of physical evidence, fingerprint development, identification of known to unknown fingerprint and palm prints. The student will learn footprint recovery and identification, tool mark comparisons, and blood spatter analysis. The student will participate in courtroom testimony and learn what is required of an expert witness.

5531 Forensic Criminalistics II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5530.

The student will be involved in the study of scientific crime detection techniques with emphasis on ballistics, trace metal, gun powder, residue, hair and fiber evidence, paint comparison and physical comparisons. The student will participate in courtroom testimony and what is required from an expert witness.

5532 Introduction to Laboratory Instrumentation

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 1225, 3026 and 5510 and concurrent enrollment in 5533.

The student will learn that advances in the technology of laboratory instrumentation have enabled technicians to replace highly trained analytical chemists in the routine work of the forensic laboratory. The purpose of this course is to introduce the student to the basic underlying principles of spectroscopy and chromatography, the techniques of identification and separation science. The student will become familiar with the Beer-Lambert Law which provides the theoretical basis for quantitative spectroscopy. The student will be exposed to the common principles which run through thin-layer, liquid and gas chromatography. The student will learn the basic principles of operation for the gas chromatography detectors, their limits of delectability and their application to analysis for forensic evidence.

5534 Instrumentation Analysis

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: This course must be taken concurrently with 5532.

Through demonstration and hands on experience, the student will expand their theoretical knowledge with practical illustration of spectrophotometers and chromatographs. Through examples of actual casework, the student will apply visible ultraviolet and infra red spectroscopy. The student will also apply gas chromatography to alcohol and drug

analysis. The student will gain experience the application of the combined technique, gas chromatography/mass spectroscopy to forensic problems.

5535 Forensic Toxicology

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5532 and 5533.

The student will learn the adverse effects of drugs and chemicals upon the human body. Forensic toxicology is concerned with not only the identification and quantitation of chemicals, but also the relationship of any levels detected in body fluids or tissues to the impairment of a person=s health or behavior. The student will focus on the pharmacology of alcohol and the major drugs of abuse and their detection in breath, blood, urine, and saliva. Demonstrations and laboratory work will be essential to the student=s successful completion of this course.

5538 Questioned Documents

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 5520.

The student will learn through lecture, demonstration, and laboratory work, an overview of the field of questioned document examination. The field of document examination has traditionally been one of more art than science involving the carefully trained eye of an expert technician. Now, science, with the aid of computer-driven equipment, can compare handwriting, raise obliterated text, and detect subtle changes in style. Forged signatures and bad checks along with computer assisted forgeries will be examined, as well as document alterations and wire fraud.

5545 Forensic Science Practicum I

2 credit hours, 7 contact hours (1 hour lecture, 0 hours lab, and 6 hours practicum). Prerequisite: Student must have completed a minimum of 77 credit hours with a C grade (2.00) or better, including the following courses: 1210, 1225, 3026, 4070, 4081 (or 4080), 5209, 5532, 5534 (or 5533) and 5535 (or concurrent enrollment in 5535).

This purpose of this course is to expose the student to applications of their knowledge and training through practical experience situations in a forensic science setting. Through a consortium of cooperating crime laboratories and coroner offices, the student will have the opportunity to interact with professionals who are daily involved with the scientific identification, detection, and solution of crime. The emphasis for this course will be on the criminalistics and forensic toxicology fields. A written summary of the student=s work will be required to evaluate their basic understanding of the responsibilities of the functions of the forensic science technician.

5546 Forensic Science Practicum II

2 credit hours, 8 contact hours (1 hour lecture, 0 hours lab, and 7 hours practicum). Prerequisite: C grade (2.00) or better in 5522, 5523, 5530, 5531, 5545 and 5548 (or concurrent enrollment in 5548) and permission of the instructor.

The student will increase their level of competency in forensic Science with emphasis on all areas of Forensic Science. The student will receive more advanced practical experience and will be challenged to more complex crime scenes to process. The student will also learn the role of the coroner in the State of Ohio and will work with the coroner when possible to understand the necessity for care and attention to details for investigative forensic people for the successful conclusion of a case.

5547 Forensic Serology

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1210, 1225, 3026, 4070, 4081 (or 4080), 5209, 5215, 5510, 5532 and 5534 (or 5533).

The purpose of this course is, through lecture, demonstration and laboratory, to overview the field of serology with an emphasis on forensic application. The course will comprise a review of the formed elements of the blood and other biological fluids such as saliva, perspiration, milk, and semen. The traditional immunological techniques used for identification and blood grouping of fluids and dried stains will be emphasized by lecture and lab. The principles of DNA testing will be explained and demonstrated. The student will learn to apply the most appropriate technique to their specific serological circumstance.

5548 Advanced Crime Scenes

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5215.

This course will prepare the student for court preparation of crime scenes. The student will process crime scenes and then draw the scenes both manually and on a computer for court presentation. The student will learn how to reenact a crime scene for presentation in court.

5549 Fires and Explosions

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1225, 3026, 4070, 5215, 5510, 5522 and 5523.

The purpose of this course is to be able to determine the cause of fires and explosions. Finding the point of origin and determining the cause at a scene will be discussed. Familiarity with chemical and physical principles are necessary in these investigations and the conditions which influence the growth, spread, and development will be reviewed. Emphasis will be placed on techniques for debris removal and scene reconstruction and

examination of evidence. The use of alternative light sources to find and analyze evidence will be discussed and illustrated.

5611 Observation of Young Children

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Concurrent enrollment in 5614 (or credit for 5612 with a C grade or better).

The student will be introduced to the role of observation in the development of effective curriculum and teaching practices in the early childhood setting. A range of observational techniques that will contribute to classroom management, psychological/educational assessment, and criterion-referenced assessment will be among the topics covered.

5614 Introduction to Early Childhood Education

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Concurrent enrollment in 5611.

This course will introduce the student to topics on the history of early childhood education, program descriptions, evaluation, policy concerns, and professional behavior. The underlying theories and practices of specific program models will be examined, including the Constructivist, Montessori, Bank Street, and High/Scope approaches to curriculum planning for daycare and preschool settings. The student will discover the broad range of educational strategies that are available for working with young children and their families.

5620 ECD Instructional Technology

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in 5614 and 2 credit hours of personal computer software applications also to include internet access or permission of the ECD program director.

This course will prepare the Early Childhood Development professional to design, select and analyze instructional materials, basic media options, and computer applications to enhance teaching, and maximize children=s progress. An overview of augmentative technology will be included.

5621 Experienced ECD Field Practicum

1.5 credit hours, 4.5 contact hours (1 hour lecture and 3.5 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624, 5651, 5656 and concurrent enrollment in 5629 (or 5622).

This course is designed for the highly experienced early childhood professional. The student must have written documentation of three years of direct teaching experience with at least 50 percent FTE. The student may be currently working with young children in an approved practicum site. This course is taken concurrently with 5629 (or 5622) Language

and Literacy. The student will apply the theory and methods discussed in 5629 (or 5622) within a supervised early childhood setting. Three and one-half hours will be at the practicum site and one hour in a seminar class.

5624 Curriculum Planning

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5620 and 5630 (or 5632) or permission of ECD Program Director.

In this course the student will be introduced to theories of classroom planning and instruction. Specific topics will include planning and assessment, teaching strategies, classroom transitions, guidance techniques with special attention to exceptionality and cultural diversity.

5625 ECD Field Practicum

2 credit hours, 8 contact hours (1 hour lecture and 7 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624, 5651, 5656, and concurrent enrollment in 5629 (or 5622).

This course, taken concurrently with 5629 (or 5622) Language and Literature, will provide the student an experience in an early childhood setting. In this supervised experience, the student will apply the theory and methods discussed in 5629 (or 5622) Language and Literature. A one hour seminar for discussion of supervised experiences is required.

5629 Language, Literacy and Social Studies

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624 and 5651, and concurrent enrollment in 5621 or 5625.

In this course the student will focus on fostering early childhood language, literacy and social studies development. Specific topics will include selecting and using children's literature, developing strategies to encourage oral language development, promoting emergent reading and writing development, integrating the areas of self, family, community, and culture as a basis for history, geography, economics and multiculturalism.

5630 Child Development

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Not open to students with credit for 5632.

This course will provide an overview of available knowledge on the development of children from the time of conception through adolescence with special emphasis on the early childhood years. Students will be introduced to theories related to physical, cognitive, language, and social/emotional development. Class topics will include the discussion of

biological and environmental influences on development, such as cultural variation and exceptionality.

5631 Experienced ECD Field Practicum

1.5 credit hours, 4.5 contact hours (1 hour lecture and 3.5 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624, 5651, and 5656 and concurrent enrollment in 5639.

This course is designed for the highly experienced early childhood professional. The student must have written documentation of three years direct teaching experience with at least 50 percent FTE. The student may be currently working with young children in an approved practicum site. This course is taken concurrently with 5639 Art, Drama, Music, and Movement. The student will apply the theory and methods learned in 5639 within a supervised early childhood setting. Three and one-half hours will be at the practicum site with one hour in a seminar class.

5636 ECD Field Practicum

2 credit hours, 8 contact hours (1 hour lecture and 7 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624, 5651, 5656, and concurrent enrollment in 5639.

This course, taken concurrently with 5639 Art, Drama, Music and Movement, will provide the student a field experience in an early childhood setting. In this supervised experience, the student will apply theory and method learned in 5639 Art, Drama, Music and Movement. A one hour seminar for the discussion of the supervised experiences is required.

5639 Art, Drama, Music and Movement

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614, 5620, 5624, 5651, and 5656 and concurrent enrollment in 5631 or 5636. Not open to students with credit for 5633.

This course will emphasize the aesthetic development of children through the creative experiences of art, music, movement and drama. Age appropriate experiences in both an indoor and an outdoor setting will be discussed. This course must be taken concurrently with 5631 Experienced ECD Field Practicum or 5636 ECD Field Practicum.

5640 Parenting and Parent Education

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course is an introduction to current theories of parenting and parent education programs that focus on parenting from infancy through the early childhood years. Topics will examine guidance techniques that promote the optimum development of young

children with sensitivity to special needs and cultural variation. Students will examine ways to work with parents, individually or in groups, within the early childhood setting.

5641 Experienced ECD Field Practicum

1.5 credit hours, 4.5 contact hours (1 hour lecture and 3.5 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624 (or concurrent enrollment in 5624), 5651, 5656 and concurrent enrollment in 5649.

This course is designed for the highly experienced early childhood professional. The student must have written documentation of three years direct teaching experience with at least 50 percent FTE. The student may be currently working with young children in an approved practicum site. This course is taken concurrently with 5649 Math and Science for ECD. The student will apply the theory and methods learned in 5649 within a supervised early childhood setting. Three and one-half hours will be at the practicum site with one hour in a seminar class.

5642 Family Relationships

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None.

A general introduction to theoretical studies of contemporary marriage and family relationships from a social science perspective. The focus is on family-related issues that affect individuals throughout the life cycle. The course will include an introduction to family theories, cultural and historical influences on family life, and contemporary social issues that affect the formation and maintenance of family life.

5645 Theory and Practice of Children's Play

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course will explore the important role of play in the development of young children and ways to foster play experiences in the early childhood setting. Child-initiated and teacher-guided events of play will be discussed, including age appropriate play activities such as blocks, sociodramatic play, games, and sensorimotor play.

5646 ECD Field Practicum

2 credit hours, 8 contact hours (1 hour lecture and 7 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), 5620, 5624 (or concurrent enrollment in 5624), 5641, 5651, 5656, and concurrent enrollment in 5649.

This course, taken concurrently with 5649 Math and Science for ECD, will provide the student a field experience in an early childhood setting. In this supervised experience, students will apply the theory and methods learned in 5649.

5649 Math and Science for ECD

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5611, 5614, 5620, 5624 (or concurrent enrollment in 5624), 5651, 5656 and concurrent enrollment in 5641 or 5646. Not open to students with credit for 5643.

In this course the student will explore various ways to assist preschool children in developing specific concepts in the areas of math and science including computers and current technologies. The focus will be on setting up developmentally appropriate practices which enable children to develop critical thinking and problem-solving skills. Attention will be given to various methods of documentation of children's learning.

5650 Social Studies

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C (2.00) or better in 5611, 5614, 5620, 5651, and 5656, concurrent enrollment in 5649 and 5641 or 5646.

In this course the student will explore ways to assist children in developing specific concepts in the area of social studies. Developmentally appropriate activities for young children will be emphasized.

5651 Managing Children in Groups

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: 1502, and C grade (2.00) or better in 5611, 5614 (or 5612), and 5656. Six weeks prior to enrollment in 5651 student must meet with the ECD Program Director.

This course will focus on theories and methods of guidance techniques to manage young children in group settings. Emphasis will be in the development of adult-child communication and promotion of children's social skills. A three hour supervised campus lab experience will reinforce skills in group management and the appropriate use of time and space in the early childhood setting.

5656 Family, Child, and Community Health and Safety

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None.

This course will provide training and practice in basic First Aid, in communicable disease recognition and management, and in child abuse recognition and prevention. Meets requirements of the Ohio Department of Human Services, Child Day Care Licensing Regulations for staff in early child care settings. Local and national laws and regulations related to community health and safety will be explored.

5657 Family, Child and Community Health and Safety: Child Abuse Recognition and Prevention

1 credit hour, 2 contact hours (0.5 hours lecture and 1.5 hours lab). Prerequisite: None.

This course will provide training and practice in child abuse recognition and prevention of childhood injuries. Meets requirements of the Ohio Department of Human Services, Child Day Care Licensing Regulations for staff in early child care settings. Local and national laws and regulations related to community health and safety will be explored.

5658 Family, Child and Community Health and Safety: Disease Transmission and Prevention and HIV/Aids Fundamentals

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None.

This course will provide training and practice in basic First Aid, in communicable disease recognition, transmission prevention, and management. Meets requirements of the Ohio Department of Human Services, Child Day Care Licensing Regulations for staff in early child care settings. Local and national laws and regulations related to community health and safety will be explored.

5659 Adult, Infant and Child CPR

0.5 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: None.

This course will provide training and practice in Cardiopulmonary Resuscitation of Adult, Infant, and Child including professional rescuers. This course would meet CPR recertification requirements.

5660 ECD Seminar

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: 1201, 1386, 1389, 1504 and C grade (2.00) or better in: 4045, 5629 (or 5622), 5621 (or 5625), 5620, 5624, 5630 (or 5632), 5639 (or 5633), 5640 (or 5655), 5642, 5645, 5649 (or 5643), 5651, 5656, 5671, Computer Elective, [Experienced Option, Non Student Teaching Option, and Unexperienced Option Students: 5646 (or 5641) and 5649 (or 5643); Family Option Students: 5280, 5281 and concurrent enrollment in 5284 and 5286; Early Intervention Option Students: 5675, 5676 and concurrent enrollment in 5664 and 5677], or by permission of ECD Program Director.

This seminar provides the student the opportunity to discuss his/her experiences with children, staff, and parents in early childhood settings. Specific topics will be generated by the instructor and students according to the needs and interests of the group. The culmination of this course is the development of a Professional Portfolio which must be submitted for evaluation.

5661 Experienced Student Teaching Practicum

2.5 credit hours, 17.5 contact hours (0 hours lecture and 17.5 hours per week in a practicum setting). Prerequisite: 1201, 1386, 1389, 1504, and C grade (2.00) or better in: 4045, 5620, 5621 (or 5625), 5624, 5632, 5631, 5639 (or 5633), 5640 (or 5655), 5641, 5642, 5649 (or 5643), 5645, 5651, 5656, and 5671, and concurrent enrollment in 5669 and last quarter of enrollment. Not open to students with credit for 5662.

This course is designed for the highly experienced early childhood professional. The student will observe, participate, and be responsible for teaching in an assigned early childhood setting. In this field experience, the student will receive guidance from a qualified supervisor on a regular basis. A student must have written documentation of three years direct teaching experience with at least 50 percent FTE. The student may be currently working with young children in an approved practicum site. 5660 ECD Seminar must be taken concurrently.

5662 Student Teaching Practicum

5 credit hours, 35 contact hours (0 hours lecture and 35 hours per week in a practicum setting). Prerequisite: 1201, 1386, 1389, 1504, and C grade (2.00) or better in: 4045, 5620, 5624, 5625, 5629 (or 5622), 5630 (or 5632), 5636, 5639 (or 5633), 5640 (or 5655), 5642, 5645, 5646, 5649 (or 5643), 5651, 5656, 5671, concurrent enrollment in 5669 and last quarter of enrollment. Not open to students with credit for 5661.

In this course, the student will observe, participate and be responsible for teaching in an assigned early childhood setting. In this intensive field experience, the student will receive guidance from a qualified supervisor on a regular basis. 5660 ECD Seminar must be taken concurrently.

5664 ECD Early Intervention Practicum

3 credit hours, 15 contact hours (1 hour lecture and 0 hours lab, and 14 hours practicum). Prerequisite: 1201, 1386, 1389, 1504 and [C grade (2.00) or better in 4045, 5620, 5621, 5629 (or 5622), 5630 (or 5632), 5631, 5639 (or 5633), 5640 (or 5655), 5642, 5645, 5656, 5671, 5675, 5676 and 5677] or permission of the ECD Program Director.

The student will observe and participate in the planning and implementation of a positive learning environment for children birth to six years in a variety of settings, including classrooms, community and home based programs. The student will focus on accommodating children with special needs within the least restrictive environment, engaging parent participation and cooperating with agency professionals. The student will receive guidance from a qualified supervisor on a regular basis.

5669 Student Teaching Practicum Seminar

1 credit hour, 1 contact hours (1 hour lecture and 0 hours lab). Prerequisite: 5669 must be taken concurrently with 5661 or 5662.

This course is designed to provide the student with the opportunity to analyze and evaluate with his/her student teaching practicum experience relative to theories and practice of Early Childhood Education and aid the student in the transition from student to teacher. The culmination of this course is the development of a Student Teaching Portfolio which must be submitted for evaluation.

5671 Exceptional Children

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5630 (or 5632) and (5656 or equivalent).

This course will explore the special needs of atypical children, which include children with severe mental or physical disabling conditions, children with more mild forms of delay, and gifted children. Causes, treatment, concepts, and services available will be studied.

5674 Trends and Issues in ECD

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C (2.00) or better in 5614 or experience in Early Childhood Education and permission of the ECD Program Director or Division Chair.

In this course the student will explore historical and contemporary issues affecting children, family, community and the early childhood professional. Topics will include societal views of children, early childhood professionalism, current research and future implications.

5675 ECD Early Intervention Family Dynamics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 5642 or approved early intervention course work or experience and permission of the ECD Program Director.

This course examines the function and structure of the relationship and interaction among the family, helping professional and the child, birth to age six years with special needs. The student will complete structured observations and interviews with community professionals and families emphasizing an individualized family service planning.

5676 Team Models and Community Collaboration

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: 5310 or 5614 or permission of the ECD Program Director.

This course is designed to familiarize the student with the importance of early intervention team models and community collaboration. Focus will be with the development of cooperative community services for children birth to six years and their families. In addition, the student will explore the formation of group processes, team leadership and the coordination of the individualized service plans for the family and child.

5678 Early Intervention Assessment Practices

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: 5611, 5621, 5631, 5630 (or 5632), 5651, 5671, 5681, or approved early intervention course work or experience and permission of ECD Program Director.

This course is designed to provide basic knowledge of finding, screening, and assessing children, birth to age six, who are at risk and need further assessment. The student will become familiar with a wide range of diagnostic assessment instruments and procedures that encompass the developmental needs of the whole child involving the family, appropriate community resources and professionals. The student will complete structured observations of typically developing children and assist with the screening and assessment of children with special needs.

5680 Administration in Early Childhood Programs

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Successful completion of Field Practicum or equivalent and written permission of the instructor.

This course is designed for the student interested in the administration of Early Childhood care and education programs. The focus will be on operational planning to include curriculum, parent programs, staff management, community involvement, legal responsibilities, and hiring requirements. Establishing and maintaining effective fiscal practices will be explored.

5681 Infant and Toddler Development and Care

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

Students will explore issues and theories related to physical, cognitive, language and social emotional development of infants and toddlers, birth to three years. Focus will be in infant-toddler parental care and group care settings. Students will assess curriculum and activities appropriate for infant-toddler groups.

5682 Children's Mental Health Issues

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course will explore children's mental health issues related to self-esteem, development, the effects of adult life choices, and the effects of current day stressors.

5683 School Age Programs and Care

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course is designed to assist care givers of school ages in understanding the needs elementary school age children have for programs and care outside of school hours. Students will explore developmentally and culturally appropriate activities, positive guidance, and communication guidelines.

5700 Principles of Fire Technology

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Must have completed the Professional Firefighter Course for admittance into the Fire Science Program.

This course provides an overview of the fire science including a history of loss of life and property by fire. Students are exposed to issues concerning careers, ethics, records and reports, and insurance ratings.

5701 Principles of Fire Protection Systems

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 5700, acceptance into the Fire Science Program or instructor approval.

The principles of design, application and operation of fire detection, alarms, and suppression systems. Study of extinguishing agents and their application. Analysis and evaluation of specific NFPA code requirements related to the design, inspection, testing, and maintenance of fire protection systems.

5702 Legal Aspects in Fire Service

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 5700.

A study of legislative and legal decisions relating to personnel practices, employee safety and public protection in fire safety services. A review of NFPA Standards most commonly used within the fire services and specific electrical/building codes. Some emphasis will be on the legal responsibilities, liabilities, and authority of the practitioner.

5703 Chemistry and Dynamics of Fire

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1225.

Introduction of the chemistry and dynamics of fire as it relates to properties of hazardous materials and the development of fire in a structure. This course applies the principle of fire chemistry to the science of fire and fire extinguishment.

5704 Principles of Fire Safety Inspection and Enforcement

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 5701 and 5702.

Course of study follows fire inspection objectives as part of code enforcement, identifying fire hazards, proper fire protection systems, mapping and technical information on buildings.

5705 Physical Conditioning for Fire Service I

1.5 credit hours, 3 contact hours (.5 hours lecture and 2.5 hours lab). Prerequisite: None.

This course is designed to prepare the students for the riggers of fire service. Strength, dexterity, and endurance are covered as well as diet.

5706 Building Construction of Fire Service

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade or better in 3748 or concurrent enrollment in 3748.

Study of building construction and materials as fire protection features. This course covers relative resistance of fire, flame, and smoke spread of various types of construction and the ways in which structural failure can occur during a fire. Students learn to recognize structure shortcomings requiring pre-emergency planning and to evaluate blue prints.

5707 Fire Hydraulics and Pump Operation

5 credit hours, 6 contact hours (4 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in 1225 and 5703.

This course covers the fundamental principles of water movement through pump, pipe and fire hose. The application of formulas to solve friction loss, flow rate, engine and nozzle pressures, evaluation of water supplies and sprinkler systems. Also includes fire pump operation, trouble shooting and maintenance.

5708 Physical Conditioning for Fire Service II

1.5 credit hours, 3 contact hours (.5 hours lecture and 2.5 hours lab). Prerequisite: C grade or better in 5705.

This is a continuation of 5705 Physical Conditioning for Fire Service I. This course will concentrate on the ability to perform specific physical tasks required of the professional fire fighter.

5709 Hazardous Materials

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade or better 1225 and 5703.

Students will learn to identify hazardous materials and respond to hazardous materials incidents. The study of all federal, state, and local hazardous substance legislation and regulations is covered. This course will follow professional competence of responders to hazardous material incidents.

5710 Fire Investigations I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None.

Study in this course involves the systematic approach to the investigation of the cause and origin of a fire. The course of study will concentrate on the rules of evidence, photography, scene searches, sketchers, collection and preservation of evidence. Also covered are report writing, sources of information, interviews, and interrogation.

5711 Firefighting Strategies

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade or better in 5706 and 5707.

This course covers the applications of fire strategies for fire teams and their function as an operating unit on the fire ground. Emphasis will be placed on pre-planning, fire ground organization, and problem-solving related to fire ground decision making and attack tactics.

5712 Fire Investigation II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade or better in 5710.

This course is designed to assist individuals who are charged with the responsibility of investigating and analyzing fire explosion incidents and rendering opinions as to the origin, cause, responsibility, or prevention of such incidents.

5713 Fire Organization and Administration

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None.

This course will provide the student with an understanding of contemporary management principles and practices as they apply to the fire service and will contain discussion of administration methods for managing public organizations.

5714 Fire Emergency Operations

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade or better in 5711.

Principles of critical incident operations including emergency scene decisions, strategies, and tactics will be covered in this course. The student will solve major fire and non-fire emergency simulation problems. Emphasis will be placed on rescue and disaster operations with consideration to safety.

5715 Special Fire Service Problems

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade or better in 5714 or concurrent enrollment in 5714.

This course covers special operations often confronted by the fire service including hi-rise fire, aircraft fire and rescue, confined space, wildland fire, radiation, bomb and explosions.

5716 Current Issues in Fire Service

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade or better in 5713 and 5714 or concurrent enrollment in 5713 and 5714.

This course offers the student the opportunity to examine in depth current issues affecting the fire service. Areas covered include development and research in contemporary methods, techniques and devices in the field. Topics will differ with each offering.

5801 ECD Independent Study: Creative Music Experiences with Pre-Schoolers

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5802 ECD Independent Study: Self-Esteem Development with Children

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5803 ECD Independent Study: Children's Literature

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5804 ECD Independent Study: Special Needs Inclusion

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5805 ECD Independent Study: The School Age Child: Plans and Activities

1-3 credit hours, 5-15 contact hours per week independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5806 ECD Independent Study: Parent Education

1-3 credit hours, 5-15 contact hours per week independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5807 ECD Independent Study: Current Issues in Child Development

1-3 credit hours, 5-15 contact hours per week independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

5808 ECD Independent Study: Developing an ECD Manual

1-3 credit hours, 5-15 contact hours per week independent study. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

58XX Independent Study in ECD

1-2 (variable) credit hours; 5 hours per quarter minimum contact hours. Prerequisite: C grade (2.00) or better in 5611, 5614 (or 5612), and 5630 (or 5632).

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.