Lecture time: 10:10 A.M. to 11:00 A.M. on Mondays, Wednesdays, and Fridays
Lecture location: Ford Hall 150
Discussion section: 10:10 to 11:00 on Tuesdays and Thursdays in Vincent 364
Textbook: *Precalculus* (ninth edition) by Sullivan
Web page: www.math.umn.edu/~corbett/classes/1155
Lecturer: John Corbett  corbett@math.umn.edu  (612)-626-8636
         Ford Hall 332  (office hours TBA)
TA: Mohammadali Eslamisaray  eslam012@math.umn.edu  (office hours TBA)

<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
<th>Length</th>
<th>Weight (%)</th>
</tr>
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<tbody>
<tr>
<td>First Test</td>
<td>October 2</td>
<td>50 minutes</td>
<td>20</td>
</tr>
<tr>
<td>Second Test</td>
<td>October 30</td>
<td>50 minutes</td>
<td>20</td>
</tr>
<tr>
<td>Third Test</td>
<td>December 4</td>
<td>50 minutes</td>
<td>20</td>
</tr>
<tr>
<td>Homework &amp; Quizzes</td>
<td></td>
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<td>5</td>
</tr>
<tr>
<td>Final Exam (comprehensive)</td>
<td>December 17 (1:30 P.M.to 4:30 P.M.)</td>
<td>3 hours</td>
<td>35</td>
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We do not meet on November 26–27 (Thanksgiving Day Break) but we are scheduled to have class Wednesday, November 25.

**General Information**

This course is designed to give you a working knowledge of material that you will need for other mathematics courses such as calculus, but it isn’t just preparation for further study. You can also use what you learn here to solve applied problems even if you don’t take additional mathematics courses. We cover most of the material in chapters one through twelve of the textbook.

Topics include:
- linear and quadratic equations and inequalities;
- graphs of equations, including lines, circles, parabolas; composition, inverses of functions, transformations of graphs,
- linear and quadratic models,
- equations and inequalities involving polynomials and rational functions, exponentials and logarithms with applications,
- trigonometric functions and their inverses: definitions, graphs, identities, real and complex zeros of polynomials, polar coordinates,
- DeMoivre’s Theorem,
- solutions of systems of equations by substitution and elimination, systems of inequalities,
- arithmetic and geometric sequences and series.

We will also do many word problems drawn from a variety of applications.

This is a five credit class—that means an average student is expected to spend about fifteen hours per week on this course. Class meetings (lecture and discussion sections) account for

Watch for changes to this information that may be announced in class or on the web page.
about five hours, but you should plan on putting in another ten hours every week. Of course some students may need less, and some will need much more.

**Liberal Education**

Math 1155 fulfills the Mathematical Thinking component of the Liberal Education requirements at the University of Minnesota. An important part of any liberal education is learning to use abstract thinking and symbolic language to solve practical problems.

**Special needs**

Some students may need accommodations cleared through Disability Services. These students should let me know of their needs within the first two weeks of the semester.

**Registration**

You must be registered to attend this class. If you are taking this class Pass/Fail (registered S/N), then you should know that only work at C– or better level earns a passing grade. (A grade of D+ would become an N.) If you want to audit the class, you must register as an auditor (V). If you need to drop the class, there are procedures you must follow if you want a W instead of an F grade.

**Homework and Quizzes**

Homework will be assigned every week and it will be due at the beginning of class in your discussion section. Your TA may collect the homework so it can be graded and returned to you or she may give a short quiz based on that assignment instead of collecting the homework.

Homework and quizzes may appear to count directly for about as much as the difference between a B and a B+, or a B+ and an A–, but there is actually a larger effect on your grade. Because tests and exams are based on homework problems, homework effort is usually reflected in midterm and final exam scores.

You are encouraged to work together on homework assignments, but what you actually write up and turn in has to be your own work. Handing in homework that is almost identical to a classmate’s work is a form of cheating which will not be tolerated. You are required:

1. to show methods of solution, not just final answers,
2. to explain yourself clearly enough to be understood not only by your teachers but also by your peers, and
3. to use notation and methods correctly.

There will be a lot of homework, which you should regard as practice similar to that needed to learn a sport or a language. When you run out of assigned homework problems, keep going: some practice is good, but more practice is always better. **Homework is very important, so you should try to do more problems than just the ones to hand in.**

**Calculators and other electronic devices**

I assume that you have a calculator, and that you know how to use it. You don’t need an elaborate machine—a basic scientific calculator is sufficient—but you should be able to work with square roots, logarithms, exponents, and so on. **It is department policy that graphing calculators are not permitted for tests and exams.** Be aware that all other types of electronic devices—especially those with wireless capabilities—are also banned. You will not be allowed to use a cellphone or iGadget or laptop or similar devices as your calculator for tests and exams. Any such item you bring to an exam you have to stow, turned off, under your seat, out of easy reach. This applies to lectures, too. If you use your laptop, cellphone, music player, or other device in class, you are creating a distraction for other students. Your classmates expect the University to provide a reasonable environment for learning when they sign up for a course, but using electronic devices in the classroom interferes with that. It is not acceptable to impede other students who are trying to learn the material.

**Test Schedule**

The dates for the midterm tests are not likely to change, but any changes would be announced in class and on the class web page. **The final examination will be December 17; you**

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should expect midterm tests on October 2, October 30, and December 4. Each 50-minute midterm test will cover about one quarter of the course content. The final examination (from 1:30 P.M. to 4:30 P.M. on December 17) lasts for three hours and covers the entire course.

Make-up tests

Usually there are no make-up midterm tests. You are expected to be ready to take the tests and exams when they are scheduled. Exam absences due to recognized University-related activities, religious holidays, verifiable illness, and family/medical emergencies will be dealt with on an individual basis. In all cases of absence from exams a written excuse is required for a make-up to be granted. I strongly prefer to offer you a chance to re-weight your other exam scores rather than give you a make-up: usually that would involve substituting the final exam score for the missed midterm test. All such arrangements have to be cleared through me. In case of foreseeable absences (those due, e.g., to University-sanctioned sports activities) please bring these to my attention in advance, as soon as possible, bringing me appropriate documentation. Ignorance of the time and place of an exam will not be accepted as an excuse for absence. The date and time of the final exam is set in stone: you commit to that date and time when you register for this course.

More about the tests

Tests and exams are “closed book”—books, notes, and graphing calculators are not allowed. Your answers should look about the same whether or not you use a calculator—you have to show all the steps you took to solve a problem if you want to get any credit for it. Merely pushing a button and running a calculator’s built-in program is not the same as demonstrating that you know how to solve a test or homework problem. Also, if you find an answer by “brute force” methods (just trying lots of arithmetic on a calculator) you will not receive credit.

I will base exam questions on homework problems. I won’t quote homework problems verbatim but I will emphasize methods on which you are in principle proficient if you did the homework thoroughly and thoughtfully. There will be no multiple-choice questions on midterms (but there will be some machine-scored multiple-choice questions on the final exam). For full credit you will have to show not only correct final answers, but also a sufficient amount of correct well-organized legible work to justify the final answer. Partial credit will not be awarded generously. Well-organized legible work has the best chance of getting partial credit. In general we do not search exam pages looking for items to give credit to—rather, we give partial credit for correctly setting up a solution and making substantial progress toward the solution. Errors near the end of a solution tend to be penalized less than errors at the beginning which spoil the setup.

Grades

Most of your grade will depend on how well you do on three major tests and a comprehensive final examination. Your total score is calculated as a weighted sum of test scores, homework scores, and the final exam score. The weights are: 20% for each midterm test, 5% for homework, and 35% for the final exam. Your letter grade is then determined by the total points score according to a curve which will be no stricter than the following:

<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
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<tbody>
<tr>
<td>&lt; 60%</td>
<td>F</td>
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<tr>
<td>60%</td>
<td>D</td>
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<tr>
<td>67%</td>
<td>D+</td>
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<tr>
<td>70%</td>
<td>C−</td>
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<td>B+</td>
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<tr>
<td>90%</td>
<td>A−</td>
</tr>
<tr>
<td>93%</td>
<td>A</td>
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For example, a total points score of at least 87% but less than 90% becomes a “B+” grade.

Incompletes

A request for an I grade is granted only in exceptional situations—you would be earning a passing grade (C– or better) on all the course work before the final exam but events beyond your control prevent you from taking the final exam at the usual time. An incomplete will

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not be given merely to postpone a test you have not prepared for, nor to allow retaking the course later as an attempt to avoid receiving a low grade this term.

Help

Usually we have time in lectures to go over a few questions before moving on to new material, but the discussion sections and office hours are the best sources of additional help. I am usually available before and after class to answer questions, and you may also contact me by e-mail (corbett@math.umn.edu or corbett@umn.edu) either to ask a question about course material or to set up an appointment. If you do that, please put “MATH 1155” in the subject line of your e-mail.

University Policies

Many of the points discussed in this handout are based on official University policies. There is an Official University Policy on just about any topic. You can find more information about them at http://www.policy.umn.edu/Policies/Education/index.htm#ctgeducation.

Web Disclaimer

The web page is not intended to be a substitute for attendance. Students are held responsible for all announcements and all course content delivered in class.

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