R DMT 55 Heavy-Duty Diesel Tune Up and Engine Analysis (3)
2 hours lecture-4 hours laboratory
Prerequisite: DMT/R DMT 50
Note: Cross listed as DMT 55; graded only; may be taken 2 times
The use of software and diagnostic equipment in performing diesel tune-up. Topics include: theory of operation, tune-up procedures, fuel system function and repair, diagnostic equipment usage, electronic engine controls, mechanical and electronic engine system troubleshooting.

R DMT 61 Diesel Engine Rebuilding I (3)
6 hours lecture/laboratory
Recommended preparation: R DMT/DMT 50
Note: Cross listed as DMT 61; graded only; may be taken 2 times
Theory and practice in rebuilding diesel engines. Topics for study include disassembly, cleaning, inspection, and analysis of engine parts. Also included are cylinder head service, sleeve and piston service, advanced machining and measuring techniques.

R DMT 62 Diesel Engine Rebuilding II (3)
6 hours lecture/laboratory
Prerequisite: R DMT/DMT 61
Note: Cross listed as DMT 62; graded only
Theory and practice in rebuilding diesel engines. Topics for study include final cleaning, inspection and reassembly of engine parts. Also included are assembly measuring, torque procedures and torque-turn methods used on engine assembly, and engine testing upon completion of assembly.

R DMT 65 Air Brake Systems (3)
2 hours lecture-3 hours laboratory
Note: Cross listed as DMT 65; graded only
The service and repair of heavy duty hydraulic and air brake systems and their components. Topics of study include brake troubleshooting, complete system repair, anti skid brake system, and related axle services.

R DMT 66 Truck Transmission and Drive Line (3)
2 hours lecture-3 hours laboratory
Note: Cross listed as DMT 66; graded only
Service and repair of heavy duty truck drive lines. Topics for study include the disassembly, inspection, and reassembly of single and multiple disc clutches, four to fifteen speed transmissions, universal joints, and differentials.

R DMT 70 Medium Duty Diesel Engine Tune Up (3)
2 hours lecture-4 hours laboratory
Note: Cross listed as DMT 70; graded only; may be taken 2 times
The use of diesel tune up and diagnostic equipment. Topics include: fuel systems; compression testing; fuel pump and injection timing; troubleshooting procedures; alternators, regulators, and starting systems.

R DMT 97 Diesel Mechanics Technology Workshop (.5-3)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: Cross listed as DMT 97; graded only; may be taken 4 times
A special selection of topics specific in nature. The contents will vary depending on specific needs of the students and community.

Drafting Technology (R DT)

COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

R DT 125 AutoCAD Introduction to Computer Aided Drafting (3)
2 hours lecture-3 hours laboratory
Note: Cross listed as DT 125; may be taken 2 times; maximum of 4 completions in any combination of DT/R DT 125, DT/R DT 126, DT/R DT 127
Transfer acceptability: CSU; UC – R DT 125 and 126 combined: maximum credit, one course
An introduction to computer aided drafting using AutoCAD software and IBM compatible computers. Hands on experience with AutoCAD to include the following operations: preparing and editing drawings, storage and retrieval of drawings, and production of commercial quality drawings on a plotter. Introductory computer terminology and techniques in Windows.

R DT 126 AutoCAD Intermediate Computer Aided Drafting (3)
2 hours lecture/3 hours laboratory
Prerequisite: DT/R DT 125
Note: Cross listed as DT 126; may be taken 2 times; maximum of 4 completions in any combination of DT/R DT 125, DT/R DT 126, DT/R DT 127
Transfer acceptability: CSU; UC – R DT 125 and 126 combined: maximum credit, one course
Advanced theory and hands on operation of a CAD system. Emphasis is placed on large scale drawings, three dimensional software techniques, orthographic projections, and complex computer aided manufacturing applications.

R DT 127 AutoCAD Customization (2)
4 hours lecture/laboratory
Prerequisite: R DT/DT 125
Note: Cross listed as DT 127; may be taken 2 times; maximum of 4 completions in any combination of DT/R DT 125, DT/R DT 126, DT/R DT 127
Transfer acceptability: CSU
Advanced theory and hands on operation of a CAD system. Emphasis is placed on increased productivity, using customization and portfolio presentation for successful career opportunities.

R DT 128 SolidWorks Introduction to 3D Design and Presentation (3)
6 hours lecture/laboratory
Prerequisite: DT/R DT 125
Recommended preparation: DT 110
Note: Cross listed as DT 128; may be taken 2 times
Transfer acceptability: CSU
Advanced theory and hands on operation of three-dimensional software techniques. Emphasis is placed on wireframe, surface, solid, and parametric three-dimensional modeling.

R DT 130 CAD/CAM Machining (3)
6 hours lecture/laboratory
Prerequisite: DT 110 and DT/R DT 128
Note: Cross listed as DT 130; graded only; may be taken 2 times
Hands-on operation of importing three-dimensional solid and parametric three-dimensional models into CAD/CAM operations.

R DT 131 SolidWorks Advanced 3D Design and Presentation (3)
6 hours lecture/laboratory
Prerequisite: DT/R DT 128
Note: Cross listed as DT 131; may be taken 2 times
Transfer acceptability: CSU
Advanced theory and hands-on operation of solid and parametric three-dimensional models. Emphasis is placed on creating molds, advanced sheet metal design and developing dynamic assemblies.

R DT 200 Advanced Computer Aided Architectural Drafting (4)
8 hours lecture/laboratory
Prerequisite: DT/R DT 125 and completion of, or concurrent enrollment in, DT 105
Note: Cross listed as DT 200; graded only; may be taken 2 times
Transfer acceptability: CSU
Advanced techniques in the operation of AutoCAD software for architectural applications on IBM-compatible computers. Preparation of various architectural working drawings from a preliminary residential design.

R DT 202 Advanced Computer Aided Architectural Drafting II (4)
8 hours lecture/laboratory
Recommended preparation: DT/R DT 200
Note: Cross listed as DT 202; graded only; may be taken 2 times
Transfer acceptability: CSU
Third-party architectural software for use in conjunction with AutoCAD software. Preparation of 3D architectural models and their manipulation for preparation of individual architectural working drawings including: dimensioned floor plans, building sections, elevations, etc.

Graphic Communications - Imaging & Publishing (R GCIP)

See also Graphic Communications and Graphic Communications - Multimedia & Web

COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

R GCIP 103 Acrobat for Print (3)
(Formerly R GC 248)
6 hours lecture/laboratory
Note: Cross listed as GCIP 103; may be taken 4 times
Transfer acceptability: CSU
Hands-on instruction in creating and editing high quality, print-ready PDF files using Adobe Acrobat. This course also includes the estimating of materials and labor relative to current industry practices for the production of a printed product.

R GCIP 140 Digital Imaging/Photoshop I (3)
(Formerly R GC 140)
6 hours lecture/laboratory
Note: Cross listed as GCIP 140; graded only; may be taken 4 times
Transfer acceptability: CSU
The study of digital imaging and editing with Adobe Photoshop for visual, pictorial and graphic use in all media. Emphasis on creating and enhancing imagery for effective use in mass communication mediums.

R GCIP 149 Page Layout and Design I (3)
(Formerly R GC 149)
6 hours lecture/laboratory
Note: Cross listed as GCIP 149; may be taken 4 times
Transfer acceptability: CSU
Introduction to electronic document design and page layout, electronic composition, text and graphics entry with computers. Students will create a variety of projects including but not limited to: brochures, flyers, and newsletters.

R GCIP 152 Desktop Publishing/Illustrator I (3)
(Formerly R GC 152)
6 hours lecture/laboratory
Note: Cross listed as GCIP 152; graded only; may be taken 4 times
Transfer acceptability: CSU
Introduction to electronic layout on the microcomputer. Illustrator will help the student generate new images or convert bitmapped images into PostScript. Quality levels needed for electronic output will be evaluated.

R GCIP 170 Screen Printing (3)
(Formerly R GC 170)
hours lecture/laboratory
Note: Cross listed as GCIP 170; graded only; may be taken 4 times
Transfer acceptability: CSU
Screen printing theory and application of layout and image preparation, computer applications, stencil methods, process camera and basic screen printing techniques. Practical application is stressed.

R GCIP 172 Textile Screen Printing (3)
(Formerly R GC 172)
6 hours lecture/laboratory
Note: Cross listed as GCIP 172; graded only; may be taken 3 times
Transfer acceptability: CSU
Theory and application of screen printing for textile use. Copy preparation for multicolor reproduction, color matching, ink selection, and mesh and stencils for material compatibility.

R GCIP 197A Topics in Graphic Communications (.5-4)
(Formerly R GC 197A)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: Cross listed as GCIP 197A; graded only; may be taken 3 times
Transfer acceptability: CSU
Short term or special topic course, lecture or laboratory courses in various topics in Graphic Communications.

R GCIP 249 Page Layout and Design II (3)
(Formerly R GC 249)
6 hours lecture/laboratory
Prerequisite: GCIP/R GCIP 140 and GCIP/R GCIP 149
Note: Cross listed as GCIP 249; may be taken 4 times
Transfer acceptability: CSU
Intermediate concepts of electronic document layout, typography, and graphics. Software capabilities in creating sophisticated graphic and type treatments.

R GCIP 260 Portfolio Development and Presentation (3)
(Formerly R GC 260)
6 hours lecture/laboratory
Prerequisite: R GCIP/GCIP 140 and R GCIP/GCIP 152
Note: Cross listed as GCIP 260; graded only; may be taken 2 times
Transfer acceptability: CSU
Students will develop a personal portfolio to showcase their graphic skills and techniques. Various resources, including the Internet, will be used to conduct a job search, develop a resume and learn interviewing techniques. Guest speakers will share industry tips. Students will practice presentation and interviewing skills, with feedback from professionals working in graphics and related industries.

Graphic Communications - Multimedia & Web (R GCMW)

See also Graphic Communications and Graphic Communications - Imaging & Publishing

COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

R GCMW 101 Multimedia I (3)
(Formerly R GC 200)
6 hours lecture/laboratory
Note: Cross listed as GCMW 101; graded only; may be taken 4 times
Transfer acceptability: CSU
Introduction to multimedia authoring software combining text, graphics, sound, animation, video clips, and user interface to produce effective visual presentations.

R GCMW 102 Web Page Layout I (3)
(Formerly R GC 202)
6 hours lecture/laboratory
Note: Cross listed as GCMW 102; graded only; may be taken 4 times
Transfer acceptability: CSU
A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, and structured page design for effective Internet communications.