

**University of Arkansas – Fort Smith**

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**General Syllabus**

**CGT 1001 – CAD Concepts and Applications**

**Credit Hours:** 1

**Lecture Hours:** 0

**Lab Hours:** 2

**Prerequisite:** None

**Effective Semester:** Summer I, 2013

**I. Course Information**

**A. Catalog Description**

Introduction to the field of Computer Graphic Technology and introduction to visualization skills, expectant professional behaviors, basic electronic portfolio creation, and elementary computer skills.

**B. Additional Course Information**

This course is designed for all disciplines – architects, engineers, designers, or anyone who needs a thorough understanding of graphic standards and basic graphic communication knowledge. Beginning with explanations and examples from each of the various graphics fields and understanding each of the professional organizations and moving through industry standards, basic sketching, and visualization techniques the student will gain a firm foundation in graphic communication skills.

**II. Student Learning Outcomes**

**A. Subject Matter**

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

1. From lectures and class demonstration, name and describe the purpose of professional organizations and associations.
2. From lectures and Internet searches, describe career options, identify educational experience and personal traits that benefit a drafter, and describe potential barriers to career advancement and strategies for removing them.
3. Discuss and describe ethical problems and behaviors in graphic communications.
4. Participate in small group projects based on learning visualization skills.
5. From lectures and class demonstration, describe various types of drawings and determine which area of graphic communication they would belong in.
6. Given a series of sketching assignments, demonstrate capability in preparing properly proportioned sketches.
7. Given a series of exercises, prepare timed freehand sketches and freehand lettering.
8. Given a series of examples, identify the typical abbreviations used in engineering and architectural drawings.

## **B. University Learning Outcomes**

### **Communication Skills**

Students will prepare a professional resume and present in an e-portfolio. The students will start their collection of works for their e-portfolio final capstone projects.

### **Technological Skills**

Students will learn to use LiveText as an e-portfolio collection software. They will also be exposed to all types of CAD application and how the applications are used in the professional world.

### **Global and Cultural Perspectives**

Students will study the contributions by various government agencies to CAD applications. Students will discover the different professional organizations that are associated with the field.

## **III. Major Course Topics**

### **A. Professional Knowledge**

1. Identify all of the leading professional organizations and association in mechanical, architectural, GPS/GIS and animation.
2. Understand and explain ethical practices and expectations in CAD and graphic communication professions
3. Describe career options, identify educational experience and personal traits that benefit a drafter.

### **B. Visualization Skills**

1. Participate in small group projects based on learning visualization skills.
2. Describe various types of drawings and determine which area of graphic communication they would belong in.
3. Prepare an e-portfolio
4. Identify the typical abbreviations used in engineering and architectural drawings.
5. Analyze example drawings for the various parts and functions of the drawings
6. Learn plan reading skills