CADMD 243 (IAI: IND 911)
Introduction to AutoCAD
Prerequisite: CADMD 141
2 lectures, 2 lab hrs per week: 3 hrs credit
This is an introductory course in Computer Aided Drafting (CAD). Through lecture and hands-on experience, students learn to use the most popular microcomputer CAD software, AutoCAD. Students learn basic CAD skills that enable them to produce mechanical drawings. Topics include: setting up AutoCAD, utility commands, drawing construction techniques, editing, display controls, layers, drawing aids, dimensioning, and plotting. Although there are no specific prerequisites, prospective students should have a working knowledge of IBM-compatible PCs, an understanding of plane geometry, and be able to deal with both common and decimal fractions.

CADMD 244
Intermediate AutoCAD
Prerequisite: CADMD 243
2 lecture, 2 lab hrs per week: 3 hrs credit
This course is a continuation of CADMD 243. Students learn to use advanced AutoCAD commands to create complex mechanical drawings. The topics to be covered include: attributes and polylines, AutoCAD 3-D, customizing AutoCAD, and a brief intro to AutoLisp.

CADMD 245 (IAI: EGR 941)
Computer Aided Design
Prerequisite: CADMD 244
2 lecture, 2 lab hrs per week: 3 hrs credit
This is a course in Computer Aided Design for the advanced CAD user. Students learn to use a typical CAD system to design and analyze mechanical mechanisms. The course content stresses reinforcement of CAD capabilities covered in previous courses, creating AutoLisp programs using AutoCAD commands in AutoLisp, conditional and loop statements, and programming logic. Design concepts such as design automation and product design analysis are covered.

CADMD 246
Architectural Desktop
Prerequisite: CADMD 243
1 lecture, 2 lab hrs per week: 2 hrs credit
This course teaches advanced CAD students to use Architectural Desktop software to create architectural drawings. It is not a course in architectural design. Students are expected to have previous AutoCAD experience and have a working knowledge of conventional architectural drawing techniques. Topics include creating typical architectural drawings such as floor plans, elevations, sections, and site plans.

CADMD 247
Mechanical Desktop
Prerequisite: CADMD 244
1 lecture, 2 lab hrs per week: 2 hrs credit
This course teaches students to create mechanical designs using Autodesk's Mechanical Desktop software. Students who are already proficient in 2-D CAD learn to convert rough sketches into working solid model mechanical drawings.

CADMD 248
Introduction to Inventor
Prerequisite: CADMD 244
1 lecture, 2 lab hrs per week: 2 hrs credit
This course is an introduction to Autodesk Inventor, which is an advanced 3-D parametric solid modeling system with surface modeling capabilities. Students learn to create solid parts, assemblies of solid parts, exploded presentations of assemblies and engineering drawings.

Chemistry

CHEM 105 (IAI: P1 902L)
Survey of General Chemistry
Prerequisite: MATH 090 with a C or better or qualifying score on Math Placement Test
3 lectures, 3 lab hrs per week: 4 hrs credit
This course includes the basic concepts of general chemistry such as nomenclature, mass relationships, solutions, acids and bases, and bonding. Students cannot receive credit for both CHEM 105 and 110.

CHEM 110 (IAI: P1 902L; CHM 911)
General Chemistry I
Prerequisite: MATH 095 with a C or better or placement in MATH 151 and high school chemistry
4 lectures, 3 lab hrs per week: 5 hrs credit
This is the first course of a two-semester sequence and is strongly recommended for all science majors and pre-engineering students. It includes the mole concept, bonding theory, formulas and equations, periodic classification of the elements, and physical properties of gases, liquids, solids, and solutions. Students cannot receive credit for both CHEM 105 and 110.

CHEM 130 (IAI: CHM 912)
General Chemistry II
Prerequisite: CHEM 110 with a C or better
4 lecture, 3 lab hrs per week: 5 hrs credit
This is the second course of the two-semester sequence and is strongly recommended for all science majors and pre-engineering students. This class includes a study of acids and bases, general equilibria, qualitative analysis, electrochemistry, oxidation reduction, general descriptive chemistry, thermodynamics, molecular structure, coordination compounds, and introduction to organic chemistry.

CHEM 203 (IAI: CHM 913)
Organic Chemistry I
Prerequisite: CHEM 130 with a C or better
4 lectures, 3 lab hrs per week: 5 hrs credit
This course covers the properties, preparation, and reactions of aliphatic and aromatic compounds, alkenes, alkynes, alkyl halides and alcohols, mechanism or reactions, stereochemistry, infrared, and nuclear magnetic resonance spectroscopy.

CHEM 204 (IAI: CHM 914)
Organic Chemistry II
Prerequisite: CHEM 203 with a C or better
4 lectures, 3 lab hrs per week: 5 hrs credit
The course focuses on interpretation of NMR, IR, and mass spectra, heterocyclic compounds, polymers.

College Skills

COL 100
Computer Skills for College Writing
Prerequisite: None
1 lecture per week: 1 hr credit
This course is designed to teach the basic computer skills necessary to become successful writers in the college environment. Topics covered include computer skills, beginning word processing functions, the fundamentals of composing on the computer, and computer terminology. In addition, students learn the basics of the Internet, including using the Prairie State College e-mail system and WebAdvisor.

COL 101
College Success Seminar
Prerequisite: None
1 lecture per week: 1 hr credit
The purpose of this course is to provide an opportunity for students to learn and adopt methods that promote success in college. Students learn about the challenges and choices they face as college students as they set education and career goals, explore their values and decision-making skills, learn study strategies, and develop an appreciation for diversity. Students complete a master academic plan.

COL 102
Career Development Seminar
Prerequisite: None
1 lecture per week: 1 hr credit
This course provides the opportunity to explore career interests, skills, abilities, and work-related values. Topics include the nature of various careers, labor market trends, job search strategies, education and training requirements, and diversity in the workplace. Students learn to develop a career and educational plan based upon informed career decisions.

COL 105
Personal Awareness
Prerequisite: None
1 lecture per week: 1 hr credit
The focus of this course is to help each individual assess his or her personal resources and communication styles and then set realistic goals. Students examine their own values, interpersonal relationships, emotions, decision-making processes, motivations, etc. Various personal growth theories also are explored. Emphasis is placed on the application of these characteristics and theories to help students obtain and maintain positive control over their lives and lifestyles.

COL 106
Personal Wellness
Prerequisite: None
1 lecture per week: 1 hr credit
This course is designed for those who want to improve their choice of lifestyle relative to personal responsibilities, balance, and personal enhancement of physical, mental, and spiritual health. The course also assists individuals in making voluntary behavior changes which reduce health risks and enhance individual productivity.

COL 107
More Brothers and Scholars
Prerequisite: COL 105 and instructor consent
2 lab hours per week; 1 hour credit
This course provides students instruction and experience in the development and implementation of individual projects, including virtual, community and on-campus activities.

Communication

COMM 101 (IAI: C2 900)
Principles of Communication
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is a course in the theory and practice of interpersonal, group, and public communication. Emphasis is placed on the speaker's confidence, audience adaptation, discovery of ideas, organization, and delivery. Students are given opportunities to improve their speaking and critical listening skills.

COMM 102
Persuasive Public Speaking
Prerequisite: COMM 101
3 lectures per week: 3 hrs credit
This course develops one's ability to formulate, construct, deliver, receive, and analyze formal and informal persuasive messages. It is primarily a speaking course with an emphasis on the discovery of multiple methods for designing messages that evoke change in society.