University of Arkansas – Fort Smith
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General Syllabus

CGT 2764 – CAD Level II

Credit Hours: 4 **Lecture Hours:** 2 **Lab Hours:** 4
Prerequisite: CGT 2744 CAD Level I
Prerequisite or Corequisite: MATH 1403 College Algebra or MATH 1715 Pre-Calculus Mathematics
Effective Semester: Summer I 2013

I. Course Information

A. Catalog Description

Involves the use of several advanced CAD features such as 3D productivity techniques, user coordinate systems, external references, advanced plotting, advanced grips, region modeling system variables, object filtering, and wildcards.

B. Additional Course Information

This course is designed for all disciplines – architects, engineers, designers, or anyone who needs a thorough understanding or AutoCAD. Beginning with layout of the graphics screen and progress through drawing simple graphics, using drawing aids, organizing drawing into layers, editing drawings, dimensioning drawings, plotting drawings, and setting up drawing prototypes.

II. Student Learning Outcomes

A. Subject Matter

1. Apply and draw objects using CONSTRAINTS.
2. Create and use a library of symbols and details with BLOCK and WBLOCK.
3. Create and display Attributes with the ATTDEF, DDATTDEF, ATTDISP, ATTEDIT, and DDATTE commands and the ATTDIA system variable.
4. Practice report generation using ATTEXT and DDATTEXT commands.
5. Practice plotting and printing drawings using the PLOT command.
6. Create viewports and save different views.
7. Relocate the UCS icon.
8. Know all of the options using the XREF command for objects, dwgs, and images.
9. Know what system variables are and how they can be utilized.
10. Use advanced editing commands.
11. Use advanced/dynamic blocks.
12. Overview of 3d modeling techniques within AutoCAD.

B. University Learning Outcomes

Communication Skills
Students will communicate effectively with a variety of audiences in any setting. Students will compose coherent documents appropriate to the intended audience. Students will effectively communicate orally in a public setting.

Technological Skills
Students will use computerized tools to efficiently access, communicate, analyze and evaluate electronic information. Students will use technology to access information. Students will use technology to effectively communicate. Students will use appropriate technology to analyze and evaluate data.

Analytical Skills
Students will use analytical/critical thinking skills to draw conclusions and/or solve problems. Students will access and evaluate appropriate information through written and electronic means.

Ethics
Students will recognize and analyze ethical dilemmas. Students will understand the UA Fort Smith Standards of Conduct and Academic Honesty policies and apply these standards to particular fact situations. Students will apply ethical concepts and rules to determine viable alternatives in any given situation.

Quantitative Reasoning
Students will assign and use numbers, read and analyze data, create models, draw inferences, and support conclusions based on sound mathematical reasoning. Students will apply appropriate mathematical models to solve problems. Students will represent mathematical information symbolically, visually, numerically and verbally and interpret models and data in order to draw inferences. Students will recognize the limitations of quantitative analysis.

III. Major Course Topics

A. Professional Knowledge

1. User Coordinate Systems.
2. Understanding System Variables.
3. Editing, tracking, and use of External References.
4. Advanced reference techniques using Dynamic Blocks.
5. 3d modeling and orthographic view generation.

B. Visualization Skills

1. Communicate using industry standard technical drawings and graphics.
2. Participate in team building activities to create assemblies and working drawing sets.
3. Recognize and identify industry standards through drawings and symbols.