COURSE OUTLINE

DRF105

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:	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.
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.**	#1. Complete all work in compliance with current legislation, standards, regulations and guidelines. #2. Apply quality control and quality assurance procedures to meet organizational standards and requirements. #3. Comply with current health and safety legislation, as well as organizational practices and procedures. #5. Use current and emerging technologies to support the implementation of mechanical engineering projects. #6. Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering. #7. Interpret, prepare and modify mechanical engineering drawings and other related technical documents.

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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:	<table><tr><th>Evaluation Type</th><th>Evaluation Weight</th></tr><tr><td>assignments</td><td>70%</td></tr><tr><td>Exam</td><td>30%</td></tr></table>
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.