



UNIVERSITY OF
CALGARY

Math 249 L07 (Fall 2010)

Lectures and Labs

Lectures

TR	15:30-16:45	ST 145
W	12:00-12:50	ST 145

Labs

In addition to the lectures, you should be in one of four labs.

Lab	Time	Quiz weeks	Non-quiz weeks	Teaching Assistant
B25	M 12:00-12:50	MS 317	MS 515	Rezairad, Monireh
B26	M 12:00-12:50	MS 317	MS 521	Obour, Paul
B27	R 17:00-17:50	MS 317	MS 515	Rezairad, Monireh
B28	R 17:00-17:50	MS 317	MS 521	Xia, Bing

Learning Tools and Resources

Textbook

Authors: Howard Anton, Irl Bivens and Stephen Davis
Title: Calculus: Early Transcendentals Single Variable, 9th edition. John Wiley & Sons, 2009.

The text is available in various formats (hard copy, binder ready, electronic – see CourseSmart ...)

You can also access the accompanying [Student Companion Site](#) for the Web Appendices (which we will be using) and other study resources at:

<http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=4845&itemId=0470182040>

Calculators

Windows Calculator, and only Windows Calculator, will be available and permitted during quizzes. No Calculators will be allowed for the midterm test and the final examination.

WeBWorK

You will be writing your quizzes and your assignments with [WeBWorK](#). You can access WeBWorK at <http://math.ucalgary.ca/undergraduate/webwork> and click into this course.

Continuous Tutorials

Continuous Tutorials is a drop-in help center for Math 249. Attendance is not mandatory but certainly recommended for assistance. The opening hours and locations are as follows:

Day	Start	End	Location
M	11:00	16:00	MS365
T	11:00	16:00	MS365
W	11:00	16:00	MS365
R	11:00	16:00	MS365
R	11:00	14:00	MS365

Calculus Connections

Calculus Connections is a companion course to Introductory Calculus offered by Y. Elsabrouty. There are no prerequisites and there is no cost to the student. The opening hours and locations are as follows:

CALCULUS CONNECTIONS - PRECALC REVIEW

September only: MTWR 17:00-18:50 LOCATION TO BE ANNOUNCED

CALCULUS CONNECTIONS - CALC REV: SEP-DEC

September-December TR 17:00-18:50 LOCATION TO BE ANNOUNCED

Credit Components

Schedule

There are 10 Assignments (A), 4 Quizzes, a Midterm Test and a Final Examination. Note these important dates:

	Monday	Tuesday	Wed	Thurs	Friday
September					
13-17					
20-24				Algebra Refresher due*	
27-Oct 1				Ex1 & A1 due	
October					
4-8	Quiz 1O (B25)			Quiz 1O (B27) // Ex2 & A2 due	
11-15				Ex3 & A3 due	
18-22	Quiz 1E (B26)			Quiz 1E (B28) // Ex4 & A4 due	
25-29	Quiz 2O (B25)			Quiz 2O (B27) // Ex5 & A5 due	
November					
1-5	Quiz 2E (B26)			Quiz 2E (B28) // Ex6 & A6 due	
8-12		Midterm (November 9)			
15-19	Quiz 3O (B25)			Quiz 3O (B27) // Ex7 & A7 due	
22-26	Quiz 3E (B26)			Quiz 3E (B28) // Ex8 & A8 due	
29 – Dec 3	Quiz 4O (B25)			Quiz 4O (B27) // Ex9 & A9 due	
December					
6-10	Quiz 4E (B26)			Quiz 4E (B28) // Ex10 & A10 due	
13				Ex11 due	

* The Algebra Refresher and the Exercises are not for credit. The Assignments are for credit. See more details in the next section.

Assignments

There are ten credit Assignments (1 to 10). All assignments are to be accessed and submitted via WeBWork, and are due at 11:59 p.m. on selected Thursdays (see schedule above). They together are worth 10% of the course.

Here is a schedule:

Non-credit Exercises	Credit Assignments	Sections covered
Algebra Refresher	---	Up to and including Web Appendix F
Exercise 1	Assignment 1	Web App G,H, Sections 0.1-0.3
Exercise 2	Assignment 2	Sections 0.4-0.5, Appendix B, 1.1
Exercise 3	Assignment 3	Sections 1.2, 1.3
Exercise 4	Assignment 4	Sections 1.5-1.6, 2.1
Exercise 5	Assignment 5	Sections 2.2-2.5
Exercise 6	Assignment 6	Sections 2.6, 3.1-3.3
Exercise 7	Assignment 7	Sections 3.4-3.6, 4.1
Exercise 8	Assignment 8	Sections 4.2-4.4
Exercise 9	Assignment 9	Sections 4.5, 4.6, 4.8
Exercise 10	Assignment 10	Sections 5.2-5.4
Exercise 11	---	Sections 5.5, 5.6, 5.9, 6.1

Each credit Assignment is accompanied by a non-credit Exercise, which contains versions of the Assignment problems and extra problems. The Exercise problems allow unlimited number of attempts. Each Assignment problem, however, allow 3 attempts. Also, there is a non-credit review exercise called Algebra Refresher and a non-credit Exercise 11 not associated with any credit Assignments.

Quizzes and Labs

There will be four 50-minute WeBWork quizzes, all held in MS 317 as per the above schedule (please make sure you know your Lab number). They together are worth 20% of the course.

IMPORTANT: You are urged to carefully read the document “Introducing WeBWork” posted on the Department site before you come to write your first quiz:

<http://math.ucalgary.ca/courses/f10/MATH249/LEC7>

In non-quiz weeks, you meet in the normally posted Lab classroom.

In quiz weeks, you write the quiz in MS 317, The quizzes will be based on the Assignments and Exercises as follows, where the odd-numbered labs B25 and B27 write the O-sequence of quizzes and the even-numbered labs B26 and B28 the E-sequence of quizzes:

	B25 and B27		B26 and B28
Quiz 1O	Ex 1, 2 and A 1, 2	Quiz 1E	Ex 2, 3 and A 2, 3
Quiz 2O	Ex 3, 4 and A 3, 4	Quiz 2E	Ex 4, 5 and A 4, 5
Quiz 3O	Ex 5, 6 and A 5, 6	Quiz 3E	Ex 6, 7 and A 6, 7
Quiz 4O	Ex 7, 8 and A 7, 8	Quiz 4E	Ex 8, 9 and A 8, 9

Midterm Test

There will be one midterm test, which is worth 20% of the course. You will write it in class on November 9, 2010. It is a hand-written test and is not WeBWork based. Time allowed is 75 minutes. No calculators are allowed.

Final Examination

There will be a two-hour final examination to be scheduled by the registrar's office. It is worth 50% of the course.

IMPORTANT: If you fail the final examination, you fail the course.

Date/Location: TBA

Content of Lectures

We will cover Chapters 0 to 5, and section 6.1. I will try to follow the following schedule as closely as possible. The Web Appendices can be accessed through links provided on the [Student Companion Site](#) for the textbook, and the Appendix B refers to an Appendix at the back of our textbook.

	Mon	Tue	Wed	Thur	Fri
Sept 13-17		Intro, Web App E (Inequalities), F (Absolute Value) □	Web App G (Lines)	H (Distance, Circle) 0.1 (Functions)	
20-24		0.2 (New Functions from Old) 0.3-0.4 (Families of Functions)	0.5 (Expo & Log)	0.5 (Expo & Log) App B (Trigo)	
27-Oct1		1.1 (Limits) 1.2 (Limit Laws) □	1.3 (Limit at infinity)	1.3 (Limit at infinity)	
4-8		1.4 (Formal definition) □	1.5 (Continuity, IVT)	1.5 (Continuity, IVT) 1.6 (Cont. of trig functions)	
11-15		2.1 (Tangent & Velocity) □	2.2 (Derivative)	2.2 (Derivative) 2.3 (Powers & linear comb)	
18-22		2.4 (Product and quotient) 2.5 (Trig. functions)	2.6 (Chain Rule)	2.6 (Chain Rule) 3.1 (Implicit differentiation)	
25-29		3.2-3.3 (Expo & ln)	3.4 (Related Rates)	3.4 (Related Rates) 3.5 (Linear approximation)	
Nov1-5		3.6 (l'Hopital's rule)	4.1 (increasing, decreasing func)	4.1 (increasing, decreasing func) 4.2 (Relative max/min)	
8-12		Midterm	4.2 (Relative max/min)	Reading Days. No lectures.	
15-19		4.3 (Curve sketching)	4.4 (Absolute max/min)	4.4 (Absolute max/min) 4.5 (Applied max/min.)	
22-26		4.6 (Motion)	4.8 (MVT)	4.8 (MVT) 5.2 (Indefinite integral)	
29-Dec3		5.3 (Substitution)	5.4 (Area as limit)	5.4 (Area as limit) 5.5 (Properties of definite integral)	
6-10		5.6 (Fund. Th. of Calculus) 5.9 (Substitution)	6.1 (Area)	6.1 (Area) Review	

Suggested questions: To master the subject materials, **you should do as many questions as you can** from the textbook. Another source of good exercises, consisting mostly of multiple choice problems, can be found in the [Student Study Guide](#) page of the [Student Companion Site](#) for the textbook. Here is a list of suggested problems you can start with.

Exercise Set	Pages	Problem Number
Web Ap E	E10	25, 27, 29, 31, 35, 39, 41
Web Ap F	F5-6	3, 7, 17, 21, 23, 31, 33, 38
Web Ap G	G12-15	19, 23, 39, 41, 43, 49, 51
Web Ap H	H8-9	17, 49, 61, 69, 71
0.1	12-15	3, 7, 9(b), 9(f), 10(b), 28(a), 35
0.2	24-27	29, 31, 33, 35, 51, 53, 59, 69
0.3	35-38	11, 26, 29, 33
0.5	61-63	5, 9, 11, 17, 19, 23, 25, 27, 29, 30, 32, 33
Appendix B	A24-25	21, 23, 27, 35, 37, 41, 58
1.1	76-79	3, 7, 9, 17, 19, 21, 25
1.2	87-88	1-44
1.3	96-100	3, 5, 9-40, 47, 55-62
1.4	106-109	16, 22, 31, 33, 35
1.5	118-120	13, 17, 21, 29, 35; 1, 7, 32, 47, 48, 51, 53
1.6	125-128	1, 7, 17-18, 20-40, 43, 51, 53, 55
2.1	140-143	3, 4, 13, 17, 19-22, 27

2.2	152-155	1, 7, 9, 13, 23, 31, 47, 50
2.3	161-163	1-21, 37, 39, 43, 47, 51, 59
2.4	168	5-21, 25, 29, 31, 33
2.5	172-173	1-25, 27, 31, 33, 39
2.6	178-181	5, 7-40, 43, 49, 57
3.1	190-192	5, 9, 25, 33, 42
3.2	195-196	1-27, 35-41, 53
3.3	202-203	15-35, 65, 67, 69, 71
3.4	208-211	14,16,20,22,32
3.5	217-219	5, 9, 13, 25, 31, 41, 45, 53, 55, 57, 65, 67
3.6	226-228	1-18, 21-47, 57, 59
4.1	240-244	1, 7, 19, 25, 27, 33, 41, 53, 63
4.2	252-254	9, 11, 15, 17, 23, 29, 39, 45, 47
4.3	264-266	3, 7, 9, 43, 47, 57
4.4	272-274	7, 11, 13, 15, 23, 27
4.5	283-288	3, 21, 23, 31, 55
4.6	294-296	15, 21, 27, 33, 35
4.8	308-310	1, 3, 5, 7, 19, 21, 25
5.2	330-332	9, 13, 15-32, 43, 49
5.3	338-340	1-10, 15-22, 25-34, 37-44, 47-56, 63-65, 71
5.4	350-352	12, 17, 37, 43, 47
5.5	360-362	2, 7, 9, 19, 21, 23, 33
5.6	373-375	13-24, 29-31, 51, 59-6
5.9	394-396	5-16, 29-44, 63
6.1	419-420	1, 3, 7, 9, 13, 17, 35

Updates

September 11, 2010

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