

Discipline: Engineering

Degree Credit [X]
Non Credit []
Nondegree Credit []
Comm Service []

Riverside Community College District Integrated Course Outline of Record

Engineering 51

College: R M N

Lecture Hours: 27

Lab Hours: 27

Units: 2.00

ENE-51: Blueprint Reading

COURSE DESCRIPTION

Prerequisite: None.

A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations. This course is designed for students interested in print reading for the machine trades. 27 hours lecture and 27 hours laboratory.(Letter Grade, or Pass/No Pass option.)

SHORT DESCRIPTION FOR CLASS SCHEDULE

Beginning course in blueprints and their interpretation.

ENTRY SKILLS

None.

STUDENT LEARNING OUTCOMES

Upon successful completion of the course, students should be able to:

Develop basic blueprint reading ability along with a better understanding of prints, specifications, etc., used to in the general field of all industry.

Establish a systematic approach to recognizing the essential information given on a blueprint.

Create in the individual a confidence in the ability to approach and analyze even a complex print.

COURSE CONTENT

1. Introduction
2. Visualization
3. Lines and sections
4. Views
5. Notes and symbols
6. Drawing format
7. Dimensioning and tolerancing
8. Class exercises

METHODS OF INSTRUCTION

Methods of instruction used to achieve student learning outcomes may include, but are not limited to:

- Present class lectures/discussions in order to assist students in achieving the learning outcomes by reviewing relevant course content.
- Perform assigned lab activities in order to expose the student to situations/problems which reinforce lecture presentation material.
- Develop and assign problem solving tasks and activities in order to assist the student in achieving learning objectives and by offering opportunities to draw a variety of alternate design problems, while providing individualized learning opportunities.
- Show videos, films, and slides and provide handouts in order to give the student a better feeling of exposure to activities in industry and related fields.
- Pair and small group activities, discussions, and exercises in order to promote discovery and enhance problem solving skills.
- Invite or visit guest lecturers in order to bring current industry experience directly into the classroom and help students attain objectives through direct interface with active professionals.

METHODS OF EVALUATION

Students will be evaluated for progress in and/or mastery of learning outcomes by methods of evaluation which may include, but are not limited to:

- Individual and small group projects are evaluated based on the standards that would be applicable to success in the field or professions employing

drafting skills. Content and quality of their final product is evaluated within the context of the assigned problem and time allotted.

- Evaluation of student mechanical drawing problem solutions of laboratory projects to determine correct application and use of drafting tools.
- Evaluation of quizzes, performance exams and final exam for conceptual understanding as well as the application of the proper technique of drafting fundamentals.

SAMPLE ASSIGNMENTS

Outside-of-Class Reading Assignments

- Students will be assigned several chapter readings from the textbook.
- Students will be assigned other readings dealing with industrial print reading in various areas of the mechanical trades industry.

Outside-of-Class Writing Assignments

- Students will answer assigned chapter questions.
- Students may answer test questions in sentence or essay format.
- Students may be assigned short one to two page reports dealing with basic print reading ability.
- Students may be assigned writing assignments that deal with blueprint reading in general industry.

Other Outside-of-Class Assignments

- None.

COURSE MATERIALS

All materials used in this course will be periodically reviewed to ensure that they are appropriate for college level instruction. Possible texts include:

Thomas P. Olivo and C. Thomas Olivo . Basic Blueprint Reading and Sketching . 9th ed. -: Delmar Cengage Learning, 2010.

Schultz, R. and Smith L.. Blueprint Reading for the Machine Trades. 6th ed. -: Prentice Hall, 2008.

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