COURSE OUTLINE: DRF105 - DRAFTING/BP READING

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Approved: Corey Meunier, Dean, Technology, Trades, and Apprenticeship

Course Code: Title	DRF105: DRAFTING AND BLUEPRINT READING
Program Number: Name	4039: MECH. ENG. TN-MANUFA 4040: MACHINE SHOP 5082: MECH.TECH.IND.MAINT.
Department:	MECHANICAL TECHNIQUES PS
Academic Year:	2024-2025
Course Description:	The technician and tradesperson is required to receive and transfer technical information. Drawings and blueprints are used to transfer this information. Through practice the student will strengthen this skill, interpret and visualize this information found on the blueprints or drawings.
Total Credits:	3
Hours/Week:	2
Total Hours:	28
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Substitutes:	DRF115
This course is a pre-requisite for:	CAD225
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4039 - MECH. ENG. TN-MANUFA** VLO 1 Complete all work in compliance with current legislation, standards, regulations and guidelines. VLO 2 Apply quality control and quality assurance procedures to meet organizational standards and requirements. VLO 3 Comply with current health and safety legislation, as well as organizational practices and procedures. VLO 5 Use current and emerging technologies to support the implementation of mechanical engineering projects. VLO 6 Analyze and solve mechanical problems by applying mathematics and fundamentals of mechanical engineering. VLO 7 Interpret, prepare and modify mechanical engineering drawings and other related technical documents. **4040 - MACHINE SHOP** VLO 1 Complete all work in compliance with current legislation, standards, regulations and guidelines. VLO 2 Contribute to the application of quality control and quality assurance procedures to

	meet organizational standards and requirements. VLO 3 Comply with current health and safety legislation, as well as organizational practices and procedures. VLO 5 Use current and emerging technologies to support the implementation of mechanical and manufacturing projects. VLO 6 Troubleshoot and solve standard mechanical problems by applying mathematics and fundamentals of mechanics. VLO 7 Contribute to the interpretation and preparation of mechanical drawings and other related technical documents. **5082 - MECH.TECH.IND.MAINT.** VLO 1 Complete all work in compliance with current legislation, standards, regulations and guidelines. VLO 2 Contribute to the application of quality control and quality assurance procedures to meet organizational standards and requirements. VLO 3 Comply with current health and safety legislation, as well as organizational practices and procedures. VLO 5 Use current and emerging technologies to support the implementation of mechanical and manufacturing projects. VLO 6 Troubleshoot and solve standard mechanical problems by applying mathematics and fundamentals of mechanics. VLO 7 Contribute to the interpretation and preparation of mechanical drawings and other related technical documents.
Essential Employability Skills (EES) addressed in this course:	EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
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.
Books and Required Resources:	Blueprint Reading for the Machine Trades by Russ Shultz and Larry Smith Publisher: Pearson Edition: 8th ISBN: 9780134436340 Drafting Kit for DRF105 (available at the Campus Bookstore)

Course Outcomes and Learning Objectives:

Course Outcome 1	**Learning Objectives for Course Outcome 1**
1. Upon successful completion of this course, the student will demonstrate the ability to use: Drawing instruments	1.1 Identify drafting instruments 1.2 Use drafting instruments correctly 1.3 Use correct drafting techniques
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Upon successful completion of this course, the student will demonstrate an understanding of Orthographic Drawings	2.1 Interpret the information found in the title box 2.2 Discuss the parameters of using up to six view orthographic drawings 2.3 Understand first and third angle projections 2.4 Draw with instruments, orthographic drawings, 2.5 Transfer surfaces and add all Dimensions 2.6 Correct missing or incomplete views
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Upon successful completion of this course, the student will demonstrate the ability produce both Isometric and Oblique sketches	3.1 Discuss the advantages of isometric sketching 3.2 Discuss the advantages of oblique sketching 3.3 Sketch isometric views 3.4 Sketch oblique views
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Upon successful completion of this course, the student will be able to interpret the various Dimensioning and tolerance techniques used on blueprints:	4.1 Use proper symbols and lines 4.2 Discuss dimensioning techniques 4.3 Apply tolerance techniques 4.4 Produce complete accurate scale drawings
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5.Upon successful completion of this course, the student will be able to interpret the various	5.1 Discuss and draw ,full, half and partial sections 5.2 Identify different thread types on the drawing

	Sectional views and Fasteners used on blueprints:	5.3 Use standard thread designations
	Course Outcome 6	**Learning Objectives for Course Outcome 6**
	6. Upon successful completion of this course, the student will be able to interpret the various Styles of blueprints	6.1 Read both detail and assembly drawings 6.2 Recover the information required from assembly drawings 6.3 Use the information found on detail drawings to check or reproduce a component

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	50%
Drawings	20%
Exam	30%

Date: August 9, 2024

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