

## COURSE MODIFICATION PROPOSAL

College: [ **Engineering & Comp Sci** ]

Department: [ **Manufacturing Systems  
Engineering & Mgmt** ]

### 1. Current Catalog Entry Information:

Subject Abbreviation and Number: [ **MSE 623** ]

Course Title: [ **Composite Materials** ]

Units: [ **3** ] units

General Education Section [     ] (if applicable)

### 2. Date of Proposed Implementation: (Semester/Year): [ **Fall** ] / [ **16** ] *Comments*

### 3. Course Level:

Undergraduate Only

Graduate Only

Graduate/Undergraduate

### 4. Nature of Request:

Delete Course (*Note: Record of course will remain in inactive course file*)

Change unit value from [   ] units to [   ] units

Change course type (classification) such as lecture-discussion, laboratory, activity, etc.:

**From:** [   ] units @ [   ] to [   ] units @ [   ]

**From:** [   ] units @ [   ] to [   ] units @ [   ]

Change course title to: [     ]

Change course abbreviation "Short title" (Maximum of 17 characters and spaces) to

NEW Short Title: [     ]

Change current catalog course description (*Attach current and proposed catalog course description*)

**Introduction to composite materials. Analysis of composite properties (structural, thermal, electrical, etc.), micro- and macro-mechanics; models for describing composite properties. Composite manufacturing methods. Environmental and manufacturing effects on composites. Methods of composite testing.**

**Notes:** If grading is NC/CR only, please state in course description. If a course numbered less than 500 is available for graduate credit, please state "Available for graduate credit" in the catalog description.

Change subject abbreviation number to: (*Example: HSCI 100 to PT 105*) [ **MSE 523** ]

Change requisites (*Prerequisites, Corequisites, Preparatory, Recommended Corequisites*)

**From:** [ **Instructor consent** ]

**To:** [ **CE 340 or equivalent, and instructor consent** ]

Change Current Basis of Grading

**From:**  Credit/No Credit Only

Letter Grade Only

CR/NC or Letter Grade

**To:**  Credit/No Credit Only

Letter Grade Only

CR/NC or Letter Grade

- Add course to GE Section [    ]
- Remove course from GE Section [    ]
- Change course from GE section [    ] to GE section [    ]
- Change course to a Community Service Learning course (CS)
- Allow multiple enrollments within a semester.
- Change number of times this course may be taken:  
     May be taken for credit for a total of [ ] times, or for a maximum of [ ] units
- Multiple enrollments are allowed within a semester
- Crosslist this course with [    ]
- Other: [    ]

**5. Justification and Clarification of Request** *(Attach)*

**6. Estimated Impact on Resources within the Department, for other Departments and the University.***(Attach)*

*(See Resource List)*

**7. Impact on other Departments' programs** *(Attach)*

**8. Indicate which of the Program's Measurable Student Learning Outcomes are addressed in this course.** *(Attach)*

*(see Course Alignment Matrix and the Course Objectives Chart)*

**9. If this is a General Education course, indicate how the General Education Measurable Student Learning Outcomes (from the appropriate section) are addressed in this course.** *(Attach)*

**10. Methods of Assessment for Measurable Student Learning Outcomes** *(Attach)*

A. Assessment tools

B. Describe the procedure dept/program will use to ensure the faculty teaching the course will be involved in the assessment process (refer to the university's policy on assessment.)

**11. Record of Consultation:** *(Normally all consultation should be with a department chair or program coordinator.) If more space is needed attach statement and supporting memoranda.*

Date:	Dept/College:	Department Chair/Program Coordinator	Concur (Y/N)
[2/6/2015]	[MSEM/CECS]	[ K. Chang]	[Y]
[ 2/6/2015]	[ ME/CECS ]	[ H. Johari ]	[Y]
[ 2/6/2015]	[ ECE/CECS]	[ A. Amini]	[Y]
[2/6/2015]	[ CECM/CECS ]	[ N. Dermendjian]	[Y]
[2/6/2015 ]	[ CS/CECS]	[ R. Covington]	[Y]
[    ]	[    ]	[    ]	[    ]

Consultation with the Oviatt Library is **recommended** for course modifications to ensure the availability of appropriate resources to support proposed course curriculum.

**Collection Development Coordinator**

**Please send an email to:** collection.development@csun.edu

**Date**

[   ]

## 12. Approvals:

Department Chair/Program Coordinator:	Kang Chang	Date:	[2/6/2015]
College (Dean or Associate Dean):	Robert Ryan	Date:	[5/4/2015]
Educational Policies Committee:		Date:	[   ]
Graduate Studies Committee:		Date:	[   ]
Provost:		Date:	[   ]

## 5. Justification and Clarification of Request

MSE 623 is currently limited to classified graduate students. Since the course was originally introduced, the course has gradually evolved to include a greater focus on application rather than theory, based on student interest and course assessment. This evolution has increased the potential audience for the course. Changing the course to 500-level will broaden participation to undergraduates and unclassified graduate students. Further, it will complement ME 531, a graduate-only composite materials course offered by the mechanical engineering department, that covers the design and analysis of structures composed of composite materials, as well as ME 436/L, a new undergraduate lecture/lab course covering an introduction to design with composite materials.

### Existing Course Description

#### **MSE 623. Composite Materials (3)**

Prerequisite: Instructor consent. Introduction to the structural and materials properties of composites. Static and dynamic characteristics. Stress analysis. Environmental and manufacturing effects on composites. Methods of testing composites.

### Proposed Course Description

#### **MSE 523. Composite Materials (3)**

Prerequisite: CE 340 or equivalent, and Instructor Consent. Introduction to composite materials. Analysis of composite properties (structural, thermal, electrical, etc.), micro- and macro-mechanics; models for describing composite properties. Composite manufacturing methods. Environmental and manufacturing effects on composites. Methods of composite testing.

**6. Estimated Impact on Resources within the Department, for other Departments and the University.**

Because MSE 623 is currently offered by the MSEM department, no impact on teaching personnel is anticipated. The course will utilize existing classroom and laboratory resources.

**7. Impact on other Departments' programs**

The proposed offering will complement ME 531, a course currently offered by the mechanical engineering department, as well as a new course, ME 436/L. It is expected that enrollment will increase in all three of these courses with time, given the growing importance of composite materials in mechanical design applications.