

CEE 2040A – Dynamics, Spring 2014

MW 11:05 pm – 11:55 pm, Mason 2117

Course Description: Kinematics and kinetics of particles and rigid bodies; principles of work/energy and impulse/momentum

Prerequisites: COE 2001 Statics, or ME 2211, or AE 2120

Text: *Dynamics* by Meriam and Kraige, WileyPLUS version 7/e. The bookstore sells a printed copy (BRV – binder ready version) version that contains a WileyPLUS registration code. Please double check that the ISBN is 9781118505168. After purchase, please register at <http://edugen.wileyplus.com/edugen/class/cls372239/>.

If you do not want the printed copy, you can purchase the lower-cost online version with WileyPLUS registration code directly at the above website. If you aren't sure which version to buy, the online version allows a 14-day grace period for you to try out.

Instructor: Yang Wang, Ph.D.
Assistant Professor
School of Civil and Environmental Engineering
Email: yang.wang@ce.gatech.edu
Office Hours: Wednesday 12 – 1pm or by appointment, Mason 4160.

Course Assistant: Dapeng Zhu (zhudp@gatech.edu) and Xiaohua Yi (yixh@gatech.edu)
Office Hours: MTWTh 10 – 11am, Mason 1201 Student Commons
(Starting from the week of January 13).

Grading: Homework (20%, the last homework will be due in the WPFE - week preceding the final exam)
Two in-class exams (20%, 20%)
Final Exam (40%)
Class attendance (3% extra credit)

In-class Exam Schedule (Tentative)

1. February 10 (Mon)
2. March 12 (Wed)

Final Exam Schedule: Period #1, April 28 (Mon), 8 - 10:50am (tentative per Registrar's Office)

Course Policy:

1. The Institute mandates you to **check emails on each school day**: “*All students will have an e-mail account through the Georgia Institute of Technology that will be their official point of contact, and they are expected to check this account each school day.*” (<http://www.catalog.gatech.edu/rules/3a.php>) Please do so since email is the only way for the instructor to contact you.

2. This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza. Find our class page at: <https://piazza.com/gatech/spring2014/cee2040a/home>.
3. If you **miss a class**, it is your responsibility to keep abreast of latest material and any announcements by asking fellow students.
4. **Laptop or cell phone usage is not allowed** in the class.
5. In this class, you are allowed to work in groups on all homework and out of class assignments, but **any work you turn in must be completed by yourself**. Generally what this means is: 1) try the problem on your own, 2) if necessary ask for help/suggestions, 3) go back on your own and implement the suggestions.
6. You should strive to turn your assignments in on time. The **late homework policy** uses a time-credit system. You are allowed up to SIX "late days" over the course of the semester. You may use them whenever you like, although no more than two late days per homework. Once you have used your allotted days, additional late assignments will not be accepted.

Note that you cannot use less than a day (meaning a calendar day, **NOT a "School Day" or a "Business Day"**); for example, if an assignment is one hour late it will be considered a full day.

7. If you miss an exam/quiz without a documented excuse¹, you get zero points on that exam/quiz. In exceptional circumstances, **makeup exams or quizzes** may be given after the normal exam time. The makeups may be more difficult than the normal exams, due to the extra time you have compared with other students.
8. It is your responsibility to check possible **conflict in your final exams**, and contact the instructors to resolve the conflicts no later than 2 weeks before the Monday of the exam week: <http://www.registrar.gatech.edu/home/examguide.php>.
9. All in-class exams and the final exam are going to be **closed-book** while allowing cumulative cheat sheets. You can use a one-page two-sided cheat sheet in Exam 1, two pages in Exam 2, and three pages in the final exam. These exams are meant to be your own work.
10. Compliance with GATech's **Academic Honor Code** is expected (<http://www.honor.gatech.edu>). Plagiarizing is defined by *Webster's* as "to steal and pass off (the ideas or words of another) as one's own: use (another's production) without crediting the source." If caught plagiarizing, you will be dealt with strictly according to the GT Academic Honor Code.

¹ A documented excuse includes an original document indicating the excuse (such as hospitalization, family emergencies, Institute activities, etc.), as well as a possible note from the Dean of Students that verifies the document.

CEE 2040 – Dynamics Outline

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Chapter	Topic
2	Kinematics of Particles
2/1 – 2/2	Rectilinear motion
2/3 – 2/4	Plane curvilinear motion; Rectangular coordinates
2/5	Normal and tangential coordinates
2/6	Polar coordinates
2/8 – 2/9	Relative motion; Constrained motion of connected particles
3	Kinetics of Particles
3/1 – 3/5	Force, mass, and acceleration
3/6 – 3/7	Work and energy
3/8 – 3/10	Impulse and momentum
5	Plane Kinematics of Rigid Bodies
5/1 – 5/4	Rotation; Absolute motion; Relative velocity
5/5	Instantaneous center of zero velocity
5/6	Relative acceleration
6	Plane Kinetics of Rigid Bodies
6/1 – 6/5	Force, mass, and acceleration
6/6	Work-energy relations