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save you TIME AND MONEY!

Iowa Central Community College
Industrial Technology Department



Course Syllabus

Course Name: Engineering Mechanics 1

Course Number: CAD-217

Class Location and Time:

Room: SC-302 Day: MWF Time: 10:20 am -11:20 am

Room: Day: Time:

Course Start Date: 8/30/2012

Course End Date: 12/14/2012

Instructor: Carl Gross

Office Location: SC-301A

E-mail Address:

gross_c@iowacentral.edu

Office Hours:

Days: MWF Times: 9:10 am-10:10 am

Phone: (515) 574-1227, x or
800 362-2793, x 1227

Days: TR Times: 1:10 pm – 2:10 pm

Days: Times:

Final Exam: Day: Wednesday Date: 12/14/2012 Time: 9:40 am -11:10 am

Departmental Assistance: For help with course selection, class registration, transfer information, and other academic assistance, please contact the department associate, Phyllis Minnihan in AST 117 at 515-574-1903 or by email to Minnihan@iowacentral.edu

1. Total Semester Hour Credit: 3
2. Total Contact Hours per Semester: Lecture: 54 Lab: Clinical:
3. Catalog Description:

The student will learn and apply concepts of statics and dynamics to various design challenges. Students will use diagrams, calculations, and computers to construct simple designs under various loading conditions and analyze them for the effects of loading.
4. Prerequisites and/or Co-requisites: Solid Modeling 2, Technical Math 2
5. Textbook Required:
 - Engineering Mechanics Statics, R.C. Hibbeler, Prentice-Hall, 2010
ISBN:9780136077909
6. Supplemental Materials Required:
 - Scientific calculator – (Ti-36X is one example.)
 - USB flash drive – (Does not need to be for this course only.)

7. College Procedures:

- **Children in the Classroom:**
 - Students are not allowed to bring children into the classrooms, labs, shops, or hallways during class times.
- **Electronic Devices in the Classroom:**
 - Cell phones, pagers, timers and similar devices are not to be operational during classroom, lab, and clinical times.
- **Inclement Weather Statement:**
 - The final decision to attend college classes can only be made by the individual based on their specific extenuating circumstances that may make it hazardous for them to travel.
- **Academic Accommodations:**
 - Any student who feels they may need academic accommodations should contact the Special Populations Coordinator early on in the semester. The Coordinator will verify documentation and coordinate appropriate and reasonable accommodations. Students must obtain a new accommodation notification each semester.
 - For information contact:
 - Heather Lundberg
 - Special Populations Coordinator
 - Student Resource Center/Library
 - 515-574-1045

8. Additional Course Information:

- Attendance
 - Attendance is required for success. Please be sure to attend class regularly. Refer to your student handbook for college attendance policy.
- Late Work
 - A regular homework assignment or quiz is **NOT** accepted late for **any reason**.
 - A progress check on a project in the engineering notebook is counted as a regular homework assignment.
 - A project assignment that takes a number of days to complete will be accepted late with penalty. Penalty: 5% per day deduction in total score.
- Lab Work
 - Missed labs can't be made up.
 - An exception **may** be made if **all** of the following are satisfied:
 - The missed lab can be completed by one person or you can find a partner to help with the data collection.
 - A time can be found that is convenient for the instructor to set up the lab again.

- The lab has not yet been graded.
- Make-up Work
 - Arrangements must be made with the instructor **prior to due date** if possible.
 - At minimum an e-mail or Facebook message must be received by the end of the day to be eligible for make-up work.
 - When available, make-up work will likely be different from in-class versions.
 - Make-up work will be evaluated on a case-by-case basis.
 - Missed presentations can't be made up unless arrangements are made **at the time the presentation is assigned**.
- Extra Credit
 - Not available.
- Quiz / Homework
 - Missed homework can't be made up because it is graded as attempted or not.
 - Quizzes can be made up by taking an alternate version. The alternate is due no later than the due date of the next assigned quiz unless otherwise stated.
 - The highest score from either the original or the alternate will apply to your grade.

9. Grading Policy:

Letter Grade	Minimum Percent
A	>90
B	>80
C	>70
D	>60
F	<60

Grade Weighting	
Homework	40
Quiz	20
Bridge Project	10
Midterm	15
Final	15

10. Course (Student) Outcomes:

Upon satisfactory completion of this course, the student will be able to:

- Define and discuss terminology of statics.
- Apply principles of statics in design scenarios.
- Use computer software to construct and analyze a system under loading.

11. Learning Strategies (Instructional Methods):

- Lecture, hands-on lab exercises, videotapes, guest speakers, team exercises, unit problems, worksheets, computer-based problem solving.

12. Unit (Competencies) Outcomes:

During this course, students will be expected, through definition and problem completion, to demonstrate competency in each of the following areas:

1. Standard practices of statics and dynamics calculations
2. Geometric concepts
3. Forces, vectors, and resultants
4. Moments and couples
5. Equilibrium in a plane
6. Structures and members
7. Equilibrium in space
8. Friction
9. Centroids and center of gravity
10. Moments of inertia