COURSE MODIFICATION PROPOSAL

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

1. **Current Catalog Entry Information:**
   Subject Abbreviation and Number: **[ME 675A]**
   Course Title: **[Conductive and Radiative Heat Transfer]**
   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 @ **[] []**

[] Change course title to: **[ ]**
[] Change course abbreviation "Short title" (Maximum of 17 characters and spaces) to
NEW Short Title: **[• • • • • • • • • • • • • • • •]**
[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: ME 375]
To: [Prerequisites: ME 475 or equivalent; ME 501A or ME 501B or equivalent.]

[] 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]		[E/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

ME 675A is an advanced graduate level course on conductive and radiative modes of heat transfer. Both analytical and numerical methods are used for the analysis of fundamental and applied heat transfer problem. Currently only the introductory undergraduate heat transfer course (ME 375) is the prerequisite. However, with the approval of a second undergraduate heat transfer (ME 475), a more appropriate prerequisite would be the latter, more advanced course. Furthermore, given the extensive use of analytical methods in the course, a graduate level analysis course (either ME 501A or ME 501B) is also added as a prerequisite. With the combination of ME 475 and ME 501A/B, the students will be better prepared for challenging topics in ME 675A.

Current Catalog Course Description

ME 675A. Conductive and Radiative Heat Transfer (3)

Prerequisite: ME 375. Theory and applications of the conductive and radiative modes of heat transfer. Analytical and numerical methods for single- and multi-dimensional steady state and transient conduction. Numerical and analytical techniques as applied to radiative exchanges between diffuse and specular surfaces, and transfer through absorbing-transmitting media.

Proposed Catalog Course Description

ME 675A. Conductive and Radiative Heat Transfer (3)

Prerequisites: ME 475 or equivalent; ME 501A or ME 501B or equivalent. Theory and applications of the conductive and radiative modes of heat transfer. Analytical and numerical methods for single- and multi-dimensional steady state and transient

conduction. Numerical and analytical techniques as applied to radiative exchanges between diffuse and specular surfaces, and transfer through absorbing-transmitting media.

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

This change will primarily impact the order in which certain courses are taken, so there is minimal resource impact.

7. Impact on other Department's programs

There is none. This course is only taken by mechanical engineering majors.