DATE OF LAST REVIEW: 02/2013
CIP CODE: 15.1302
SEMESTER: Departmental Syllabus
COURSE TITLE: Computer Aided Drafting
COURSE NUMBER: ENGR-0106
CREDIT HOURS: 3
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
TELEPHONE: Departmental Syllabus
EMAIL: Departmental Syllabus

KCKCC-issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): None

REQUIRED TEXT: Please check with the KCKCC bookstore, http://www.kckccbookstore.com for the required text for your particular class.

COURSE DESCRIPTION:

Computer-Aided Drafting introduces students to autocad concepts, processes, and systems as utilized in industry today. This course emphasizes autocad commands, multi-color plotting, and methods that will help to make students productive and efficient in autocad. Students will be instructed in different methods by which commands may be utilized and objects constructed so as to increase proficiency in autocad. Students are instructed on new methods of producing engineering drawings with computers.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

Time permitting, the following will be covered in ENGR-0106:

I. Autocad Screen Components
   A. Drawing Area
   B. Command Window
   C. Navigation Bar
   D. View Cube
   E. Status Bar

II. Creating A New Drawing
   A. Opening a Drawing
   B. Starting from Scratch
   C. Using a Template
   D. Using a Drawing Wizard
   E. Closing and Saving a Drawing

III. Draw Commands
   A. Line
   B. Construction Line
   C. Arc
   D. Circle
   E. Hatch
   F. Table
   G. Text

IV. Modify Commands
   A. Erase
   B. Copy
   C. Mirror
   D. Fillet
   E. Break
   F. Trim
   G. Scale
   H. Array
   I. Offset

V. Working with Drawing Aids
   A. Object Properties
   B. Quick Properties
   C. Working with Layers
   D. Changing Linetypes
   E. Changing Lineweights
   F. Working with Pallettes
   G. Function Keys
   H. Using Grips
   I. Loading Hyperlinks
   J. Editing with Grips
VI. Creating Text and Tables
   A. Dtext
   B. Mtext
   C. Single Line Text
   D. Entering Special Characters
   E. Creating Tables

VII. Dimensioning
   A. Dimensioning Terms
   B. Associative Dimensions
   C. Annotative Dimensions
   D. Linear Dimensions
   E. Aligned Dimensions
   F. Rotating Dimensions
   G. Baseline Dimensions
   H. Angular Dimensions
   I. Radius Dimensions
   J. Dimension Breaks
   K. Multileaders
   L. Leaders
   M. Creating Tolerances
   N. Setting Dimension Styles
   O. Applying Constraints

VIII. Model Space Viewports and Template Drawings
   A. Working with MVSetup Command
   B. Importing Layouts to Sheet Sets
   C. Inserting Layouts using the Wizard
   D. Loading Templates
   E. Creating Templates
   F. Using Viewports

IX. Creating Blocks, Plotting, and Hatching Objects
   A. Creating Blocks
   B. Inserting Blocks
   C. Modifying Blocks
   D. Plotting to large format plotters
   E. Hatching objects utilizing predefined hatch patterns
   F. Hatching objects utilizing custom hatch patterns
EXPECTED LEARNER OUTCOMES:

A. Upon completion of the course the student will be able to create and save a drawing in Autocad.
B. Upon completion of the course the student will be able to interpret data and create new drawings in Autocad.
C. Upon completion of the course the student will be able to interpret data and utilize Autocad draw commands.
D. Upon completion of the course the student will be able to interpret data and utilize Autocad modify commands.
E. Upon completion of the course the student will be able to interpret data and utilize Autocad drawing aids to create and modify drawings.
F. Upon completion of the course the student will be able to create text and tables in Autocad.
G. Upon completion of the course the student will be able to interpret data utilize Autocad dimension commands to place dimensions on objects in Autocad.
H. Upon completion of the course the student will be able to create Model Space Viewports and utilize drawing templates in Autocad.
I. Upon completion of the course the student will be able to interpret data to create blocks, plot drawings, and Hatch object in Autocad.

COURSE COMPETENCIES:

Upon completion of the course the student will be able to identify Autocad screen components.

1. Upon completion of the course the student will be able to identify the drawing area and command window in Autocad.
2. Upon completion of the course the student will be able to identify and utilize the Navigation Bar in Autocad.

Upon completion of the course the student will be able to interpret data and create new drawings in Autocad.

3. Upon completion of the course the student will be able to open a drawing in Autocad.
4. Upon completion of the course the student will be able to utilize the drawing wizard in Autocad to create a new drawing.
5. Upon completion of the course the student will be able to create a drawing in Autocad using a drawing template.
6. Upon completion of the course the student will be able to close and save a drawing in Autocad.

Upon completion of the course the student will be able to interpret data and utilize Autocad draw commands.

7. Upon completion of the course the student will be able to utilize line and construction line commands in Autocad.
8. Upon completion of the course the student will be able to create circles using circle command in Autocad.
9. Upon completion of the course the student will be able to create arcs using arc command in Autocad.
10. Upon completion of the course the student will be able to create a table in Autocad.

Upon completion of the course the student will be able to interpret data and utilize Autocad modify commands.

11. Upon completion of the course the student will be able to move objects using erase command in Autocad.
12. Upon completion of the course the student will be able to trim and break objects using trim and break commands in Autocad.
13. Upon completion of the course the student will be able to copy objects using copy command in Autocad.
14. Upon completion of the course the student will be able to mirror object using mirror command in Autocad.

Upon completion of the course the student will be able to interpret data and utilize Autocad drawing aids to create and modify drawings.

15. Upon completion of the course the student will be able to utilize object properties and quick properties to modify drawings.
16. Upon completion of the course the student will be able to utilize the Layer Properties Dialog Box to create new layer and modify elements of existing layers in Autocad.

Upon completion of the course the student will be able to create text and tables in Autocad.

17. Upon completion of the course the student will be able to create text using Dtext and Mtext commands in Autocad.
18. Upon completion of the course the student will be able to create special text characters in Autocad.

Upon completion of the course the student will be able to interpret data utilize Autocad dimension commands to place dimensions on objects in Autocad.

19. Upon completion of the course the student will be able to differentiate between associative and annotative dimensions in Autocad.
20. Upon completion of the course the student will be able to modify existing dimension styles and create new dimension styles in Autocad.
21. Upon completion of the course the student will be able to place linear dimensions on objects in Autocad.
22. Upon completion of the course the student will be able to place baseline and angular dimensions in Autocad.
Upon completion of the course the student will be able to create Model Space Viewports and utilize drawing templates in Autocad.

23. Upon completion of the course the student will be able to use MVSetup command in Autocad to create scale drawings.
24. Upon completion of the course the student will be able to load existing templates and create new templates in Autocad.
25. Upon completion of the course the student will be able to import layouts to sheet sets in Autocad.

Upon completion of the course the student will be able to interpret data to create blocks, plot drawings, and Hatch object in Autocad.

26. Upon completion of the course the student will be able to create blocks using Wblock command in Autocad.
27. Upon completion of the course the student will be able to insert and modify blocks in Autocad.
28. Upon completion of the course the student will be able to hatch objects using predefined patterns in Autocad.
29. Upon completion of the course the student will be able to plot drawings to large format plotters.

ASSESSMENT OF LEARNER OUTCOMES:
Assessment methods may include, but are not limited to, the following: Homework, Assignments, Quizzes, Class Participation, Chapter Tests, and Final Exam. The grading scale and the process for calculating the course grades are to be determined by the individual instructors. This information will be included in each instructor's syllabus.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center, in Rm. 3354 or call at: 288-7670.