

INDR - Industrial Drawing Courses

INDR B12 Introduction to Drafting and CAD

3 units

Description: An introductory course in technical drawing using both computer aided drafting and design (CAD) software and conventional drafting methods. Students will develop the visualization skills essential for a career in the fields of technical design and engineering-support. Students will learn how to create technical drawings using industry-standard formats typical to the industrial, architectural and engineering fields. Emphasis is placed on basic CAD skills, the creation and layout of drawing views, and sketching.

Note: Not open to students who have completed INDR B10 and INDR B11.

Hours: 36 lecture, 54 lab

Transferable: CSU and private colleges.

INDR B20A Computer Aided Drafting and Design (CAD)

3 units

Prerequisites: Successful completion of INDR B12 with a grade of C or better or equivalent experience to be evaluated by the instructor.

Description: An intensive course utilizing a computer aided design (CAD) program to obtain graphic solutions, design refinements, modifications, and delineations in both 2D and 3D for industrial, architectural, and engineering drawings. Emphasizes technology skills that are necessary to function as an entry-level CAD operator.

Materials Fee: \$10.00

Hours: 27 lecture, 81 lab

Transferable: CSU, UC, and private colleges

INDR B20B Computer Aided Drafting and Design (CAD)

3 units

Prerequisites: Successful completion of INDR B20A with a grade of C or better.

Description: Continuation of the sequence utilizing a computer aided drafting (CAD) program to obtain graphic solutions, design refinements, modifications, and delineations in both 2D and 3D for industrial, architectural and engineering drawings. Emphasizes technology skills that are necessary to function as an entry-level CAD operator.

Materials Fee: \$3.00

Hours: 27 lecture, 81 lab

Transferable: CSU and private colleges.

INDR B40 Parametric Modeling Fundamentals

3 units

Description: This class will introduce basic and advanced parametric modeling techniques. Three-dimensional models of mechanical objects will be used to generate two-dimensional drawings (including views, sections, details, dimensions, and assembly drawings). Emphasis on design and digital prototyping will run throughout the course. The course is project-based and will include the use of a 3D printer and the creation of animations to communicate design concepts.

Hours: 27 lecture, 81 lab

Transferable: CSU and private colleges. Degree applicable.

INDR B42 Introduction to Solidworks

2 units

Description: A foundational course in the use of Solidworks mechanical design software. Students will utilize 3D solid modeling

techniques to generate and edit parts, assemblies, and detail drawings.

Hours: 27 lecture, 27 lab

Transferable: CSU and private colleges. Degree applicable.

INDR B48WE Occupational Work Experience Education/ Internship

1-8 Units

Prerequisite: Prerequisites: Declared major or occupational goal and evaluation of student's qualifications and objectives.

Description: College credit for Industrial Drawing related learning experiences obtained on the job in accordance with a training plan developed cooperatively between the employer, college, and student. Occupational work experience credit may accrue at the rate of 1 to 8 units per semester for a total of sixteen units, and students must work 75 hours per semester unit at paid work experience; 60 hours per semester unit volunteer work experience per unit. Repetition allowed per Title 5 55253.

Hours: Non-paid 60 hours for each 1 unit (60-480). Paid 75 hours for each 1 unit (75-600).

Transferable: Not transferable. Degree applicable.

INDR B50 Process Piping

3 units

Prerequisites: Successful completion of INDR B10 and INDR B11 or INDR B12 with a grade of C or better.

Description: This is an intermediate-level CAD course that is structured to impart the foundational knowledge and essential technical skills required to succeed in the field of process pipe drafting and design. Areas of special emphasis include industry standards, pipe drawing conventions, technical calculations, as well as the creation of arrangement plans, isometric drawings, and process flow diagrams.

Materials Fee: \$5.00

Hours: 27 lecture, 81 lab

Transferable: Not transferable. Degree applicable.

INDR B51 Electrical Design

3 units

Prerequisites: Successful completion of INDR B12 with a grade of C or better.

Description: Introduces students to the techniques necessary to create professional electrical control drawings using AutoCAD Electrical. Elements included in the class include building circuits, creating panel drawings, ladder diagrams, and generating reports.

Materials Fee: \$3.00

Hours: 27 lecture, 81 lab

Transferable: Not transferable. Degree applicable.

INDR B52 Civil Drafting and Geographic Information Systems

3 units

Prerequisites: Successful completion of INDR B20A or equivalent with a grade of C or better.

Description: This is an advanced-level CAD course that is structured to impart the knowledge and skills necessary to create the kinds of technical drawings that are used in the Cadastral (civil engineering, mapping, and surveying fields) using CAD software. Students will also use Geographic Information Systems (GIS) software to perform model-based infrastructure planning and database queries.

Hours: 27 lecture, 81 lab

Transferable: Not transferable. Degree applicable.

Courses *(continued)*

Association's Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care at the healthcare provider level; and possess a current EMT certificate or NREMT-Basic registration; or possess a current AEMT certificate in the State of California; or be currently registered as an EMT I

Recommended: One year full-time experience working on an ambulance as an EMT

Description: The Paramedic Preparatory Course is designed to aid in the transition from the level of emergency medical technician (EMT) to the level of paramedic student. The course is designed to prepare the student for the rigorous intensity of the paramedic program and introduce the student to the study skills necessary to be successful in the Bakersfield College's paramedic program. Other topics included in this course will be reviewing of the basic life support skills (BLS) learned in the EMT course, as well as introducing the student to basic advanced life support (ALS) topics, such as electrocardiogram (ECG) rhythms, pathophysiology, pharmacology, and advanced airway maintenance.

Hours: 27 lecture

Transferable: Not transferable. Not degree applicable

ENGL - English Courses

ENGL B1AC Expository Composition Support

0.5 units

Description: This course offers intensive practice in the skills needed to read college-level texts and compose college-level essays. It provides support in developing skills and strategies for success in transfer-level writing classes. Students enrolling in this course must also enroll in ENGL B1A.

Hours: 27 lab

Transferable: Not transferable. Not degree applicable.

ENGL B25B Survey of World Literature

3 units

Prerequisites: BC placement into writing level 06 or successful completion of ENGL B50 or equivalent with a grade of C or better.

Recommended: Successful completion of ENGL B1A with a grade of C or better.

Description: A study of representative works of world literature in historical and cultural contexts, focusing on their aesthetic significance and the enduring human values which unite the different literary traditions. Covers approximately 1650 to present. Not open to students who have completed ENGL B20B.

Hours: 54 lecture

C-ID: ENGL 145

Transferable: CSU and private colleges. CSU GE C.2; BC GE C.2

FIRE - Fire Technology Courses

FIRE B48WE Work Experience Education/Internship

1-8 units

Prerequisites: Declared major or occupational goal and evaluation

of student's qualifications and objectives.

Description: College credit for fire related learning experiences obtained on the job in accordance with a training plan developed cooperatively between the employer, college, and student.

Occupational work experience credit may accrue at the rate of 1 to 8 units per semester for a total of sixteen units, and students must work 75 paid ours or 60 non-paid hours per unit. Repetition allowed per Title 5 55253.

Hours: Non-paid 60 hours for each 1 unit (60-480). Paid 75 hours for each 1 unit (75-600).

Transferable: CSU and private colleges.

INDR - Industrial Drawing Courses

INDR B20A Computer Aided Drafting & Design (CAD) - Intermediate

3 units

Prerequisites: Successful completion of INDR B12 with a grade of C or better or equivalent experience to be evaluated by the instructor.

Description: This is an intermediate-level CAD course that is structured to impart the foundational knowledge and essential technical skills required to succeed as an entry-level CAD drafter/modeler. Areas of special emphasis include industry standards, drawing conventions, and operational practices typical to the industrial design, architectural drafting, and engineering support fields.

Materials Fee: \$10.00

Hours: 27 lecture, 81 lab

Transferable: CSU, UC, and private colleges

MFGT - Manufacturing/Machine Technology Courses

MFGT B54 Power Metalworking Operations

3 units

Prerequisite: Successful completion of MFGT B1AB and WELD B54B with a grade of C or better.

Description: This course is designed for people working in or aspiring to enter the metalworking trades in the fields of construction Fabrication and manufacturing. This is a comprehensive course in powered sheet metal fabrication equipment. The course will cover the safe set up and operation of press brakes, ironworkers, turret punch, rotary machines, welders, shears, roll-formers, tube benders, and tube notchers. Individualized hands-on experience in tool setup and job shop performance equal to industry standards will be provided. Students will also be introduced to the materials and fabrication techniques necessary to build projects of sheet metal aimed at emerging "green energy", agriculture & food processing fields

Hours: 27 Lecture, 81 Lab

Transferable: Not transferable. Degree applicable.