

University of Arkansas – Fort Smith

5210 Grand Avenue
P.O. Box 3649
Fort Smith, AR 72913
479-788-7000

General Syllabus

CGT 1284 - Engineering Graphics II

Credit Hours: 4

Lecture Hours: 2

Lab Hours: 4

Prerequisite: CGT 1234 Engineering Graphics I and CGT 2744 CAD Level I

Effective Semester: Summer I 2014

I. Course Information

A. Catalog Description

Course covers projection, representation of fasteners, electrical wiring and welding, surface development, geometric relationship of lines and planes, and architectural and pictorial drawings.

B. Additional Information

This course continues developing the drafting skills covered in the prerequisite course. The students' skills in drafting/CAD are broadened by an introduction to:

1. Graphic analysis and presentation of data using charts and graphs
2. Surface developments, using the concepts of parallel line, radial line and triangulation methods.
3. Study of typical industrial fasteners and practice in applying the data available for standardized parts and specifications.

II. Student Learning Outcomes

A. Subject Matter

Upon completion of this course, the student will be able to:

1. Given a series of drawing assignments, demonstrate knowledge in rectilinear, pie and bar charts applications.
2. Based on lectures and course textbook examples, select the proper graphical presentation.
3. Given a series of drawing assignments, prepare graphs and charts using analytical or empirical data.
4. Given a series of drawing assignments, develop sheet-metal surface using parallel-line, radial-line and triangulation methods.
5. Based on lectures and application of the course textbook, create drawings using the following American National Standards Institute documents: Screw Threads.

B. University Learning Outcomes

Global and Cultural Perspectives

Students will learn about other country's unit methods and be given practical application problems or case studies about differing unit problems

Communication Skills

Students will be required to present one oral presentation that is scored with a rubric for standard speech requirements.

Technological Skills

Students will use technological skills to create flat pattern developments using computer technology.

Analytical Skills

Students will be required to analyze 3D objects to determine proper flat pattern development processes.

Ethics

Students will participate in an ethics project case study concerning copyright infringement, the collapse of the Marriott Hotel in Kansas City or another timely real-world ethics project.

Quantitative Reasoning

Students will mathematically determine cabinet drawings differing x and y ratio scales for cabinet oblique drawings.

III. Major Course Topics

A. Professional Knowledge

1. Exploring topics (only 2): Architectural, Electronic, Piping, Contours, or Structural
2. Fasteners: Threads, Specifications
3. Weld Symbols

B. Visualization Skills

1. Creating flat pattern developments
2. Recognizing standard drafting industry symbols
3. Creating pictorial representations of objects