DATE OF LAST REVIEW: 02/2013

CIP CODE: 15.1302

SEMESTER: Departmental Syllabus

COURSE TITLE: Industrial Illustration

COURSE NUMBER: ENGR-0264

CREDIT HOURS: 4

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: 913-334-1100

PREREQUISITE(S): None

REQUIRED TEXT(S):
See bookstore for current textbook.

COURSE DESCRIPTION:
Students choose an area of specialization from the areas of architectural, structural steel, machine drafting, or industrial illustration. Students will follow the course outline designed for their area of specialization and proceed with advanced problems in that area performing research and development.

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:
Course content may vary, but will generally include the following:
I. Basic techniques of illustration.
   A. Basic shapes
   B. Basic machine operations
   C. Irregular curved surfaces
   D. Plotting angles
   E. Sectioning angles
   F. Intersections
II. Drawing illustrations with CAD
   A. Isometric
   B. Oblique
   C. Axonometric drawing.
   D. Diametric and Trimetric.
E. 3d surface modeling
F. Solid modeling

III. Shading and Rendering

IV. CAD
   A. Autocad
   B. 3d Studio
      1. Materials
      2. Lights
      3. Scenes
      4. Rendering

EXPECTED LEARNER OUTCOMES:
1. Upon completion of the course the student will be able to demonstrate understanding of the basic techniques of illustration.
2. Upon completion of the course the student will be able to create illustrations using CAD.
3. Upon completion of the course the student will be able to shade and render an illustration.
4. Upon completion of the course the student will be able to use CAD to place textures and lighting on 3d scenes.

COURSE COMPETENCIES:
Upon completion of the course the student will be able to demonstrate understanding of the basic techniques of illustration.
1. Upon completion of the course the student will be able to interpret data and create basic shapes.
2. Upon completion of the course the student will be able to create irregular surfaces on illustrations.
3. Upon completion of the course the student will be able to interpret data and create intersections on illustrations.
4. Upon completion of the course the student will be able to interpret data and create section angles on illustrations.
5. Upon completion of the course the student will be able to interpret data and plot angles on illustrations.

Upon completion of the course the student will be able to create illustrations using CAD.
6. Upon completion of the course the student will be able to interpret data and create an isometric illustration using CAD.
7. Upon completion of the course the student will be able to interpret data and create an Oblique illustration using CAD.
8. Upon completion of the course the student will be able to differentiate between the different forms of axonometric projection.
9. Upon completion of the course the student will be able to interpret data and create a diametric illustration using CAD.
10. Upon completion of the course the student will be able to interpret data and create a trimetric illustration using CAD.
11. Upon completion of the course the student will be able to interpret data and create a 3D surface model.
12. Upon completion of the course the student will be able to demonstrate proficiency in solid modeling using CAD.

Upon completion of the course the student will be able to shade and render an illustration.
13. Upon completion of the course the student will be able to interpret data and shade a drawing.
14. Upon completion of the course the student will be able to interpret data and render
Upon completion of the course, the student will be able to use CAD to place texture and lighting on 3D scenes.

15. Upon completion of the course, the student will be able to interpret data and place textures on 3D scenes using Autocad.
16. Upon completion of the course, the student will be able to interpret data and place lighting on 3D scenes using Autocad.
17. Upon completion of the course, the student will be able to interpret data and create 3D scenes using Autocad.
18. Upon completion of the course, the student will be able to interpret data and place textures on 3D scenes using 3D Studio.
19. Upon completion of the course, the student will be able to interpret data and place lighting on 3D scenes using 3D Studio.
20. Upon completion of the course, the student will be able to interpret data and create 3D scenes using 3D Studio.
21. Upon completion of the course, the student will be able to interpret data and create an assembly using Inventor.
22. Upon completion of the course, the student will be able to place dimensions using Inventor.
23. Upon completion of the course, the student will be able to create a solid model using Inventor.
24. Upon completion of the course, the student will be able to select and assign material to a solid model using Inventor.
25. Upon completion of the course, the student will be able to assign different materials to solid models on an assembly using Inventor.
26. Upon completion of the course, the student will be able to input data to assign motion to a solid model using Inventor.
27. Upon completion of the course, the student will be able to position a camera on a solid model using Inventor.
28. Upon completion of the course, the student will be able to position lights on a solid model using Inventor.

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.

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