MATH 243-015 Analytic Geometry and Calculus C
MTWF 1:25–2:15, EWG 205; R 1–1:50, SHL 120 Spring 1999
Web Page: `http://www.math.udel.edu/~edwards/download/m243/s99home.html`

Instructor: Prof. D. A. Edwards Office Hours: W 3:30–4:30 F 10–11 or by appointment
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# Introduction

Welcome to Analytic Geometry and Calculus C! Since most of you are not mathematics majors, the focus of this course will be on the *applications* of calculus, rather than the *theory* behind it (except when explaining the theory will enhance your understanding of the concepts). I will be passing around a sheet today asking each of you what you think your major might be. Then I will try to present examples from those subjects so that you can see how calculus is applied to your area of interest.

The text for this course is *Calculus*, 9th ed., by Thomas and Finney. **The text is required**, since you will be assigned both reading and homework problems from the book. You may also wish to purchase the study guide for the text. In addition, I may also be lecturing from various other sources, so class attendance and participation is necessary for successful mastery of the material.

If you have any questions, you may contact me during my office hours or make an appointment. **Extra copies of handouts are available at the Web page listed above.**

You may bring a tape recorder with you to class, if you wish; however, unattended tape recorders will not be permitted. There will be no makeup classes for snow days.

## The Computing Environment

In this course you will continue your usage of Maple (begun in Math 242) to assist you in solving problems and visualizing concepts. In class we will be using the UNIX version of Maple Release 5, version 5. For best results, you should use release 5 as well. You will be asked to use Maple to solve certain homework and exam problems. For homework assignments, you may use whatever Maple platform (*e.g.*, Mac OS, Windows, or UNIX) that you wish. More information on this subject appears on the first homework assignment, which is attached.

In order to access electronic files which I may post, the computers in this room have Netscape on them. However, this is not a free hour for you to surf the Web using the mathematics department machines. Doing so will distract you and others from my presentation of the material. If you wish to surf the Web, please do so at some other location.

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# Electronic Communication

The Web page for this course is listed on the top of the first page. There you will find copies of handouts available for downloading, as well as any important announcements (corrections to typographical errors, etc.). Also at the URL

`http://www.math.udel.edu/~edwards/download/suggest.html`

you will find an anonymous suggestion box.

Particularly important messages regarding the course may also be e-mailed to you directly. In addition, you may send me e-mail with questions regarding the course, homework assignments, etc. For more information on how to use electronic resources, contact the Help Center (x6000).

# Exams

There will be four exams in the course; the dates are listed on the attached schedule. **NO MAKEUP EXAMS WILL BE GIVEN!** The first three will be 45 minutes long and will take place during a regular lecture hour. The final exam will be two hours long. **You will need a small blue book for each exam**. Please be prepared to show picture identification in order to enter the examination room. Attached to each examination will be a course evaluation form, so that I may receive your suggestions for how the course could be improved. These forms will be seen only by me, so if you have comments that you wish the department to hear, please contact them directly.

When the exams are returned, they will have a numerical score and a letter grade on them. The numerical score is your score for the exam; *the letter grade is your grade for the course* to that point, including all quiz and homework scores.

# Quizzes

Four quizzes will be given during the term in recitation section; their dates are listed on the attached schedule. No makeup quizzes will be given. They will take fifteen minutes each, and you will need to bring your own paper. They will cover any material presented in lecture up to the week before the quiz. Before computing your quiz average, I will drop your lowest quiz score.

# Recitation Sections

In addition to the lectures, you are also registered for a recitation section meeting on Thursday. In these sections the TA may answer any questions you might have about the material covered in lecture that week. The TA can **NOT** address specific questions about any homework problems not already turned in.

# Assessment

Your grade for the course will be determined in two stages. First your *raw score* will be calculated from your exam scores, with the final counting as the equivalent of two exams.

However, if including your homework and/or quiz scores will improve your score, I will let each count for 10% of your grade. Therefore, doing the homework, attending recitation sections, and taking the quizzes *can only help* your grade. (In the past, it has been my experience that the vast majority of students improve their grades significantly by using their homework and quiz scores.) Then each of the raw scores will be scaled to determine final grades.

# Homework

Homework will be distributed on Friday during lecture (the first assignment is attached to this introduction), and it will usually be due at the beginning of class the following Friday. The homework will cover material up through the Tuesday after it is distributed. **ABSOLUTELY NO LATE HOMEWORK WILL BE ACCEPTED!** If you must miss a due date because of University business, it is your responsibility to make sure the homework gets to me ***before*** the due date. Since calculus is a subject where the material for one section builds on the section before, it is critical that you keep up to date on the homework: hence the stringent policy. However, to calculate your semester-long homework average, I will drop your two lowest homework scores. Therefore, low scores for assignments where you were pressed for time can be erased as long as you don't have too many of them.

Though you may not copy directly from another's paper or use someone else's ideas as your own, I encourage you to discuss the homework problems with your classmates. Any scientific endeavor is rarely done in a vacuum; therefore it is to your advantage to learn the benefits of collaborating. Model homework solutions will be placed on reserve in the library after the assignment is due. Hopefully these will assist you in learning the material.

Homework assignments should be folded like a book with the following information on the "front cover:"

Name
Math 243-015—Edwards
Assignment Number
Date

You will turn in your assignments this way so that your score may be written on the inside, thus ensuring your privacy. I will make every effort to ensure that your graded homework is returned in a timely manner.

Each homework assignment will consist of ten questions. Of those, some randomly selected problems will *not* be graded. For these questions, you will receive one point if you attempted the problem. For the problems that will be graded, you may receive up to four points, depending on the completeness and accuracy of your solution.

Obviously, I can assign only a select few homework problems to be turned in. Therefore, I choose ones which, if mastered, show adequate understanding of the material. The examinations will largely be based on the material covered in the homework assignments. However, you are encouraged to try other problems in the book for practice.

# Tentative Schedule

**Note:** This is only a tentative schedule; there may be deviations from it.

February 9–12: Review of calculus and Maple; section 10.1
February 9: Homework 1 distributed
week of February 15: Sections 10.1, 10.2
**February 18: Quiz 1** (covers the review and section 10.1)
February 19: Homework 1 due, Homework 2 distributed
week of February 22: Sections 10.2–10.4
February 26: Homework 2 due, Homework 3 distributed
March 1–3: Sections 10.5 and 9.1
**March 5: Exam I** (covers the review and sections 10.1–10.5)
week of March 8: Sections 9.1, 10.6–11.1
March 12: Homework 3 due, Homework 4 distributed
week of March 15: Sections 11.1, 11.3, 11.4
**March 18: Quiz 2** (covers sections 9.1, 10.6–11.1)
March 19: Homework 4 due, Homework 5 distributed
week of March 22: Sections 11.4, 12.1, 12.2
March 26: Homework 5 due, Homework 6 distributed
**week of March 29: Spring Break**
April 5–7: Sections 12.2–12.4
**April 9: Exam II** (covers sections 9.1, 10.6–11.1, 11.3, 11.4, 12.1, 12.2)
week of April 12: Sections 12.4, 12.5, 12.7
April 16: Homework 6 due, Homework 7 distributed
week of April 19: Sections 12.7–13.1
**April 22: Quiz 3** (covers sections 12.3–12.5, 12.7)
April 23: Homework 7 due, Homework 8 distributed
week of April 26: Sections 13.1–13.4
April 30: Homework 8 due, Homework 9 distributed
May 3, 4: Sections 13.4, 13.6
**May 5: Exam III** (covers sections 12.3–12.5, 12.7–12.9, 13.1–13.3)
May 7: Sections 13.6
week of May 10: Sections 14.1–13
**May 13: Quiz 4** (covers sections 13.4, 13.6, 14.1)
May 14: Homework 9 due; supplementary questions distributed
May 17, 18: Sections 14.3, 14.4
May 19: Formal Review Session