

DRFT-112 MATERIALS AND PROCESSES 3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This introductory course in materials science will give the student a basic knowledge of industrially significant materials and commonly employed processing and manufacturing methods

Prerequisites: None

Semester Offered: Spring

COMMON STUDENT LEARNING OUTCOMES

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to...

1. Understand the structure and composition of metallic materials and how their properties are affected by these parameters.
2. Learn how properties of ferrous metals are affected by thermal treatment.

3. Understand the structure and composition of non-metallic materials and how their properties are affected by these parameters.
4. Examine the commonly employed industrial methods for processing materials.
5. Study the effects on the environment of materials processing.