ME 116: MACHINERY DESIGN I

In Workflow

1. ME Committee Chair (akuma@csus.edu)
2. ME Chair (akuma@csus.edu)
3. ECS Committee Chair (torsetj@csus.edu)
4. ECS Dean (kevan@csus.edu)
5. Academic Services (torsetj@csus.edu;%20212408496@csus.edu;%20cnewsome@skymail.csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Dean of Undergraduate (james.german@csus.edu;%20celena.showers@csus.edu)
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9. Catalog Editor (212408496@csus.edu;%20torsetj@csus.edu;%20cnewsome@skymail.csus.edu)
10. Registrar's Office (wwd22@csus.edu;%20wlindsey@csus.edu;%20sac19595@csus.edu;%20danielle.ambrose@csus.edu; %20h.skocilich@csus.edu;%20j.espera@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Mon, 11 Feb 2019 19:48:27 GMT
   Akihiko Kumagai (akuma): Rollback to Initiator
2. Sat, 06 Apr 2019 17:52:04 GMT
   Akihiko Kumagai (akuma): Approved for ME Committee Chair
3. Sat, 06 Apr 2019 17:57:16 GMT
   Akihiko Kumagai (akuma): Approved for ME Chair
4. Fri, 19 Apr 2019 17:50:37 GMT
   Troy Topping (troy.topping): Rollback to ME Chair for ECS Committee Chair
5. Fri, 19 Apr 2019 18:12:20 GMT
   Akihiko Kumagai (akuma): Approved for ME Chair
6. Fri, 03 May 2019 17:19:46 GMT
   Troy Topping (troy.topping): Approved for ECS Committee Chair
7. Fri, 03 May 2019 17:29:41 GMT
   Kevan Shafizadeh (kevan): Approved for ECS Dean
8. Fri, 31 May 2019 21:06:12 GMT
   212408496: Rollback to ECS Dean for Academic Services
9. Tue, 04 Jun 2019 17:25:55 GMT
   Kevan Shafizadeh (kevan): Approved for ECS Dean
10. Tue, 04 Jun 2019 21:48:51 GMT
    212408496: Rollback to ECS Dean for Academic Services
11. Fri, 30 Aug 2019 16:50:16 GMT
    Kevan Shafizadeh (kevan): Approved for ECS Dean

Date Submitted:Sat, 06 Apr 2019 17:51:25 GMT

Viewing:ME 116 : Machinery Design I

Last edit:Tue, 04 Jun 2019 21:48:50 GMT

Changes proposed by: Akihiko Kumagai (101016054)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Kenneth Sprott	sprottk@ecs.csus.edu	916-278-6308

Catalog Title:

Machinery Design I

Class Schedule Title:

Machinery Design I

Academic Group: (College)

ECS - Engineering & Computer Science

Academic Organization: (Department)

Mechanical Engineering

Will this course be offered through the College of Continuing Education (CCE)?
No

Catalog Year Effective:
Fall 2019 (2019/2020 Catalog)

Subject Area: (prefix)
ME - Mechanical Engineering

Catalog Number: (course number)
116

Course ID: (For administrative use only.)
201307

Units:
2

In what term(s) will this course typically be offered?
Fall, Spring, Summer

Does this course require a room for its final exam?
Yes, final exam requires a room

Does this course replace an existing experimental course?
No

This course complies with the credit hour policy:
Yes

Justification for course proposal:
Remove ENGR 6 as a prerequisite. Course not required for the material covered

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)
Introduction to basic design methodology for mechanical systems and devices. Detail design of machine components; application of analytical methods in the design of complex machines. Failure mode analysis, theories of failure, yield, fracture, deflection, and fatigue analysis of machine elements. Design of common machine elements such as bearings and shafts.

Are one or more field trips required with this course?
No

Fee Course?
No

Does this course have prerequisites?
Yes

Prerequisite:
ENGR 112, and ME 37. ENGR 112 and ME 37 may be taken concurrently.

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):
Lecture

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture Units

2

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc."

1. Understand the basic steps of the mechanical design process.
2. Calculate the allowable loads and stresses based on applied forces and a factor of safety.
3. Calculate stress in machine components and pressure vessels given the applied loads.
4. Calculate the deflection of machine components under an applied load.
5. Predict failure in machine components using static failure theories.

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.

Homework (ELO 1-5)
Examinations (ELO 1-5)

Is this course required in a degree program (major, minor, graduate degree, certificate?)

Yes

Identify the program(s) in which this course is required:

Programs:
BS in Mechanical Engineering

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Intellectual and practical skills

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Reviewer Comments:

Akihiko Kumagai (akuma) (Mon, 11 Feb 2019 19:48:27 GMT): Rollback: Please see my email.
Troy Topping (troy.topping) (Fri, 19 Apr 2019 17:50:37 GMT): Rollback: ELOs
212408496 (Fri, 31 May 2019 21:06:12 GMT): Rollback: The 2018-2019 AY has come to a close; proposals were accepted for review until April 20, 2019. Unfortunately, this proposal was received after this deadline and will need to be resubmitted to Academic Services at the start of the fall 2019 semester.
212408496 (Tue, 04 Jun 2019 21:48:51 GMT): Rollback: The 2018-2019 AY has come to a close; proposals were accepted for review until April 20, 2019. Unfortunately, this proposal was received after this deadline and will need to be resubmitted to Academic Services at the start of the fall 2019 semester.

Key: 3298