

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: ETI 2424

COURSE TITLE: Casting

PREREQUISITE(S): None

COREQUISITE(S): None

CREDIT HOURS: 3

CONTACT HOURS/WEEK: 3

## CONTACT HOUR BREAKDOWN:

Lecture/Discussion: 3

Laboratory:

Other:

FACULTY WORKLOAD POINTS: 3

STANDARDIZED CLASS SIZE  
ALLOCATION: 30

## CATALOG COURSE DESCRIPTION:

This course focuses on the current state-of-the-art processes associated with the continuous casting of steel billets. Students in this course will develop an in-depth understanding of ladle metallurgy, liquid steel pouring, tundish metallurgy, heat transfer and solidification, and casting defects associated with the casting process. Prior to completing this course each student will actively participate in all phases of the casting process. Enrollment in this course is restricted to AmeriSteel Corporation employees only.

SUGGESTED TEXT(S): The Making Shaping and Treating of Steel, 10<sup>th</sup> Edition,  
Published by AISE

IMPLEMENTATION DATE: Fall Term, 2000

REVIEW OR MODIFICATION DATE: Fall Term, 2002 (20031)  
Fall Term, 2006 (20071) (was ETI 2157)

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Introduction	1
A. History B. Course Outline	
II. Continuous Casting	39
A. Equipment (5) B. Casting Operation (8) C. Heat Transfer and Solidification (8) D. Casting Practices (6) E. Product Quality (8) F. Casting Defects (4)	
III. Caster Lab	5

PROGRAM TITLE: Industrial Management Technology (Steel Mill)

COURSE TITLE: Casting

CIP NUMBER:

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLE(S):

11.0 DEMONSTRATE APPROPRIATE UNDERSTANDING OF BASIC SCIENCE - - The student will be able to:

11.01 Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.

11.02 Draw conclusions or make inferences from data.

18.0 DEMONSTRATE AN UNDERSTANDING OF TECHNICAL OR INDUSTRIAL COMPETENCIES - - The student will be able to:

18.01 Demonstrate an understanding of technical or industrial competencies as specified in the curriculum frameworks of any post-secondary adult or post-secondary vocational program.