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Fall 2015

## **ENME 3735**

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# ENME 3735 Syllabus

# **Mechanism Design – Fall 2015**

6:00 – 7:15 Tues & Thur EN320

Lecture #	Date	Торіс	Homework
1	8/20	Intro., Chapter 1. 1.0 - 1.3, 1.5 - 1.9	
2	8/25	Chapter 9. Gear Trains 9.0 - 9.3	9-8,11,13,70
3	8/27	9.4 - 9.8	9-17,22,26
4	9/1	9.9 - 9.12	9-32,38
5	9/3	9.10 - 9.12	(Design problem 15%)
6	9/8	Ch. 2. Kinematics Fundamentals 2.0-2.6	2-7, 8, 21
7	9/10	2.7 - 2.13	2-32, 38, 56
8	9/15		
9	9/17	Chapter 8. Cam Design 8.0 - 8.3	8-8,13, 9, 14
10	9/22	8.3	8-18, 20
11	9/24	8.4 & 8.5	8-36, 39
12	9/29	8.5 & 8.6	(Design problem 25%)
13	10/1	8.6 - 8.8	
14	10/6		
15	10/8	Chapter 4 Position Analysis 4.0 – 4.6	
16	10/13	4.7 – 4.8	
17	10/20	Chapter 5 Linkage Synthesis 5.0 – 5.4	
18	10/22	5.6	
19	10/27	5.7 - 5.10	(Design problem 25%)
20	10/29	5.11 - 5.13	
21	11/2	Chapter 6 Velocity Analysis 6.0 – 6.2	
22	11/4	6.7 – 6.9	
23	11/9	Chapter 7 Acceleration Analysis 7.0 – 7.1, 7.3	
24	11/11	7.4 – 7.6	
25	11/17	Chapter 11 Dynamic Force Analysis	(Design problem 25%)
26	11/19		
27	11/23		(Class Participation and
28	12/1		Attendance 10%)
29	12/3		
30			

### Nick J. Loiacono office hours: by appointment

#### **Attendance Policy**

Class participation and attendance is required. Roll will be called at 6:00 pm sharp indicated on the clock in the classroom. If you are <u>not in class when your name is called</u> you will be marked as absent. <u>There will not be any excused absences</u>. If you do not have the text or a copy of the text with you, you will be marked absent. This requirement will start one week from the start of the semester. Grading scale for attendance: 0 absent will get the full 10%, 1 absent 9%, 2 absent 6%, 3 absent 2%, and 4 absent 0%.

#### **Student Learning Outcomes**

Students will have a more complete understanding of two dimensional motions, will be able to characterize them, and to analyze them using complex numbers.

Students will be able to synthesize and analyze basic mechanisms that execute planar motions: gears, linkages, and cams.

Students will be able to apply modern computer-aided approaches to solving synthesis and analysis problems.

Students will have improved ability to participate on teams

Students will have improved to give oral presentations.

**Required Textbook:** Robert L. Norton, *Design of Machinery - An Introduction to the Synthesis and Analysis of Mechanisms and Machines*, 4<sup>th</sup> edition. This book comes with software and you will be required to use it.

#### **Required Work:**

Your grade will be based on the grades you receive from four projects and attendance/class participation. The value of each is as shown on the first sheet of the syllabus. Specific grading requirements and the due date and time will be described in the project descriptions that are handed out in class. You will receive a 0 for any project not submitted on or before the due date and time.

Your second project will be a group project consisting of two group members. You must select your own group. The group will receive the same grade. It is the responsibility of the group to turn in the project on the due date.

**Collaboration** - I expect that students will work "together" while developing their knowledge and skills, but when it comes to actually doing the project, I expect it to be your own!

#### **Statement on Academic Integrity**

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

### **Expected Conduct**

I expect you to conduct yourself in an adult professional manner. I will not tolerate immature behavior in the classroom or outside the classroom. You are in a professional school. I expect that you are learning to be a professional and will act like accordingly.

I will not tolerate interruptions in class due to ringing phones or chirping beepers. Those devices must be off when you enter the classroom. If you should forget to turn yours off before class and it should go off during class, I expect you to silence it immediately without answering it.

I expect you to bring the text or a copy of the text to each class. There will be times when I reference material in the text and I expect you to bring this with you. If you come to class without a copy of the text you will be marked absent. You will have one week to get the text or the copy.

#### **Students with Disabilities**

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.