MACH 61B Course Outline as of Spring 2000

CATALOG INFORMATION

Dept and Nbr: MACH 61B Title: NON-FERROUS METALLURGY
Full Title: Non-Ferrous Metallurgy
Last Reviewed: 9/27/2010

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	2.00	17.5	Lab Scheduled	35.00
		Contact DHR	1.00		Contact DHR	17.50
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	09 - 6 Units Within 4 Semesters
Also Listed As:	
Formerly:	

Catalog Description:
Study of non-ferrous metals including alloying, heat treating, testing and applications in industry.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Study of non-ferrous metals including alloying heat treating, testing and applications in industry. (Grade Only)
Prerequisites/Corequisites:
Recommended:
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: 6 Units Within 4 Semesters

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:	Spring 2019
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Students will:
A. Study non-ferrous metals from periodic table.
B. Identify non-ferrous metals by experimentation.
C. Learn to heat treat non-ferrous alloys.
D. Describe applications of design, manufacturing, and fabrication applicable to non-ferrous metals.

Topics and Scope:

1. Introduction and review of ferrous metals.
2. History and developments of non-ferrous metal materials.
3. Non-ferrous metals - use and applications.
4. Testing equipment procedures.
5. Research and design methods.
6. Library use and research of data base for non-ferrous alloys. Numbering system.
7. Heat treatmenting mediums and solutions.
8. Review and final.

Assignment:

The following assignments will determine student's final grade.
A. Reading assignments - weekly.
B. Lab reports - on lab experiments.
C. Mid-term paper on a specific non-ferrous material.
D. Individual projects assigned by instructor on metallurgical process.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, Lab reports	Writing 20 - 25%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Field work, Lab reports	Problem solving 15 - 25%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion	Exams 55 - 60%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
METALLURGY, by B.J. Moniz, American Technical Publishers, 2nd. Ed., 1994