Calculus with Analytic Geometry II
University of Central Florida
MAC 2312.0009 — Spring 2016

Instructor: A. Nevai
Course Meetings: Tue and Thu from 10:00 to 11:50 am in HEC 111
Office: MSB 324
Office Hours: TR 12:30 pm – 1:20 pm
TR 3:00 pm – 3:50 pm
F 9:30 am – 10:20 am
E-mail: math.anevai@gmail.com
Website: http://math.cos.ucf.edu/~anevai/courses/mac2312

Syllabus
This syllabus is a contract between us. Please read it and become familiar with it. Ask if you have questions. Corrections will be announced in class and posted on the course website (with changes in red).

Course Description
This is a 4-unit class on calculus with analytic geometry. There will be regular homework assignments and quizzes, three midterm exams, and one final exam. We will cover many topics, and we will move quickly. If you work hard in this course, then you will be prepared for Calculus III.

Course Objectives
The objective of this course is to master advanced topics in the calculus of real-valued functions of a single variable.

Course Prerequisites
The prerequisite for this course is MAC 2311 (Calculus I) or the consent of the instructor.

Add, Drop, and Withdraw
The drop deadline is Jan 14, the add deadline is Jan 15, and the withdraw deadline is Mar 23. For late adds, late withdrawals, and medical withdrawals please consult Academic Affairs.

Textbook

Materials
Enhanced WebAssign access code.

Grading
The letter grade you get will depend on your mastery of course material, which is evidenced by your attendance and participation in class (2%); and your performance on homework (7%), quizzes (7%), the three midterm exams (54%), and the final exam (30%). The following grading scale will be in effect (pluses and minuses may also be used)

A: 90% – 100%  B: 80% – 89%  C: 70% – 79%  D: 60% – 69%  F: 0% – 59%

For example, a student with 80% of all points is guaranteed at least a B– (minus).
Attendance
You are expected to attend the full lecture of each class. I may take roll on any day. If you cannot attend class for a legitimate reason, then you must notify me by e-mail at least 24 hours before class begins. If you do not submit such advance notice, then your absence will be considered unexcused. If a legitimate emergency arises, and you cannot notify me in advance, then you must submit supporting documentation, including proof of travel, upon your return.

Religious Policy
I will accommodate within reason the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of examinations and assignments. If you plan to observe a religious holy day then you must notify me in writing during the first week to be excused from classes on that day. Appropriate documentation for your request will be needed.

Participation
Your participation grade consists of various factors. Be on time. Stay alert. Be respectful to your classmates and to me. Answer your share of the questions that I pose to the class. Do not maintain discussions about material unrelated to the course. Do not work on outside activities during class. If you plan on asking questions from the book, then bring it (or a photocopy) to class. Do not bring distracting materials to class. Silence all noise-making devices. Avoid frequent restroom breaks. If you disrupt the ability of your classmates to learn, you will be asked to leave and you will be reported to the dean of the college.

Reading
Please do the reading from the book before the material is covered in class. If you do so, then you will ask better questions, take better notes in class, and you will perform better in the course.

Notes
It is your responsibility to take notes in lecture or to obtain them from a classmate afterward. To avoid “getting lost” it is recommended that you review these notes prior to attending the next lecture. Permission to record lectures in any audio or video format must be obtained in advance.

Homework
The best way to succeed in this class is to do all of the assigned homework in a timely manner. Homework will be assigned regularly and submitted for a grade. You are also expected to attempt every odd-numbered problem (skipping calculator-based parts) in every section that we cover. It is understood that you will attempt these problems immediately after the material has been covered in class and before the next lecture. You will have an opportunity to ask questions related to recent homework at the beginning of each lecture.

Quizzes
The quizzes are short online exams that test your understanding of recent material. They can be accessed at Webcourses@UCF.

Midterm Exams
The three midterm exams will be held in class on Tue, Feb 9th; Tue, Mar 15th; and Tue, Apr 12th (tentatively). Unstructured in-class review sessions may be provided prior to the midterms.

Final Exam
The final exam will be held from 10:00 am – 12:50 pm on Tue, May 3rd. It is comprehensive, with an emphasis on material after the third midterm.
Exam Policies

The midterms and final are closed book and closed calculator exams. Moreover, they can only be taken in class and there will be no exceptions to this rule.

Office Hours

You are welcome to attend my weekly office hours but I ask that you prepare in advance. Before you arrive, write down on a piece of paper your specific questions regarding class material or homework problems. Be sure to write down exactly what you don’t understand from lecture or where you get stuck on a problem and why. Bring these questions together with your course notes and textbook. Vague questions such as How do I do problem xx? will not be answered. If you miss a class, then please know that in office hours I will not repeat or summarize lecture material (so obtain notes from a classmate instead). Do not bring your skateboard into my office.

Math Lab

If you need extra help, tutors are available in the Math Lab. It is located in MSB 113 and the hours this semester are Mon – Thu from 9 am to 7 pm, Fri from 9 am to 3 pm, and Sun from 2 pm – 6 pm. Consult the lab’s web page for any changes to the schedule (http://math.cos.ucf.edu/~mathlab).

E-mail

If you e-mail me, then send it only to the address above and use the following format:

Subject: MAC 2312 – insert relevant subject line here
Dear Professor Nevai (sample salutation),

   Write your message here using complete sentences.

Best regards (sample closing),

Your name

If you send your message to a different address or deviate from the format above (e.g., if u wrt yr msg lk ths) then I may not respond.

Academic Integrity

I have a responsibility for your education and the value of a UCF degree. Academic dishonesty will not be tolerated. I will seek to prevent unethical behavior and respond to infringements of academic integrity when needed. Disciplinary action will be taken in response to such behavior. Penalties can include a failing grade on an assignment, in a content area, or in the course, and a “Z Designation” on your official transcripts indicating academic dishonesty (the final grade for this course will be preceded by the letter Z). In addition, further disciplinary action through the university may be taken and could result in suspension or expulsion. Visit http://www.z.ucf.edu and http://www.goldenrule.sdes.ucf.edu for more information.

Disability Policy

The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations. Visit http://www.sds.sdes.ucf.edu for more information.

Financial Aid Requirement

I am required to document academic activity at the beginning of this course. Instructions on how to access this first activity will be given in class. This activity will be due soon, and failure to complete this activity on time may result in a delay in the disbursement of your financial aid.
Course Materials

All materials in this course are copyrighted by me and released to you under the Creative Commons Attribution Non-Commercial Share Alike 3.0 license (http://creativecommons.org/licenses/by-nc-sa/3.0).

Schedule of Topics (tentative)

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<th>Dates</th>
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<td>Jan 12</td>
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<tr>
<td>Chapter 6: Applications of Integration</td>
<td>Jan 12 — Jan 21</td>
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<td>Chapter 7: Techniques of Integration</td>
<td>Jan 26 — Feb 4</td>
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<tr>
<td>Review</td>
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<tr>
<td>First Midterm Exam</td>
<td>Feb 9</td>
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<td>Chapter 7: Techniques of Integration</td>
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<td>Chapter 8: Further Applications of Integration</td>
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<td>Chapter 10: Parametric Equations and Polar Coordinates</td>
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<td>Review</td>
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<td>Second Midterm Exam</td>
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<td>Chapter 11: Infinite Sequences and Series</td>
<td>Mar 17 — Apr 7</td>
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<td>Review</td>
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<td>Third Midterm Exam</td>
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<td>Chapter 11: Infinite Sequences and Series</td>
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<td>Review</td>
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<td>Final Exam</td>
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Individual Topics

- substitution method
- volume by disks
- work
- trigonometric integrals
- integration of rational functions
- improper integrals
- area of a surface of revolution
- polar coordinates
- series
- comparison tests
- absolute convergence
- root test
- Taylor and Maclaurin series

- area between curves
- volume by shells
- integration by parts
- trigonometric substitution
- strategy for integration
- arc length
- parametric equations
- sequences
- integral test
- alternating series
- ratio test
- power series
- applications of Taylor polynomials