

## Ohio University Fall 2007 Math 163A Section A02 Course Information

**Instructor:** Mark Barsamian

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**Office Hours:** Monday 10:10am-11:00am  
Tuesday 10:10am-11:00am  
Wednesday 9:10am-12:00pm  
Thursday 10:10am-11:00am  
Friday 10:10am-11:00am

**Course Description:** A survey of basic concepts of calculus for students who want an introduction to calculus, but who do not need the depth of 263A-B-C.

**Prerequisites:** Math 113 or Placement level 2 or higher.

**Note:** Students cannot earn credit for both 163A and either of 263A or 266A.

**Text:** Calculus with Applications (Brief Version), 8<sup>th</sup> Edition, by Lial, Greenwell, and Ritchey, published by Addison Wesley, 2005; ISBN: 0-321-22829-4

**Calculators:** will not be allowed on exams

### Resources Online:

- Math 163A Web page: <http://www.math.ohiou.edu/courses/math163/index.php>
- Section A02 Web Page: <http://www.math.ohiou.edu/~barsamian/2007f163A/2007f163A.html>
- Section A02 Blackboard site: <https://blackboard.ohiou.edu/>
- The Academic Advancement Center's Math Center website: <http://cscwww.cats.ohiou.edu/aac/math/>
- Supplemental Instruction (SI) website: <http://www.ohiou.edu/AAC/supins/>

### Resources on Campus:

- The Academic Advancement Center's Math Center has drop-in help tutors, online help, and a phone hotline.
- Supplemental Instruction (SI) provides free, out-of-class study sessions led by an Ohio University undergraduate student who has already taken the course. Used throughout the U.S. and the world, the SI program has proven highly successful in increasing student achievement and retention.

**Grading:** In Math 163A Section A02, you will accumulate points as follows.

Written Homework (7 assignments, 20 points each):	140 points
Midterm Exams (3 exams, 200 points each):	600 points
Final Exam:	260 points
Total Points Possible for the Quarter:	1000 points

Your course letter grade will be computed from your total score using the percentage scale shown below.

Total Score	Percentage	Grade	Interpretation
900 - 1000	90% - 100%	A	You mastered all concepts, with no significant gaps
850 - 899	85% - 89.9%	A-	
800 - 849	80% - 84.9%	B+	You mastered all essential concepts and many advanced concepts, but have some significant gaps.
750 - 799	75% - 79.9%	B	
700 - 749	70% - 74.9%	B-	You mastered most essential concepts and some advanced concepts, but have many significant gaps.
650 - 699	65% - 69.9%	C+	
600 - 649	60% - 64.9%	C	
550 - 599	55% - 59.9%	C-	You mastered some essential concepts.
400 - 549	40% - 54.9%	D	
0 - 399	0% - 39.9%	F	You did not master essential concepts.

(The Learning Objectives for the course can be found on the main Math 163A web page.)

**Homework:** In Math 163A Section A02, homework assignments will be graded. You may work together on homework, but the words that you write should be your own. Late homework will not be accepted.

**Attendance:** Attendance is mandatory, but is not recorded and is not part of your grade. If you miss a class, it is your responsibility to copy a classmate's notes and catch up on what was covered.

**Special Needs:** If you have specific physical, psychiatric, or learning disabilities and require accommodations, please let me know as soon as possible so that your learning needs may be appropriately met.

## Fall 2007 Math 163A Section A02 Syllabus and Tentative Schedule

Date	Class topics	Homework/Exam
Tue 4 Sep	1.1 Slopes and Equations of Lines	
Thu 6 Sep	1.2 Linear Functions and Applications	
Fri 7 Sep	2.1 Properties of Functions	Homework 1 Due
Mon 10 Sep	2.2 Quadratic Functions; Translation and Reflection	
Tue 11 Sep	Sign Charts	
Thu 13 Sep	2.3 Polynomial and Rational Functions	
Fri 14 Sep	2.3 Polynomial and Rational Functions	Homework 2 Due
Mon 17 Sep	Review	
Tue 18 Sep	Exam 1	Exam 1
Thu 20 Sep	3.1 Limits	
Fri 21 Sep	3.1 Limits	
Mon 24 Sep	3.2 Continuity (do class drill 1)	
Tue 25 Sep	3.3 Rates of Change	
Thu 27 Sep	3.3 Rates of Change (do class drill 2)	
Fri 28 Sep	3.4 Definition of the Derivative	Homework 3 Due
Mon 1 Oct	3.4 Definition of the Derivative	
Tue 2 Oct	3.5 Graphical Differentiation (do class drill 3a)	
Thu 4 Oct	Review	
Fri 5 Oct	Exam 2	Exam 2
Mon 8 Oct	4.1 Techniques for Finding Derivatives	
Tue 9 Oct	4.2 Derivatives of Products and Quotients	
Thu 11 Oct	4.3 The Chain Rule	
Fri 12 Oct	4.3 The Chain Rule	Homework 4 Due
Mon 15 Oct	5.1 Increasing and Decreasing Functions	
Tue 16 Oct	5.2 Relative Extrema	
Thu 18 Oct	5.3 Higher Derivatives and Concavity (class drills 4,5)	
Fri 19 Oct	5.3 Higher Derivatives and Concavity	Homework 5 Due
Mon 22 Oct	5.4 Curve Sketching (class drill 6)	
Tue 23 Oct	5.4 Curve Sketching	
Thu 25 Oct	Review	
Fri 26 Oct	Exam 3	Exam 3
Mon 29 Oct	6.1 Absolute Extrema (do class drill 7)	
Tue 30 Oct	6.1 Absolute Extrema	
Thu 1 Nov	6.2 Applications of Extrema	
Fri 2 Nov	6.2 Applications of Extrema	Homework 6 Due
Mon 5 Nov	9.1 Functions of Several Variables	
Tue 6 Nov	9.2 Partial Derivatives (do class drill 8)	
Thu 8 Nov	9.3 Maxima and Minima	
Fri 9 Nov	9.3 Maxima and Minima (do class drill 9)	Homework 7 Due
Mon 12 Nov	Holiday: No Class	
Tue 13 Nov	Review	
Fri 16 Nov	Cumulative Final Exam 10:10am - 12:10pm in Morton 237	

### Fall 2007 Math 163A Section A02 Homework Assignments

Sections	Assigned Problems (turn in)	Suggested problems (do not turn in)
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H1	1.1	2, 32, 50	3, 4, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 33, 35, 39, 47, 53, 57, 59
	1.2	10, 14	1, 2, 3, 4, 13, 17, 23

H2	2.1	62	1, 3, 5, 7, 15, 17, 23, 25, 27, 29, 37, 41, 43, 45, 55, 57, 59, 65
	2.2	26	1, 2, 3, 5, 7, 9, 11, 21, 25, 27, 29, 49
	Sign Charts Handout	2, 6	1, 3, 4, 5
	2.3	34	1, 2, 3, 5, 7, 9, 11, 13, 15, 17, 21, 25, 27, 31, 39

H3	3.1	32, 56	1, 3, 5, 7, 9, 10, 11, 25, 29, 39, 41, 43, 49
	3.2	24, 30*	1, 3, 5, 7, 9, 11, 13, 19, 25 (*Typo on #30: It should say "... substituting $x = 2$ ."*)
	3.3	28*	1, 3, 5, 7, 9, 11, 13, 15, 21 (*In problem #28d, compare all three results a,b,c.)
	3.4	none	1, 2, 3, 4, 5, 9, 10, 11, 13, 15, 17, 19, 21, 33, 47* (*In problem #47d, compare all three results a,b,c.)
	3.5	none	3, 5, 7, 9, 11, 13

H4	4.1	18, 32	3, 5, 7, 13, 27, 29, 41, 45, 46, 53, 54
	4.2	8, 12	1, 21, 23, 27, 30*, 31 (*hint for #30: Do the derivative yourself, then compare.)
	4.3	26	1, 3, 7, 13, 19, 21, 29, 37, 45, 54a

H5	5.1	12, 20	7, 15, 21, 29, 41
	5.2	36, 48	7, 11, 21, 29, 30, 49
	5.3	36	3, 5, 9, 29, 31, 37, 51
	5.4	none	5, 9, 11, 13, 17, 18, 19, 20, 35, 36, 37

H6	6.1	14,18,26	1, 3, 11, 17, 36
	6.2	12, 16	1, 3, 7, 9, 11, 23, 27

H7	9.1	8, 24	3, 21, 22, 23, 25, 26, 27
	9.2	2, 6	3, 5, 11, 17, 21, 25, 33, 35, 51
	9.3	14	7, 9, 11, 21, 22, 23, 24, 25, 26, 35