

SYLLABUS

DATE OF LAST REVIEW:	03/2017
CIP CODE:	15.1302
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Drafting Technology
COURSE NUMBER:	ENGR-0151
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
EMAIL:	KCKCC-issued email accounts are the official means for electronically communicating with our students.
PREQUISITES:	ENGR-0106, Computer Aided Drafting
REQUIRED TEXT(S):	Please check with the KCKCC bookstore, http://www.kckccbookstore.com for the required text for your particular class.

COURSE DESCRIPTION:

This course is designed to provide fundamental knowledge of the principles of drafting as well as skill in the basic drafting construction methods. It covers such topics as orthographic projection, dimensioning, geometric construction, sketching, auxiliary views, sectioning, and charts and graphs.

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:

- I) Geometric Construction
 - A) Theory
 - B) Lines
 - C) Bisecting
 - D) Trisecting
 - E) Proportional dividing

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- F) Angles
- G) Triangles
- H) Squares
- I) Polygons
- J) Tangents
- K) Circumference lengths
- L) Ellipses
- II) Multi-View Projection
 - A) Theory
 - B) Planes of Projection
 - 1) Frontal
 - 2) Horizontal
 - 3) Profile
 - C) Orthographic Projection
 - D) Selection of Views
 - E) Relationship of Views
- III) Freehand Sketching and detailing
 - A) Straight Lines
 - B) Curved Lines
 - C) Geometrical Figures
 - D) Classification of Lines
 - E) Multi-View Sketching
- IV) Dimensioning
 - A) Locations
 - B) Size
 - C) Methods
 - 1) Aligned
 - 2) Unidirectional
 - D) Rules
 - E) Line Delineation
- V) Section Views
 - A) Full-Sections
 - B) Half-Sections
 - C) Broken-Sections
 - D) Revolved-Sections
 - E) Phantom-Sections
 - F) Offset-Sections
 - G) Auxiliary-Sections
- VI) Auxiliaries
 - A) Primary Auxiliaries
 - B) Secondary Auxiliaries
 - C) Dimensioning Auxiliaries
- VII) Charts and Graphs
 - A) Bar Charts
 - B) Pie Area Charts
 - C) Volume Charts

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D) Flow Charts

EXPECTED LEARNER OUTCOMES:

- A. *Upon completion of the course, the student will be able to create geometric constructions.*
- B. *Upon completion of the course, the student will be able to create multi-view projection drawings.*
- C. *Upon completion of the course, the student will be able to sketch objects.*
- D. *Upon completion of the course, the student will be able to dimension drawings.*
- E. *Upon completion of the course, the student will be able to create section view drawings.*
- F. *Upon completion of the course, the student will be able to create auxiliary view drawings.*
- G. *Upon completion of the course, the student will be able to create charts and graphs.*

COURSE COMPETENCIES:

Upon completion of the course, the student will be able to create geometric constructions.

1. Upon completion of the course, the student will be able to interpret not only data and bisect but also trisect lines.
2. Upon completion of the course, the student will be able to interpret data and divide a line.
3. Upon completion of the course, the student will be able to interpret data and create triangles, squares, polygons, and angles.
4. Upon completion of the course, the student will be able to create an ellipse.
5. Upon completion of the course, the student will be able to determine the circumference of a circle.

Upon completion of the course, the student will be able to create multi-view projection drawings.

6. Upon completion of the course, the student will be able to demonstrate understanding of the theory of multi-view projection.
7. Upon completion of the course, the student will be able to demonstrate understanding of the three principal planes of projection.
8. Upon completion of the course, the student will be able to interpret data and create multi-view projection drawings.
9. Upon completion of the course, the student will be able to demonstrate understanding of orthographic projection.
10. Upon completion of the course, the student will be able to demonstrate understanding of the relationship of the three principal views.

Upon completion of the course, the student will be able to sketch objects.

11. Upon completion of the course, the student will be able to sketch straight and curved lines.
12. Upon completion of the course, the student will be able to sketch geometrical figures.
13. Upon completion of the course, the student will be able to identify line types as related to drafting.
14. Upon completion of the course, the student will be able to sketch objects orthographically.

Upon completion of the course, the student will be able to dimension drawings.

15. Upon completion of the course, the student will be able to interpret data and place dimensions on a drawing.
16. Upon completion of the course, the student will be able to differentiate between locational and size dimensions.
17. Upon completion of the course, the student will be able to demonstrate understanding of aligned and unidirectional dimensioning.

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18. Upon completion of the course, the student will be able to apply the rules of dimensioning on a drawing.
19. Upon completion of the course, the student will be able to place general and specific notes on a drawing.

Upon completion of the course, the student will be able to create section view drawings.

20. Upon completion of the course, the student will be able to interpret data and create full and half section view drawings.
21. Upon completion of the course, the student will be able to interpret data and create broken and revolved section view drawings.
22. Upon completion of the course, the student will be able to interpret data and create offset section view drawings.
23. Upon completion of the course, the student will be able to create section view drawings.

Upon completion of the course, the student will be able to create auxiliary view drawings.

24. Upon completion of the course, the student will be able to interpret data and create primary auxiliary view drawings.
25. Upon completion of the course, the student will be able to interpret data and create secondary auxiliary view drawings.
26. Upon completion of the course, the student will be able to dimension auxiliary view drawings.

Upon completion of the course, the student will be able to create charts and graphs.

27. Upon completion of the course, the student will be able to interpret data and create bar and pie area charts.
28. Upon completion of the course, the student will be able to interpret data and create volume and flow charts.

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

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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 disabilities services office at (913) 288 -7664.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.