



COURSE OUTLINE

DRF105

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Prepared: Howard Gray Approved: Corey Meunier

Course Code: Title	DRF105: DRAFTING AND BLUEPRINT READING
Program Number: Name	4039: MECH. ENG. TN-MANUFA
Department:	MECHANICAL TECHNIQUES PS
Semester/Term:	17F
Course Description:	<p>In a hands-on environment students will learn blueprint reading, geometric dimensioning and tolerancing (G.D. & T.) and be introduced to AutoCAD. The course will commence with skill development in blueprint reading. These skills shall be applied to the machinist's trade and related areas. New information has been added to explain computer-aided design, new dimensioning practices, and assembly drawing interpretation. Using common shop terminology, industrial prints will be interpreted. G.D. & T. includes reading dimensional drawings in fractions, decimals and in metric units. AutoCAD is taught so that upon completion students can create computerized, mechanical drawings.</p>
Total Credits:	3
Hours/Week:	2
Total Hours:	30
Substitutes:	DRF115
This course is a pre-requisite for:	CAD225
Vocational Learning Outcomes (VLO's): Please refer to program web page for a complete listing of program outcomes where applicable.	<p>#1. Complete all work in compliance with current legislation, standards, regulations and guidelines.</p> <p>#2. Apply quality control and quality assurance procedures to meet organizational standards and requirements.</p> <p>#3. Comply with current health and safety legislation, as well as organizational practices and procedures.</p> <p>#5. Use current and emerging technologies to support the implementation of mechanical engineering projects.</p> <p>#6. Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering.</p> <p>#7. Interpret, prepare and modify mechanical engineering drawings and other related technical documents.</p>



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Essential Employability Skills (EES):

- #2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.
- #4. Apply a systematic approach to solve problems.
- #5. Use a variety of thinking skills to anticipate and solve problems.
- #6. Locate, select, organize, and document information using appropriate technology and information systems.
- #10. Manage the use of time and other resources to complete projects.
- #11. Take responsibility for ones own actions, decisions, and consequences.

Course Evaluation:

Passing Grade: 50%, D

Other Course Evaluation & Assessment Requirements:

Grade
Definition Grade Point Equivalent
A+ 90 – 100% 4.00
A 80 – 89%
B 70 - 79% 3.00
C 60 - 69% 2.00
D 50 – 59% 1.00
F (Fail) 49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.
S Satisfactory achievement in field /clinical placement or non-graded subject area.
U Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR Grade not reported to Registrar's office.
W Student has withdrawn from the course without academic penalty.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
assignments	70%
Exam	30%

Books and Required Resources:

Blueprint Reading for the Machine Trades by Russ Shultz and Larry Smith
Publisher: Pearson Edition: 7th
ISBN: 0-13-217220-8
Drafting Kit for DRF105 (available at the Campus Bookstore)

Course Outcomes and Learning Objectives:

Course Outcome 1.



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Upon successful completion of this course, the student will demonstrate the ability to use:
Drawing instruments

Learning Objectives 1.

- Identify drafting instruments
- Use drafting instruments correctly
- Use correct drafting techniques

Course Outcome 2.

Upon successful completion of this course, the student will demonstrate an understanding of
Orthographic Drawings

Learning Objectives 2.

- Interpret the information found in the title box
- Discuss the parameters of using up to six view orthographic drawings
- Understand first and third angle projections
- Draw with instruments, orthographic drawings,
Transfer surfaces and add all Dimensions
- Correct missing or incomplete views

Course Outcome 3.

Upon successful completion of this course, the student will demonstrate the ability produce both
Isometric and Oblique sketches

Learning Objectives 3.

- Discuss the advantages of isometric sketching
- Discuss the advantages of oblique sketching
- Sketch isometric views
- Sketch oblique views



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Course Outcome 4.

Upon successful completion of this course, the student will be able to interpret the various Dimensioning and tolerance techniques used on blueprints:

Learning Objectives 4.

- Use proper symbols and lines
- Discuss dimensioning techniques
- Apply tolerance techniques
- Produce complete accurate scale drawings

Course Outcome 5.

Upon successful completion of this course, the student will be able to interpret the various Sectional views and Fasteners used on blueprints:

Learning Objectives 5.

- Discuss and draw ,full, half and partial sections
- Identify different thread types on the drawing
- Use standard thread designations

Course Outcome 6.

Upon successful completion of this course, the student will be able to interpret the various Styles of blueprints

Learning Objectives 6.

- Read both detail and assembly drawings
- Recover the information required from assembly drawings
- Use the information found on detail drawings to check or reproduce a component

Date:

Friday, September 1, 2017



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Please refer to the course outline addendum on the Learning Management System for further information.