Math 152 - Calculus II
Section 3
Spring 2013

Basic Info:

Instructor:	Dr. Nathan Reff
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Office:	Myers Hall 109B
Phone:	607.871.2818
Office Hours:	T 2:00PM-3:00PM and 6:00PM-7:00PM, WF 9:15AM-10:15AM
Course Web Page:	http://people.alfred.edu/~reff/MATH152S3/
Course Meetings:	MTWF 10:20AM-11:10AM in Myers Hall 227
Text:	*Calculus,* 10^{th} *Ed.* by Anton, Bivens and Davis (ISBN: 978-0-470-64772-1)

Prerequisite: You absolutely must have a passing grade in Math 151 (Calculus I) or equivalent to be in this course.

Course Goals: This course is a continuation of Calculus I where the concept of a limit was introduced in order to study differentiation and integration. In the first part of the course, we will focus on techniques of integration and their applications. In the second part of the course, we will study infinite series and their applications. After completing this course students should be able to:

- Use a variety of techniques to evaluate integrals.
- Use a variety of techniques to determine if a given infinite series converges.
- Find a power series expansion for a given function and answer convergence questions. Furthermore, use the power series expansion as a technique to solve other calculus problems.
- Apply the integration and series techniques to real-world applications.

Technology: A graphing calculator may be used in this course. The TI-84 is recommended, but if you have another model come talk to me. Please bring your calculator to every class. You must have your own calculator.

Grade Distribution: Your final grade will be determined as follows:

Homework, Quizzes, etc.	30%
Tests	40%
Comprehensive Final Exam	30%

You also have the opportunity to earn participation points which will be added to your course score. You can earn these points by answering questions, asking relevant questions, etc. Coming to class is expected and will not get you these participation points alone. I would like everyone to be a part of the classroom discussions.

Borderline cases of grades can be adjusted up or down based on your attendance, class participation, homework, and trend (patterns in the grades as the semester progresses, for example, steady improvement is good, but a weak final exam is bad).

Grade Conversion:

A	93−100	C	73−76
A−	90−92	C−	70−72
B+	87−89	D+	67−69
B	83−86	D	63−66
B−	80−82	F	0−62
C+	77−79		

Homework: Homework problems will be assigned daily/weekly and posted **on the course website**. Homework problems will come in 3 forms: WeBWork problems, book problems, and my own problems. Problems that are not part of WeBWork will usually be collected on exam days. You must bring all of your homework to every lecture (see quizzes below). Please make sure your homework is *neat* (legible, not torn out of a spiral bound notebook, etc.) and *stapled* when you turn it in. It is *very* important that you keep working on problems throughout the course. There is an old saying that "math is not a spectator sport" and there is definitely a lot of truth to this. I recommend working on your own and also with other classmates (but make sure you are turning in your own work). If you are working on a problem and get stuck, make a note of it and remember to *ask questions*. I encourage *everyone* to come to office hours and visit the help room frequently.

Other than assigned problems you should be reading the text every day and keeping up with the pace of the course. Keep in mind that it your responsibility to read each section before an exam.

Quizzes: There will at least one quiz each week (except when there is an exam). Quizzes may be announced or unannounced. Quizzes will usually cover lecture material and homework problems. The questions may even be taken directly from the homework set, or minor perturbations of the homework problems. Also, there will be homework quizzes where you will just copy exactly what your have written as a homework solution. These will be 5 minute quizzes of just copying. You may not look at the problem in the text or have a sheet with the problems written on them. This will hopefully give you even more encouragement to do the homework. There will be no make up quizzes.

Class Work: Occasionally worksheets, lab projects and other classwork will be assigned. Generally these assignments will carry the same weight as a homework or quiz for the course.

Tests: There will be 4 tests during the semester. The tentative tests dates are as follows:

Test 1	February 8.
Test 2	March 1.
Test 3	April 5.
Test 4	April 26.

Please see the course website for more details. Tests will be more challenging than the quizzes so you need to study accordingly. However doing the homework and reviewing the quizzes is the best way to prepare yourself.

Quiz/Test/Final Exam Policy: Only your approved calculator may be used (when allowed). Hence, no cell phones, computers, mp3 players, slide rules, abaci, Addiators, Napier's bones, Difference/Analytical Engines, Pascalinas, Antikythera mechanisms, etc. may be used. In other words I want you to only use your brain, calculator and the hard work you put into this course to earn your grade. You may not talk to each other in the classroom while other students are working, even if you are done. Please keep your eyes on your own paper. Do not look at notes, books, etc. while working. Work through the problem on your own and you will do fine (and save us both a lot of trouble).

Cheating and Academic Dishonesty: Academic dishonesty of any kind will not be tolerated. It is disrespectful to the University, your classmates and to me. Any form of academic dishonesty will be dealt with severely. Alfred University's policies on Academic Dishonesty (Unethical Practices) (see Policy 700) can be found at `http://my.alfred.edu/index.cfm/fuseaction/academic_policies.academic_regulation_ug.cfm`.

Attendance Policy: You are expected to attend and be a part of every class meeting. I will keep a record of your attendance, participation and preparation. I will allow a maximum of three unexcused absences without penalty. Excessive absences will noticeably affect your final grade. This course will move rather quickly so I suggest you only miss class for a good reason (meaning an excused absence). If you must miss a class it is your responsibility to learn the missed material quickly to keep up with the course.

Excused Absences: If you cannot attend one of the exams you should submit a written reason for your absence **in advance** of the exam date. I would appreciate letting me know at least 3 days in advance if you are going to miss a class. In emergency situations please send me an email or leave me a voice message. The decision to allow make-up exams will be made on a case by case basis, but proper documentation is always necessary. No make-up exams will be given without advance notice. If you miss a quiz, exam or final with an unexcused absence, you will receive a 0 for that particular assignment.

Students with Disabilities: Alfred University is committed to upholding and maintaining all aspects of the Federal Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. If you are a student with a disability and wish to request accommodations, please contact Dr. Aubrey Elmore at the Office of Special Academic Services located in Crandall Hall, or call (607) 871-2148. Any information

regarding your disability will remain confidential. Many accommodations require early planning, therefore requests for accommodations should be made as early as possible. Any requests for accommodations will be reviewed in a timely manner to determine their appropriateness to this setting.

Tutor Services/Requests: The Division of Mathematics has drop in help sessions for most math courses during the week. The final schedule will be posted on our course website as soon as it is complete.

The office of Special Academic Services (`sas@alfred.edu`) in Crandall Hall offers personalized help in the form of individual and group tutoring. Please contact Beth Niles at (607) 871-2148 for more information. Also, please contact me for additional support.

Extra Credit: I will not be giving anyone extra credit. This way everyone has the same advantage in the course.

Tentative Schedule:

Monday	Tuesday	Wednesday	Friday
Jan 21st **CLASS CANCELED**	22nd **1** §4.6, 4.9 Review Integration	23rd **2** §4.8 Average Value	25th **3** §5.1 Area Between Curves
28th **4** §5.2 Volumes (Disk/Washer)	29th **5** §5.2 Volumes (Disk/Washer)	30th **6** §5.3 Volumes (Shells)	Feb 1st **7** §5.3 Volumes (Shells)
4th **8** §5.2,5.3 Volumes	5th **9** §5.4, 5.5 Arc Length and Surface Area	6th **10** **Review**	8th **11** **TEST 1**
11th **12** §5.6 Work	12th **13** §7.2 Integration by Parts	13th **14** §7.2 Integration by Parts	15th **15** §7.3 Trig. Integrals
18th **16** §7.3 Trig. Integrals	19th **17** §7.4 Trig. Substitution	20th **18** §7.4 Trig. Substitution	22nd **19** §7.5 Partial Fractions
25th **20** §7.5 Partial Fractions	26th **21** §7.5 Partial Fractions	27th **22** **Review**	Mar 1st **23** **TEST 2**
4th **24** §7.8 Improper Integrals	5th **25** §7.8 Improper Integrals	6th **26** §9.1 Sequences	8th **27** §9.1 Sequences

Monday	Tuesday	Wednesday	Friday
11th **SPRING BREAK**	12th **SPRING BREAK**	13th **SPRING BREAK**	15th **SPRING BREAK**
18th **28** §9.2 Monotone Sequences	19th **29** §9.3 Series	20th **30** §9.3 Series	22nd **31** §9.3 Series
25th **32** **Withdraw Deadline** §9.4	26th **33** §9.4 Convergence Tests	27th **34** §9.5 Comparison Tests	29th **35** §9.5 Ratio/Root Tests
Apr 1st **36** §9.6 Alternating Series Test	2nd **37** §9.6 Absolute and Conditional Convergence	3rd **38** **Review**	5th **39** **TEST 3**
8th **40** §9.7 Maclaurin/Taylor Polynomials	9th **41** §9.8 Maclaurin/Taylor Series	10th **42** §9.8 Maclaurin/Taylor Series	12th **43** §9.8 Maclaurin/Taylor Series
15th **44** §9.8 Maclaurin/Taylor Series	16th **45** §9.9 Convergence of Taylor Series	17th **46** §9.9 Convergence of Taylor Series	19th **47** §9.10 Applications of Taylor Series
22nd **48** §9.10 Applications of Taylor Series	23rd **49** §10.1 Parametric Equations	24th **50** **Review**	26th **51** **TEST 4**
29th **52** §10.1 Parametric Equations	30th **53** §10.2 Polar Coordinates	May 1st **54** §10.3 Polar Calculus	3rd **55** **Review**
6th **56** **Review**	7th	8th	10th

Final Exam: Wednesday May 8, 1:15PM-3:15PM in Meyers Hall 227.

Disclaimer: I reserve the right to make changes to this syllabus without prior notice.