**Math 245 – Mathematics of Physics and Engineering I**

**Fall 2015 – SYLLABUS – Section 39594D**

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**Instructor**: Guillermo Reyes

**Office:** KAP 444B

**Phone:** 213-740-7285

**Email**: guillermo.[reyes@usc.edu](mailto:reyes@usc.edu)

**Web site**: https://dornsifecms.usc.edu/guillermo-reyes-souto/

**Lecture hours and location:** MWF 11:00 am – 11:50 am, ZHS 163

**Discussion hours and location** : TuThu 11:00 am , 1:00 pm, VHE 214

**Office hours**: MWF 10:00 – 11:00 am, 3:00 – 4:00 pm or by appointment, KAP 444B

**TA**: Kerem Ugurlu

**Email**: kugurlu@usc.edu

**Office:**

**TA's office hours:**

**Course Description:**

We will cover the fundamentals of ordinary differential equations and some applications to oscillating mechanical and electrical systems, as well as to models of population growth, radioactive decay, etc. The material essentially corresponds to the first seven chapters of the textbook (some sections might be omitted).

# Textbook: Differential Equations: An Introduction to Modern Methods and Applications , 2nd Edition, by [James R. Brannan](http://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&text=James+R.+Brannan&search-alias=books&field-author=James+R.+Brannan&sort=relevancerank)  and [William E. Boyce](http://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&text=William+E.+Boyce&search-alias=books&field-author=William+E.+Boyce&sort=relevancerank). Wiley and Sons (2011).

**Important dates**:

Midterm 1: Wednesday, September 30th

Midterm 2: Wednesday, November 4th

Last day to drop a class with a mark of W: Friday, November 13th

Last class: Friday, December 4th

Final Exam: Wednesday, December 9th, 11:00 am – 1:00 pm,

**Tentative schedule:**

|  |  |  |
| --- | --- | --- |
| **Week** | **Dates** | **Textbook Sections** |
| 1 | August 24 - 28 | 1.1 |
| 2 | August 31- September 4 | 1.2 – 1.4 |
| 3 | September 9 - 11 | 2.1 – 2.3 |
| 4 | September 14 - 18 | 2.4 – 2.5 |
| 5 | September 21 - 25 | 3.1 – 3.5 |
| 6 | September 28 – October 2 | Review - Midterm – 4.1 |
| 7 | October 5 - 9 | 4.2 – 4.4 |
| 8 | October 12 - 16 | 4.5 – 4.7 |
| 9 | October 19 - 23 | 5.1 – 5.4 |
| 10 | October 26 - 30 | 5.5 – 5.8 |
| 11 | November 2 - 6 | Review - Midterm – 6.1 |
| 12 | November 9 - 13 | 6.2 – 6.4 |
| 13 | November 16 - 20 | 6.5 – 6.7 |
| 14 | November 23 - 28 | 7.1 - Thanksgiving |
| 15 | November 30 - December 4 | 7.2 – 7.4 - Review |

**Grading:**

Homework will be assigned at the end of each week, except for week 8, to be turned in the next Thursday. Quizzes will be given in discussion classes every week, except for week 8.

There will be two midterm exams (50 min.) and one final exam (2h), on the above indicated dates.

All exams and quizzes are **closed-book** and **closed-notes**. **No calculators** may be used during the exams unless otherwise stated before the day of the exam.

There will be no make-up exams or quizzes and no late submissions of homework will be accepted, unless special circumstances are presented to the instructor.

Before the drop deadline (November 13th) I will post a letter grade based on the grades on homework, quizzes and the Midterm, according to the following **grade distribution:**

Quizzes = 15%. The lowest three grades will be dropped.

Homework = 15%. The lowest three grades will be dropped.

Midterms = 20% each

Final Exam = 30%

**Students Requiring Special Accommodation**

Any student requesting academic accommodations based on special needs is required to register with DSP each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Academic Integrity**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://www.usc.edu/dept/publications/SCAMPUS/gov/. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.

**Other comments:**

Official announcements, homework assignments, grades, etc. will be posted on USC Blackboard. You are expected to check Blackboard on a regular basis.

If for some reason you cannot take a midterm exam, or the final, please let me know in advance to find a solution.

Do not hesitate to ask questions. Walk-ins are welcome during office hours, and you can also make appointments to see me at other time. Your TA is also ready to help you.

There are tutors available to help you at the Math Center. The Math Center is located in KAP 263, and is open Monday to Thursday from 8am to 7pm and Friday from 8am to 5pm.

Here is a link to the Math Center if you need further information: https://dornsife.usc.edu/mathcenter