

**Math 252 / Calculus II / MWF 7:30am-9:10 / CRN 10157 / MOD 103 / W'14
1:25pm-3:05 / CRN 10246 / GRV 110**

Instructor: Liz Coleman	Office: GRV 214	"Office hours": MWF 9:10 to 9:40 in MOD 103; MWF 12:55 to 1:25 in GRV 110
Phone: 541-383-7414		T 12:35 to 1:30pm & R 9:15am to 10:15 in GRV 114
Email: ecoleman@cocc.edu		SMART Lab Tuesday 8:00-10:00 in GRV 234&235
Web Site: http://www.cocc.edu/ecoleman/		

Textbook: Calculus Early Transcendentals by James Stewart (hybrid) 7th edition

You have 3 choices to choose from: **

eBook only through WebAssign (WA):

- 1) Lifetime of edition access to eBook and homework for \$104 (best if you're taking more than one term of calculus - the eBook is the FULL text)
- 2) Single-term access to eBook and homework for \$75 (not recommended)

Through our COCC bookstore:

- 3) Calculus Early Transcendentals by James Stewart (hybrid) 7th edition, with access to WA homework, ISBN: 9781111426682 \$168.75 (a text book with no HW problems)

** If you had Math 251 within the last year, with the 7th edition and used WebAssign you will NOT need to purchase anything. You will just need to enroll yourself into the correct section to get access to the homework and ebook. **WebAssign key code for:**

7:30am-9:10 / CRN 10157: cocc 7095 3041

1:25pm-3:05 / CRN 10246: cocc 0350 2549

Calculator: TI83 or higher recommended.

Math 252 is a course in what is often called Integral Calculus. To succeed in this class you need a working knowledge of Differential Calculus as well as Trigonometry and finely honed Algebra skills. Topics include antiderivatives, integration techniques, numerical and graphical techniques of integration, improper integrals and applications of integrals. We will work with all concepts algebraically, graphically, numerically and verbally. We will cover material in chapters 4-9 of the text as well as some material not covered in the text.

Specifically, students who complete Math 252: Calculus II will be able to:

- understand and use the Fundamental Theorem of Calculus to analyze problems, including: determining the area under a curve, the area between curves, and average value of a function.
- interpret the value of the definite integral in a variety of contents.
- apply a variety of numerical methods and appropriate technology to approximate the value of a definite integral.
- use the definite integral to solve applied problems such as: volumes of solids, arc-length, surface area of solids, fluid force, work, and center of mass.
- use appropriate integration techniques to determine antiderivatives.
- determine and analyze the total change in a function given functional data from a graph, table of values, or formula.
- write significant mathematics in at least one of the following formats:
 - Determine the solution or lack of solution to a multiple-step problem and develop the solution in a formal laboratory report.
 - Analyze, discuss in a team, and develop the solution to an open-ended problem and present that solution in the form of a formal technical report.

To **succeed** in this course it is imperative that you are in class every day. Most concepts will be covered as they are described in the text so please read the sections ahead of time to have an idea of what's going on in class.

The end of the 7th week of the term is the last day to change from a grade to an audit, or vice versa. This date is also the last day to drop a course without receiving a W on your transcript. After the 7th week, and before the Wednesday prior to finals week, you may drop a course and receive a W on your transcript.

Other important dates:

Jan 10	Last day to begin attendance in a new class
Jan 17, 5pm	Tuition due and last day for full refund
Jan 20	Martin Luther King Day (no classes); College is closed
Feb 21, 5pm	Last day to drop classes with no grade on transcript
March 12, 6pm	Last day to withdraw, receive a "W" grade (need instructor's signature)
March 17-21	Finals Week

Your grade will be determined on your scores from homework, labs, daily written problem (Problem of the Day), project, two midterm exams, and the final exam:

HOMEWORK (10%): Daily homework will primarily be handled electronically through the WebAssign web page. You will have 5 chances to improve your homework score as long as you complete the homework before the due date. There are suggested due dates that are posted on each assignment and in class. You will get 5% bonus for getting your work submitted on or before those dates. The deadline dates are for the homework to be tested on and are two days before the test. No homework can be submitted after deadline dates. There will also be occasional pencil and paper homework handed in.

LABS (10%): We will have approximately 6 labs this quarter. My hope is that you will work in groups of 2-4 and will hand-in one lab "write-up" per group on the 4 group labs. There are two labs that you each turn in individually but may still work together on. The labs will be graded on neatness, completeness, as well as accuracy, and must be in pencil. You will get a 10% bonus for turning the **group** labs in on time and with at least 2 names. **Late labs will be reduced by 25% and accepted only up to a week late.**

PROBLEM OF THE DAY (10%): Every class day, except test days, will have a "Problem of the Day" (POD) at 10 points each. They will be assigned and collected during class. There are 27 class meetings for a total of 270 points. I will count your total out of 250. These problems will be from previous material or checks for understanding of key concepts. You may work together on the POD.

PROJECT (10%) There will be one project assigned this quarter. I expect you to work in groups of 2-4 and hand-in one group report. Details on the project will be posted to my directory website.

EXAMS (40%): We will have two midterm exams this quarter. They are tentatively scheduled for the 5th week and the 9th week. There will be no make-up exams.

FINAL EXAM (20%): The comprehensive final is scheduled for:

1:25pm class: **Wednesday, March 19th** from 1:00-3:00pm
7:30am class: **Friday, March 21st** from 8:00 - 10:00am

GRADES: I use the previous percentages to calculate your course grade. By keeping record of all your scores, you should be able to track your progress accurately. Here is hypothetical example to help you calculate your grade.

Homework	--	108 out of 120	→	108/120	=	90%	→	.90 * 10	=	9.0
Labs	--	180 out of 200	→	180/200	=	90%	→	.90 * 10	=	9.0
POD	--	200 out of 250	→	200/250	=	80%	→	.80 * 10	=	8.0
Project	--	90 out of 100	→	90/100	=	90%	→	.90 * 10	=	9.0
Exams	--	150 out of 200	→	150/200	=	75%	→	.75 * 40	=	30.0
Final	--	77 out of 100	→	77/100	=	77%	→	.75 * 20	=	15.0
TOTAL	→	→	→	→	→	→	→	→	80.0	= B

I adhere to Central Oregon Community College's standards as they are discussed in the Student Rights and Responsibilities Handbook.

COCC is an affirmative action, equal opportunity institution.

Students Rights and Responsibilities:

Please read the Students Rights and Responsibilities handbook available at:

<http://studentlife.cocc.edu/Resources/Policies/default.aspx>

Americans with Disabilities Statement & Non-Discrimination Statement:

COCC is an affirmative action, equal opportunity institution. Students with documented disabilities who may need special instructional accommodations or who may need special arrangements in the event of an evacuation should notify the instructor as soon as possible, no later than the second week of the term. Students may contact COCC Disability Office in the Boyle Education Center to discuss special needs, 383-7583.

COCC Non-Discrimination Policy:

Central Oregon Community College is an affirmative action, equal opportunity institution.. It is the policy of the Central Oregon Community College Board of Directors that there will be no discrimination or harassment on the basis of age, disability, gender, marital status, national origin, race, religion, sexual orientation, or veteran status in any educational programs, activities or employment. Persons having questions about equal opportunity and non-discrimination, please contact Human Resources for referral to the appropriate personnel, 383-7236.

Student Insurance:

Students are not covered by medical insurance while on campus or involved in college classes and activities. Students are responsible for their own medical and dental insurance coverage. Information on student insurance coverage can be obtained in the Student Life office in the Campus Center Building or at the cashier in the Boyle Education Center. If you have specific questions or concerns regarding student insurance, you should discuss them with the Program Coordinator or Department Chairperson.

WEEK:	<u>Tentative weekly schedule and topics for Math 252 Winter 2014</u>	
First: Jan 6	Cover the syllabus, which includes how the class is structured. This week we'll be covering/reviewing indeterminate forms and L'Hospital's Rule (which includes the concepts of limits and derivatives), antiderivatives, and Areas and Distances (a first step towards "Integration"). Read sections 4.4, 4.9 & 5.1. HW due dates are posted in class and on (WA). Make sure you are signed up on WA before the next class and in the correct section. Preliminary Lab #0: Review - due Friday. Read 5.2 and 5.3 for next week.	
Second: Jan 13	5.1-5.3, topics include The Definite Integral and the Fundamental Theorem of Calculus. Preliminary Lab #0: resubmit & Group Lab #1- due Friday. Read 5.4 and 5.5 for next week.	
Third: Jan 20	Mon Jan 20 MLK day, no class, college closed	5.4&5.5: Indefinite Integrals and the Net Change Theorem & The Substitution Rule. You need to be working on Lab #2 this week. Read 6.1 and 6.2 for next week.
Fourth: Jan 27	Group Lab #2- due Monday. 6.1&6.2: Areas Between Curves & Volumes (by the disk method); work on Lab #3 Read 6.3 for next week and study for the first test.	
Fifth: Feb 3	First Test is scheduled for this week over 4.4,4.9,5.1-5.5 6.3: Volumes by Cylindrical Shells; continue working on Lab #3; start on Lab #4 Read 6.4,6.5 and 7.1 for next week.	
Sixth: Feb 10	Group Lab #3- due Monday. 6.5, 6.4&7.1: Average Value of a Function, Work & Integration by Parts; Continue working on Lab #4; start working on the PROJECT - see my website Read 7.4 and 7.6 for next week.	
Seventh: Feb 17	Group Lab #4- due Monday. 7.4&7.6: Integration of Rational Functions by Partial Fractions & Integration Using Tables Work on Lab #5; have your design done for your project Read 7.7,7.8 and 8.1 for next week.	
Eighth: Feb 24	Deadline to get Lab #5 checked off is Friday. 7.7,7.8&8.1: Approximate Integration, Improper Integrals & Arc Length Work on Lab #6; have the outline of your report for the project done Read 8.2 and 8.3 for next week and study for the second test.	
Ninth: March 3	Second Test is scheduled for this week over 6.1-6.5,7.1,7.4,7.6 8.2&8.3: Area of a Surface of Revolution & Applications (Centroid - center of mass) Group Lab #6- due Friday. Finish the PROJECT. Read 9.1-9.3 for next week and start reviewing for the final.	
Tenth: March 10	9.1,9.2&9.3: Modeling with Differential Equations, Direction Fields and Euler's Method & Separable Equations The PROJECT is due this week and REVIEW for the final.	
Eleventh: March 17	<u>Final:</u> 1:25pm class: Wednesday, March 19th from 1:00-3:00pm 7:30am class: Friday, March 21st from 8:00 - 10:00am	