

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Design & Drafting Technology Program
Revision Date: August 22, 2022

I. CATALOG DESCRIPTION

Course Number: DDRT2130
Course Title: Industrial Plastics
Prerequisite(s): DDRT1110
Catalog Description: Identification of thermoplastics and thermosetting plastics, their properties, uses and applications. Study of the manufacturing processes associated with the use of plastics products.

Credit Hours: 2
Class Hours: 30
Lab Hours: 0
Total Contact Hours: 30

II. COURSE OBJECTIVES: *Course will:*

A. Discuss and identify the types, usage and manufacture of plastics.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
1. Develop an understanding of theory and applications for industrial plastics.
 2. Identify and define different types of plastics and processes for possible solutions to satisfy product design specifications.
 3. Utilize SolidWorks software to perform studies of mold flow analysis and finite element analysis.
- B. General Education Learning Outcomes (GELOs)
1. GELO #3: Critical Thinking & Problem Solving
Outcome 1: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE

- A. Introduction
B. Plastics Material
C. Plastics Processing
D. Plastics Design

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): Lokesngard, Erik, *Industrial Plastics*, (Refer to CID and/or instructor for current edition)
- B. Other Resources:
1. Jensen, Helsel and Short, *Engineering Drawing & Design*, (Refer to CID and/or instructor for current edition)
 2. Harper, Charles, A., *Modern Plastics Handbook*
- C. Supplies:
1. Flash Drive
 2. A, B and C-size bond paper
 3. Computer Aided Drafting System
 4. Three ring Note book

VI. METHODS OF PRESENTATION/INSTRUCTION

- A.** Methods of presentation typically include a combination of the following:
 - 1.** Lectures
 - 2.** Classroom demonstrations
 - 3.** Classroom discussions
 - 4.** Hands-on lab projects
 - 5.** Lab demonstrations
 - 6.** Lab assistance
 - 7.** Instructional handouts
 - 8.** Video presentations
 - 9.** Power Point presentations
 - 10.** Speaker(s)

VII. METHODS OF EVALUATION

- A.** Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 - 1.** The course grade is determined accordingly:
 - a.** 60%--- Homework Assignments/Exercises
 - b.** 40%--- Quizzes and Exams
 - 2.** Evaluation will be based on the number of points earned from the total points possible

VIII. SPECIFIC COURSE REQUIREMENTS

- A.** Student must meet all of the following:
 - 1.** Achieve passing grade of 60% or higher, based on SCC grading scale.
 - 2.** Submit own work. Students turning in calculations or homework by someone other than themselves will receive a grade of 0% and will be referred to the Dean of Students for further disciplinary action.