Learning Outcomes: A successful student can...

- use supply, demand, revenue, cost, and profit terminology in constructing and evaluating functions
- graph linear and quadratic functions, with the assistance of technology at instructor discretion
- construct linear and non-linear function models from written descriptions, including statements of proportionality
- find one-sided and two-sided limits using numerical, algebraic, and graphical strategies
- identify continuity of a function given as a formula or graph
- use the definition to find the derivative of a function as a formula or at a point
- find the equation of a tangent line to a function at a point
- interpret the derivative as a rate of change
- compute derivatives using short cut rules including power, product, quotient, and chain rules
- find instantaneous rates of change for polynomial, rational, exponential, and logarithmic functions
- compute and interpret the second derivative
- compute relative and percentage rates of change in a function at a point
- use marginal analysis to approximate changes in a function using the derivative
- identify intervals of increase, decrease, concave up, concave down, as well as the location of critical and inflection points for a function
- identify the location(s) of any horizontal or vertical asymptotes for a rational, exponential, or logarithmic function
- use the derivative find absolute extrema in mathematical and non-mathematical contexts

Most importantly, the student can model the mathematical topics described among the learning outcomes in words, then solve or simplify the relevant equations and/or expressions, and finally write a summary statement of the solution.

Canvas: Information for this course will be posted on Canvas. In particular, you will be able to find the syllabus, written homework assignments and due dates, and other important announcements.

Recommended Calculator: A scientific calculator or graphing calculator is recommended. The TI-30X IIS or TI-83/84 is recommended, but many other types are just as good.

Homework: There will be homework assignments each week. Homework will consist of online homework on WeBWork each week and written assignments due every other week.
You will be able to access WeBWork by going to http://webwork.uoregon.edu/ and then choosing the math 241 section corresponding to your discussion leader’s name. WeBWork will be due multiple times each week on Monday, Wednesday and/or Friday. Some weeks will have problems due all three of those days. You will need to keep track of WeBWork due dates.

No extensions will be granted for any WeBWork assignments. To account for any illnesses or other events that may cause you not to complete problems on a particular WeBWork assignment, you will only need to complete 80% of the WeBWork problems to receive 100% on the WeBWork portion of your final grade. For example, if there are a total of 200 points assigned by the end of the term, you will only have needed to complete 160 of them. Any additional points you earn will be extra credit for the WeBWork portion of your final grade.

All written homework will be turned in during your discussion sessions. You will need to neatly write your name, discussion section time, and discussion leader’s name on the top of the front page on your assignment.

Worksheets: Your discussion sections will consist of worksheets to be completed during your discussion sections and time to ask questions about homework problems. You are allowed to miss one worksheet in your discussion session during the term. Since your primary time to speak with a real person is during your discussion session, I strongly recommend that you not miss your weekly discussion session.

Course Engagement: Every lecture I will provide several opportunities for you to use iClickers to answer brief questions. Half of the credit will be given simply for answering the question and the other half will be based on correctness. The credit model for this will be such that getting 50% in the course engagement category counts as full participation for the term. For example, if you attend half of the classes, but get all of those Top Hat questions correct OR attend all of the classes but get none of the questions correct, in both cases you would have 100% in the course engagement category. By attending regularly and getting questions correct, you can earn more than 100% in this category. There are no make-ups for course engagement credit.

Exams: There will be two multiple choice Mini Exams given in week 3 and week 7. Think of these as pre-exams. There will be two in-class 50-minute exams scheduled for week 4 and week 8. These four exams will be taken during your discussion section.

Additionally, there will be two post-exams given after your 50-minutes exams have been graded and returned to you. The post-exams will be multiple choice exams taken in Canvas and require you to review your graded midterm exam.

The comprehensive Final exam is scheduled for Tuesday, December 4 at 10:15am-12:15pm.

The exam dates and times are not negotiable and there will be no make-up exams. No late homework will be accepted. In case of illness, or a conflict with a sanctioned university activity or event, special arrangements will be made.

Grade: Your grade in this course will be based on the work mentioned above. Your grade will be computed using a weighted average score of your homework, worksheets, course engagement, exams, and the final exam. The value of each component is below.
**Outside help:** You will have access to me and the Graduate student discussion leaders during my office hours each week. Additionally, we recommend that you also use the free tutoring and help available in the University Tutoring and Learning Center (TLC). They are located on the 4th floor of the Knight Library in the TLC Sky Studio. You can learn more about these services at https://tlc.uoregon.edu/tutoring/.

We also have **Class Encore** leaders who will be running small study groups each week. These study groups are not intended to be homework help sessions. They are opportunities to work with the encore leaders and other students on additional activities to better understand the material in the course. You can learn more about this program at https://classencore.uoregon.edu.

**Accommodations:** For those of you who are currently registered with Accessible Education Center (AEC) for a documented disability, please present your paperwork to me during the first week of the term (or earlier) so that we can design a plan for you. Those of you with a disability (or who might) but are not registered with AEC should contact them as soon as possible. It is much more likely that measures can be taken to provide adequate special accommodation if the organization is done through AEC. I have attempted to provide documents that are accessible. Please let me know if you need additional accommodations.

I have included below a very rough schedule we will be following this quarter. The exam dates are fixed but the speed at which we move through a particular chapter or portion of a chapter may vary from the schedule.

**Tentative Schedule and important dates**

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapters covered</th>
<th>Important dates (last day to:)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.1-1.4</td>
<td>add a class September 30</td>
</tr>
<tr>
<td>2</td>
<td>1.5-1.6</td>
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<tr>
<td>3</td>
<td>2.1-2.2</td>
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<tr>
<td>4</td>
<td>2.3-2.4, Midterm 1</td>
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<tr>
<td>5</td>
<td>2.5-2.6</td>
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<tr>
<td>6</td>
<td>3.1-3.2</td>
<td></td>
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<tr>
<td>7</td>
<td>3.3-3.4</td>
<td>drop or change grade option November 11</td>
</tr>
<tr>
<td>8</td>
<td>3.5, Midterm 2</td>
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<tr>
<td>9</td>
<td>4.1-4.3</td>
<td>no discussion sessions this week &amp; Thanksgiving</td>
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<tr>
<td>10</td>
<td>4.4, review</td>
<td></td>
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<tr>
<td>11</td>
<td>Final exam</td>
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