DEPARTMENT OF ENGINEERING PHYSICS

EMA 202: Dynamics
Summer Session 2014


PREREQUISITES: EMA 201 (Statics)

INSTRUCTOR: Prof. Robert J. Witt, 531 ERB, 608-262-2760, witt@engr.wisc.edu

OFFICE HOURS: Available by consultation through phone or email. If you are on campus, I intend to hold office hours in the WisCEL space (4th floor of Wendt Commons) twice a week. Homework assignments (as seen below) will be due on Wednesdays and Saturdays, so I intend to hold office hours on Tuesdays and Thursdays. Scheduling of exact times for office hours will depend on input from the class.

TEACHING ASSISTANT: David Sirajuddin, sirajuddin@wisc.edu. Office hours to be determined.

TUTORING: Monday through Wednesday 2-6 pm on the 4th floor of Wendt Commons (possibly also available online depending on demand)

COURSE WEB SITE: https://courses.moodle.wisc.edu/prod/course/view.php?id=2581

HOMEWORK: Online through McGraw-Hill Connect at:
(Note: You MUST use this URL to reach this summer’s homework assignments). Homework will be due twice per week.

EXAMS: There are two options for taking exams. If you are in the Madison area, we will make it possible for you to take the exams in a traditional classroom with a TA and/or instructor proctoring the exam. If you choose to take the exams remotely, it’s a bit more complicated. We have contracted with a third party vendor to provide on-line monitoring of exams. You need access to a desktop or laptop computer that has a microphone and a webcam. The exam will be made visible on the course webpage at a pre-selected time (probably late afternoon or evening Central Standard Time) and you will then download and print out the exam at that time. Taking the exam in front of your computer, all of your activities will be recorded for the duration of the exam. When finished, you will need to scan the exam (generating a high-quality, legible .pdf) and upload the .pdf to a “dropbox” on the course webpage.

Exam dates are: Tuesday, July 8th; Monday, July 28th and Monday, August 11th. These dates have been selected to permit ample time to prepare for the exam content (see detailed schedule two pages ahead) and to permit staggering of these mechanics exams with those of the other mechanics offerings.

COURSE GRADE:

Exam 1 25%
Exam 2 25%
Exam 3 30%
Connect HW 20%
Exams in this class are meant to challenge you; as such, you may receive an exam score that is lower than what you normally anticipate. I have found it reasonable to impose a curve on the final composite score at the end of the semester, so that the average grade is a “BC.” This is not an absolute rule; I’ll make a decision how to apply a curve based on class performance. I have no problem giving higher grades if aggregate class performance is better than I anticipate.

STRATEGIES FOR SUCCESS: If you look at the detailed schedule on the next page, you’ll see there are two homework assignments per week (roughly 8 ~ 10 problems per week). Many of these problems are quite challenging, particularly towards the end of the course. All the assignments will be visible to you at the beginning of June. You may wish to work ahead a bit, particularly if you anticipate other demands on your time during different parts of the summer. To gain greater confidence of your mastery of the material, you should try additional problems. I have posted at the top of the course web page a .pdf provided by the authors to answers to most of the even-numbered problems (using textbook numbers as opposed to algorithmic Connect numbers).

When I make up the exam problems, they are often composites of different types of problems in the text. I will NOT make up an exam using the existing set of assigned problems with slightly tweaked numbers. As you work through problems, put yourself in my position and try to make up an exam for the class covering the required material. Trying many different problems beyond those assigned through Connect and imagining (and then solving) different permutations and combinations of problems puts you in the best position to excel on the exams.

MCBURNEY: If you have McBurney (learning disability) accommodations that affect any aspect of this course, discuss those with me during the first week of class.

KEY DATES:  
June 16 (Mon)  8-week summer session begins  
June 20 (Fri)  Last day to drop without EMA 202 appearing on transcript  
July 4 (Fri)  Independence Day  
July 8 (Tue)  Exam 1  
July 18 (Fri)  Last day to drop  
July 28 (Mon)  Exam 2  
August 8 (Fri)  8-week summer session officially ends  
August 11 (Mon)  Exam 3

ESTIMATED WORKLOAD: 20 ~ 25 hours per week
SCHEDULE:

<table>
<thead>
<tr>
<th>Wk</th>
<th>Dates</th>
<th>Readings</th>
<th>Connect HW assignments (two per week)</th>
<th>Other Responsibilities</th>
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<tbody>
<tr>
<td>1</td>
<td>6/16-6/22</td>
<td>1.1-1.3, 2.1-2.4</td>
<td>HW01: {2.10, 2.13, 2.66, 2.77} HW02: {2.94, 2.99, 2.127, 2.128}</td>
<td>Due: Wed, 6/18 Due: Sat, 6/21 Troubleshoot online issues</td>
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<td>HW03: {2.159, 2.172, 2.192, 2.193} HW04: {2.227, 2.231, 2.253, 2.267, 2.274}</td>
<td>Due: Wed, 6/25 Due: Sat, 6/28</td>
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<td>2</td>
<td>6/23-6/29</td>
<td>2.5-2.8</td>
<td>HW05: {3.7, 3.31, 3.58, 3.64} HW06: {3.72, 3.109, 3.116, 3.127}</td>
<td>Due: Wed, 7/2 Due: Sat, 7/5</td>
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<td>6/30-7/6</td>
<td>3.1-3.3</td>
<td>HW07: {4.7, 4.20, 4.32, 4.44, 4.61} HW08: {4.73, 4.85, 4.87, 4.88, 4.111}</td>
<td>Due: Wed, 7/9 Due: Sat, 7/12 Review Chapters 2-3 in preparation for Exam 1 EXAM #1: Tuesday, July 8th</td>
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<td>3</td>
<td>7/7-7/13</td>
<td>4.1-4.4</td>
<td>HW09: {5.25a, 5.31a, 5.33, 5.68, 5.99} HW10: {5.117, 5.127, 5.128, 5.133, 5.134}</td>
<td>Due: Wed, 7/16 Due: Sat, 7/19</td>
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<td>7/14-7/20</td>
<td>5.1-5.3</td>
<td>HW11: {6.7, 6.20, 6.26, 6.58, 6.65} HW12: {6.103, 6.124, 6.126, 6.128, 6.150a}</td>
<td>Due: Wed, 7/23 Due: Sat, 7/26</td>
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<td>4</td>
<td>7/21-7/27</td>
<td>6.1-6.4</td>
<td>HW13: {7.5, 7.19, 7.38, 7.42, 7.52} HW14: {7.61, 7.77, 7.91, 7.98}</td>
<td>Due: Wed, 7/30 Due: Sat, 8/2 Review Chapters 4, 5 and the first half of 6 (6.1, 6.2) for EXAM #2: Monday, July 28th</td>
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<td>5</td>
<td>7/28-8/3</td>
<td>7.1-7.4</td>
<td>HW15: {8.6, 8.16, 8.25, 8.54, 8.59} HW16: {8.88, 8.91, 8.105, 8.110}</td>
<td>Due: Wed, 8/6 Due: Sat, 8/9 Review Chapters 6-8 in preparation for Exam 3</td>
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<td>6</td>
<td>8/4-8/10</td>
<td>8.1-8.2</td>
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Responsibilities:

1) Watch lectures and example problem videos online
2) Read the course textbook and ask questions about anything that is unclear.
3) Complete homework problems through McGraw-Hill Connect.
4) Show that you can apply dynamics analysis techniques through three exams.

EXAM #3 (Ch. 6, 7, 8) – Monday, August 11th