Online ENGR/CEE/MAE 30 STATICS
Syllabus – Summer 2016

General: This is a 5-week, online class, starting from Monday August 1, 2016.

There are three tests: two midterms (Wednesdays on Week 2 and Week 4) and one final exam in week 6 (Wednesday).

There is an online class forum called “General Discussion Forum” where students are encouraged to ask questions and/or make comments so that all students have the benefit of reading the answers. Discussion postings are archived and will be available throughout the course. Please do not email the instructor with questions about the course material. The instructor and the TA will do their best to respond quickly to questions.

We take academic honesty seriously. The learning environment at University of California, Irvine is based on honesty and integrity. Students are bound by the University of California’s Code of Conduct with the relevant links shown below:
The University of California Code of Conduct
UCI’s Academic Senate Policy on Academic Dishonesty

Course Number: ENGR 30, ENGRCEE 30, ENGRMAE 30

Course Website: TBD; ???https://canvas.eee.uci.edu/courses/319??????????

Description: Addition and resolution of forces, distributed forces, equivalent system of forces, centroids, first moments, moments and products on inertia, equilibrium of rigid bodies, trusses, beams, and cables. (Credit units: 4; Design units: 0)

Objective: This course is designed to develop skills in treating the static analysis of rigid bodies.

Outcomes: The student is able to identify and formulate statics problems;

The student is able to draw free body diagrams and solve equilibrium equations of rigid bodies;

The student is able to apply the theory and methods to analyze simple trusses and beams; and
The student is able to calculate the centroids and moments of inertia.

**Prerequisite:** Classical Physics (Physics 7C)

**Co-requisite:** Multivariable Calculus (Math 2D)

**Textbook:** *Vector Mechanics for Engineers – Statics, 10th Edition*  

**Instructor:**  
Professor Lizhi Sun  
Department of Civil and Environmental Engineering  
E4139 Engineering Gateway  
University of California, Irvine  
Phone: (949) 824-8670  
Email: lsun@uci.edu

**Lectures:**  
Online (at Course Website/Canvas)

**TA:**  
TBD  
Email: TBD@UCI.EDU

**Discussions:**  
Mon/Wed  
11:00 AM – 11:50 AM PDT  
Online

**Office Hours:**  
Tues/Thurs  
02:00 PM – 04:00 PM PDT  
Online

**Grading:**  
Homework  
20%  
Two Midterm Exams  
25% × 2  
Final Exam  
30%

**Assignments:**  
**Homework** is assigned twice a week, and is posted on the class website.  
It must be scanned and turned in by 05:00 PM PDT on Tuesday and Thursday each week (unless indicated otherwise).

There will be a 50% penalty for late homework submitted before 12:00 noon PDT on the following day. Homework turned in after then will not be graded and will receive no credit.

**Examinations:**  
All tests will be **closed-book** examinations. Students will take the tests by either coming to a designated classroom on campus or using the online tool called “Proctor U” for which you will pay a fee. See the FAQ on the course website for more information about this.
### Class and Exam Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topics</th>
<th>Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong> (08/01-08/05):</td>
<td>Syllabus; Introduction (Chap. 1); Statics of particles (Chap. 2)</td>
<td>1st midterm exam (Wednesday August 10: 11:00 AM – 12:30 PM PDT)</td>
<td></td>
</tr>
<tr>
<td><strong>Week 2</strong> (08/08-08/12):</td>
<td>Rigid bodies (Chap. 3); Equilibrium of rigid bodies (Chap. 4)</td>
<td>2nd midterm exam (Wednesday August 24: 11:00 AM – 12:30 PM PDT)</td>
<td></td>
</tr>
<tr>
<td><strong>Week 3</strong> (08/15-08/19):</td>
<td>Distributed forces – centroids and centers of gravity (Chap. 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Week 4</strong> (08/22-08/26):</td>
<td>Analysis of structures (Chap 6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Week 5</strong> (08/29-09/02):</td>
<td>Forces in beams and cables (Chap. 7); Moments of inertia (Chap. 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Week 6</strong> (09/05-09/09):</td>
<td>Final Exam</td>
<td>(Wednesday September 7: 11:00 AM – 12:30 PM PDT)</td>
<td></td>
</tr>
</tbody>
</table>