COURSE MODIFICATION PROPOSAL

College: [Engineering and Computer Science] **Department: [Mechanical Engineering]**

1. **Current Catalog Entry Information:**
   Subject Abbreviation and Number: **[ME 532]**
   Course Title: **[Mechanical Design with Polymers]**
   Units: **[3]** units
   General Education Section **[ ] (if applicable)**

2. **Date of Proposed Implementation: (Semester/Year): [Fall] / [2016]** *Comments*

3. **Course Level:**
   []Undergraduate Only **[X]**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 @ **[] []**

[X] Change course title to: **[Mechanics of Polymers]**
[X] Change course abbreviation "Short title" (Maximum of 17 characters and spaces) to

NEW Short Title: **[MECH • POLYMERS • • •]**
[X] Change current catalog course description *(Attach current and proposed catalog course description)*
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)* **[ ]**

[X] Change requisites *(Prerequisites, Corequisites, Preparatory, Recommended Corequisites)*
From: [Prerequisite: ME330. Recommended Preparatory Course: ME 386/L]

To: [Prerequisites: Undergraduate course in machine element analysis and design or equivalent background; enrollment for graduate students only.]

[] 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)
[3/5/2015]		[CECM/ECS]		[N. Dermendjian]		[Y]
[3/5/2015]		[CS/ECS]		[R. Covington]		[Y]
[3/5/2015]		[ECE/ECS]		[A. Amini]		[Y]
[3/5/2015]		[ME/ECS]		[H. Johari]		[Y]
[3/5/2015]		[MSEM/ECS]		[K. Chang]		[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 **Date**

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

12. Approvals:

Department Chair/Program Coordinator:	Hamid Johari	Date:	**[3/5/2015]**
College (Dean or Associate Dean):	Robert Ryan	Date:	**[4/15/2015]**
Educational Policies Committee:		Date:	**[ ]**
Graduate Studies Committee:		Date:	**[ ]**
Provost:		Date:	**[ ]**

5. Justification and Clarification of the Request

Mechanical Design with Polymers (ME 532) introduces students to polymeric materials, their characterization, and properties. Focus is on key mechanical properties essential for design, stress-strain behavior theories, and models with special attention to hyperelasticity and viscoelasticity. This course modification requests a change of name to "Mechanics of Polymers" to better reflect the content of the course, as well as a change of the prerequisites to require graduate status for enrollment. Restricting the enrollment to graduate students will allow the instructor to provide a more in-depth coverage of the topics and will permit the opportunity for our graduate students to take the course without being crowded out by undergraduate enrollment.

Existing Course Description

ME 532 Mechanical Design with Polymers (3)
Prerequisite: ME330. Recommended Preparatory Courses: ME 386/L Introduction to polymeric materials, their characterization and properties. Focus on key mechanical properties essential for design. Stress-Strain behavior theories and models with special attention to hyperelasticity and viscoelasticity. Integration of numerical design and analysis software suites. Available for Undergraduate Credit.

Proposed Course Description

ME 532 Mechanics of Polymers (3)
Prerequisites: Undergraduate course in machine element analysis and design or equivalent background; enrollment for graduate students only. Introduction to polymeric materials, their characterization and properties. Focus on key mechanical properties essential for design. Stress-Strain behavior theories and models with

special attention to hyperelasticity and viscoelasticity. Integration of numerical design and analysis software suites.

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

This change will cause a decrease in enrollment in ME 532, since undergraduate students will no longer be able to enroll. However, there is sufficient demand from our graduate student population to run this course on an annual basis.

7. Impact on other Department's programs

There is none. The only undergraduates who have been taking this course are from the Mechanical Engineering department.