

BUS 242

Human Resources Management

Prerequisite: None

3 lectures per week: 3 hrs credit

Modern concepts of supervisory principles and practice are studied. Emphasis is on the human relations aspects of supervision, as well as on the functions of staffing, training, compensation, employee services, fringe benefits, health and safety, job evaluation, and industrial relations. Role playing and case studies supplement the course.

BUS 251

Principles of Marketing

Prerequisite: None

3 lectures per week: 3 hrs credit

This survey course presents the concepts, principles and functions of marketing in the dynamic business and economic environment. Emphasis is on the understanding of channels of distribution, marketing costs, motivations, and pricing. Planning policies and strategies also are studied, and casework is used as a supplement.

BUS 261 (IAI: MC 912)

Advertising

Prerequisite: Placement into ENG 099 or higher

3 lectures per week: 3 hrs credit

This course is a survey of social and economic aspects of advertising, the advertising cycle, kinds of advertising, selection of media, costs, analysis of copy and displays, format, layout, labels, trademarks, slogans, campaigns, and measurement of results. Students prepare magazine and advertising copy.

BUS 287

E-Business

Prerequisite: BUS 101

3 lectures per week: 3 hrs credit

This course is designed to provide an overview of how business can profit from current technology, primarily the Internet. Topics studied include e-business versus e-commerce, foundations of e-business, business to business electronic commerce, e-business legal issues, electronic payment systems, and e-business strategy and implementation.

BUS 298

Seminar

Prerequisite: Consent of Coordinator

1 lecture per week: 1 hr credit

This seminar is taken in conjunction with BUS 299, Internship. The content of the seminar relates to internship work which is correlated with students' fields of study.

BUS 299

Internship

Prerequisite: Consent of Coordinator

15 lab hrs per week: 3 hrs credit (variable credit)

The student internship allows students to earn variable amounts of college credits for managerial responsibilities while working in commerce or industry. A formalized work training program is structured to allow supervision by both the employer and the College's coordinator. The internship work should be directly related to students' fields of study.

CAD/Mechanical Design Technology

CADMD 141

Technical Drafting I

Prerequisite: None

2 lectures, 2 lab hrs per week: 3 hrs credit

A beginning course in drafting for students who have little or no drafting experience. Principal objectives are basic understanding of orthographic, isometric, and assembly working drawings; understanding the principles and applications of descriptive geometry; experience in using handbooks and other resource materials; and use of simplified drafting practices in industry. ASA standards are stressed. Interpretation of industrial sketches and prints is introduced to emphasize accepted drawing practices.

CADMD 201

Mechanical Layout and Design I

Prerequisite: CADMD 141

2 lectures, 2 lab hrs per week: 3 hrs credit

An advanced course in graphics for all students taking the mechanical design curriculum. The instructional unit provides experience in mechanical layout and design. Design problems require solution by math, graphics, and creative imagination. Experience also is given in industrial filing systems, engineering specifications, blueprint corrections, manufacturing processes, and other products.

CADMD 203

Statics and Strength of Materials

Prerequisite: TECH 109

4 lectures per week: 4 hrs credit

A study of the stress and deformation of mechanical parts and structural members. The properties of materials, the geometry of parts, and the type of loading are considered for the design of shafts, beams, columns, and welded joints based on both strength and stiffness requirements. Methods of analyzing force systems, shear and moment diagrams, and the concepts of deflections and moments of inertia on an area are also covered by the course. This course is calculator based.

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: PI 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: PI 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.