

Industrial Technology (INTC) 2900 Industrial Technology Capstone (3 Units) CSU

Advisory: Completion of all other required courses in an industrial education or individual technology program. In addition, eligibility for English 1000, Reading 1005, and Mathematics 1050 is strongly recommended.

Hours and Unit Calculations:

48 hours lecture. 96 Outside-of-class hours (144 Total Student Learning hours) 3 Units

Catalog Description: This course is designed to be the culminating project specific to a program of study. Professional and employment related situations and projects will be explored through a variety of learning methods to include simulations, case studies, scenarios, individual research papers, projects, internships, portfolios and presentations necessary for twenty-first century success. Projects will be based on need and/or interest related to the discipline or profession and agreed upon between the instructor and the student.

Type of Class/Course: Degree Credit

Text:

Marlowe, Frank. *Welding Fabrication and Repair: Questions and Answers*. Industrial Press, 2002.

Supplemental Text:

Magolda, Marcia B. Baxter. *Creating Contexts for Learning and Self-Authorship*. Vanderbilt University Press, 2000.

Course Objectives:

By the end of this course, a successful student will be able to

1. apply technical skills to situations and research,
2. synthesize theory and facts into plans and projects,
3. design and create possible solutions to workplace challenges
4. propose and defend a technological solution,
5. demonstrate the ability to research current workplace issues and provide an analysis of theories and issues involved, and
6. present a formal report and/or project detailing a problem, its dimensions, possible solutions and rationale for them, recommendation with justification, and an evaluation plan.

Course Scope and Content:

Unit I Introduction

A. Overview



- Unit II Design of Project
- A. Research
 - B. Study
 - C. Design of Project

- Unit III Development
- A. Development of Project
 - B. Implementation of Project
 - C. Presentation of Project
 - D. Report

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 6 hours per week outside of the regular class time doing the following:

1. Crafting an appropriate bibliography to support the project
2. Reading the required text and other background materials for class
3. Answering questions
4. Studying class materials and notes
5. Performing literature searches
6. Problem solving activities and exercises
7. Preparing projects
8. Working on group exercises
9. Using technological skills to create products

Method of Instruction:

1. Orientation sessions with instructor
2. Lecture and discussion
3. Group activities
4. Role-playing and practice exercises
5. Demonstrations
6. Hands-on use of technology

Methods of Evaluation:

1. Written assignments
2. Participation
 - a. Role-playing and group activities
 - b. Oral presentations and demonstrations
 - c. Discussion responses
 - d. Scenario reflections
3. Projects
 - a. Multimedia presentations
 - b. Technological scenario responses
 - c. Formal written reports
 - d. Portfolios



e. Samples

Supplemental Data:

TOP Code:	0956.70: Industrial and Occupational Safety and Health
SAM Priority Code:	B: Advanced Occupational
Distance Education:	Not Applicable
Funding Agency:	Y: Not Applicable(funds not used)
Program Status:	1: Program Applicable
Noncredit Category:	Y: Not Applicable, Credit Course
Special Class Status:	N: Course is not a special class
Basic Skills Status:	N: Course is not a basic skills course
Prior to College Level:	Y: Not applicable
Cooperative Work Experience:	N: Is not part of a cooperative work experience education program
Eligible for Credit by Exam:	E: Credit By Exam
Eligible for Pass/No Pass:	NO
Taft College General Education:	NONE
Discipline:	Industrial Technologies or Welding