

Math 252, CRN 13814, Calculus II, Fall 2015

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| Class Time: | MTuWTh 4-4:50p.m. in 307 Deady |
| Instructor: | Dr. Marcin Bownik |
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| Homepage: | http://www.uoregon.edu/~mownik |
| Office: | 323 Fenton |
| Office Phone: | 541-346-5622 |
| Office Hours: | Mon. 1–2p.m., Tu. 3–4p.m., and Fri. 2–3p.m., or by appointment |
| Textbook: | <i>Calculus: Concepts and Contexts</i> , 4th edition by James Stewart |

- 1. Background and Goals.** We will cover Chapters 5–6 (except section 6.8 which will be covered in Math 253) and parts of Chapter 7. Chapter 5 covers the notion of integral, the Fundamental Theorem of Calculus, which allows you to use your knowledge of derivatives to evaluate some integrals, and various techniques for calculating integrals. Chapter 6 covers various applications of the integral to things like areas, volumes and lengths of curves, and to physics, engineering, biology, and economics. Chapter 7 covers some elementary ordinary differential equations.
- 2. Course Learning Goals** A successful student in this course should be able to model and solve a wide class of problems that can be answered by calculating an appropriate integral. In particular, students should be able to:
 - calculate and (roughly) estimate as appropriate the value of a definite integral by examining the graph of the integrand using the definition of the integral as a (signed) area,
 - state and apply the Fundamental Theorem of Calculus,
 - integrate symbolically using the Fundamental Theorem of Calculus, including integration by parts and substitution,
 - understand heuristically how to think about the integral as being a limit of Riemann sums,
 - set up and solve basic separable differential equations, in particular the ones that model exponential growth and decay.
- 3. Exams.** There will be two midterm in-class exams on Wed. 10/21 and Wed. 11/11. The final exam is on Mon. 12/7 2:45–4:45p.m.
- 4. Quizzes.** In addition to weekly MWTh lectures, on Tuesday there is a discussion class and a quiz (except the first and midterm exam weeks). Quizzes are meant to test understanding of the material from the last few classes. There will be no make-up quizzes, since the lowest quiz score will be dropped.
- 5. Homework.** Homework problems will be assigned each week and be due in on the following Wednesday on the material of the previous week. WeBWork problems will

be assigned each week at <https://webwork2.uoregon.edu/>. No late homework will be accepted.

6. **Grading.** The grading distribution will be as follows:

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| Homework: | 15% |
| Quizzes: | 15% |
| Each of the Midterm Exams: | 20% |
| Final Exam: | 30% |

7. **Tentative schedule.**

Week 1. Sections 4.8, 5.1–5.2

Week 2. Sections 5.3–5.5

Week 3. Sections 5.6–5.7

Week 4. Sections 5.8, 5.10 **Midterm Exam 1**

Week 5. Sections 6.1–6.3

Week 6. Sections 6.4–6.5

Week 7. Sections 6.6–6.7 **Midterm Exam 2**

Week 8. Sections 7.1–7.2

Week 9. Sections 7.3–7.5

Week 10. Catch up and review for **Final Exam**