SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Manufacturing Engineering Technology Program
Revision Date: August 23, 2021
Syllabus Statements

I. CATALOG DESCRIPTION

Course Number:	MFGT1150
Course Title:	Engineering Drawing & Design
Prerequisite(s):	None
Catalog Description:	Basic engineering documentation. Geometric construction, orthographic projection, dimensioning, section views, auxiliary views, pictorial views, precision dimensioning, gears, cams, sheet metal layout, threads, weld symbols, assemblies and a team approach to product design.
Credit Hours:	3
Class Hours:	0
Lab Hours:	135
Total Contact Hours:	135

II. COURSE OBJECTIVES: *Course will:*

A. Demonstrate and practice the techniques and industry standards to ensure quality engineering documentation.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. Student Learning Outcomes: *Student will be able to:*
- **1.** Produce necessary views of a drawing in orthographic projection and properly dimension a drawing.
- **2.** Apply theory and rules of geometric dimensioning and tolerancing to ASME Y14.5 – 2018 standards.
- **3.** Complete a working set of drawings.

B. General Education Learning Outcomes (GELOs)
- **1.** GELO #3: Critical Thinking & Problem Solving
  Outcome 2: Synthesize information to arrive at reasoned solutions to problems.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information)*

A. Print Reading for Industry
B. Line Conventions
C. Title Blocks and Parts Lists
D. Geometric Terms and Construction
E. Multiview Drawings
F. Section Views
G. Auxiliary Views
H. Screw Thread Representation
I. Dimensioning
J. Tolerancing
K. Machining Specifications and Drawing Notes
L. Geometric Dimensioning and Tolerancing
M. Drawing Revision System
N. Detail and Assembly Drawings
O. Springs and Fasteners
P. Gears and Splines

Q. Cam Diagrams
R. Plastic Parts
S. Precision Sheet Metal Parts
T. Welding Prints
U. Instrumentation and Control Drawings
V. Measurement Tools
W. Sketching Pictorial Drawings

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): *Print Reading for Industry*, Brown & Brown, (Refer to CID and/or instructor for current edition)

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:
- **1.** Small and large group discussion
- **2.** Video presentation
- **3.** Demonstrations
- **4.** Handouts
- **5.** Observations
- **6.** Assigned lab projects
- **7.** Field trips

VII. METHODS OF EVALUATION (*course outline may provide more detailed information)*

A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
- **1.** Workbook Assignments
- **2.** Quizzes
- **3.** Tests
- **4.** Lab grades

VIII. SPECIFIC COURSE REQUIREMENTS:

A. Completion of all Workbook Assignments, Quizzes, Tests, and Labs.
B. Must earn a final grade of 70% (2.0) or higher.
C. Program shop safety rules will be followed. Please see the course outline for any additional safety rules established by the instructor.