

# Math 252 X – Calculus II – UX 1

**TITLE:** Calculus II

**NUMBER:** MATH 252X, Section UX1

**CREDITS:** 4

**PREREQUISITES:** C or better in MATH 251X (Formerly Math 200X) or placement in MATH 252X

**LOCATION:** Blackboard

**MEETING TIME:** N/A

**INSTRUCTOR:** Jeff Park

**OFFICE LOCATION:** Chapman 302

**OFFICE HOURS:** In the Math Lab at 10:30am-1pm on Mondays and Fridays, or by appointment

**EMAIL ADDRESS:** [jcpark2@alaska.edu](mailto:jcpark2@alaska.edu)

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## COURSE DESCRIPTION

From the UAF course catalog:

“Techniques and applications of integration. Integration of trigonometric functions, volumes including those using slicing, arc-length, integration by parts, trigonometric substitutions, partial fractions, hyperbolic functions, and improper integrals. Numeric integration including Simpson's rule, first order differential equations with applications to population dynamics and rates of decay, sequences, series, tests for convergence including comparison and alternating series tests, conditional convergence, power series, Taylor series, polar coordinates including tangent lines and areas, and conic sections.”

Calculus II begins by picking up where Calculus I ended, integration. During the first two units we discuss more sophisticated techniques for integration (Chapter 7). Techniques used to approximate definite integrals and when an approximate value of a definite integral is an appropriate solution will also be discussed. The next topic will be completely new for most students: sequences and series (Chapter 11). Sequences and series can be used to attack many problems, including, but not limited to, approximation of functions and approximation of integrals. This unit will be broken into two sub-units. After we finish with sequences and series we will return to integration and discuss a variety of applications of integration to physics and engineering (Chapters 6 & 8). We end the course with a few alternative methods of representing curves (Chapter 10). Specifically, we will discuss how curves can be represented using parameterizations and discuss an alternative system of graphing called the polar coordinate system. This topic functions as a preview to some of the crucial ideas that will be covered in Calculus III.

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## STUDENT LEARNING OUTCOMES

In this course students will be expected to master problem skills, learn to manipulate abstract symbols and develop deductive arguments in mathematics. Students will learn a broad spectrum of mathematical applications including, but not limited to:

- Various techniques of integration.
- Integration of improper integrals.
- Applications of integration to areas, volumes, work, average value, centroids, arc length and surface area.
- Convergence and divergence of sequences and series.
- Power series and their applications.
- Parameterizations of curves and polar coordinates.

**Successful, timely completion of this course depends on committing yourself early and maintaining your effort.**

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## COURSE READING & MATERIALS

**Textbook:** Calculus: Early Transcendentals 8th Edition, James Stewart, ISBN-13: 978-1285741550, ISBN-10:1285741552.

**Optional:** Student Solutions Manual for Stewart's Single Variable Calculus: Early Transcendentals, 8th Edition, ISBN-13: 978-1305272422, ISBN-10:1305272420. This book contains fully worked solutions to all of the odd-numbered exercises in your textbook. This is not available through the UAF bookstore, but is available on Amazon (and probably elsewhere) to rent and buy.

**WebAssign Code:** You will be doing a significant portion of your homework online. To do this you must have a WebAssign access code. If you purchase your textbook from the UAF bookstore this code will come packaged with your text. If not, you can purchase one on [www.webassign.net](http://www.webassign.net). If you have not yet purchased a code, don't fret! You will have a one week “trial” period where you can use WebAssign without paying, starting the first day of classes. You also have access to an eBook on WebAssign.

## TECHNICAL REQUIREMENTS FOR COURSE

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Students must have regular access to a **computer** and the Internet to access online materials on the course website and Blackboard. Students must also have access to a **printer** and a **scanner or a scanning app** for this course. Students will be expected to download, print, and upload assignments. A list of scanning tips is given on Blackboard. It is the responsibility of the student to ensure that all scans are legible and formatted as a PDF files. At the discretion of the instructor, deduct points will be deducted if scans are illegible. **All documents submitted to the instructor in Blackboard must be PDF files, one file per assignment. Files that are not PDF files will not be graded for credit and will be subject to any late penalties that apply. Files that are not one file will receive five points off the first week half credit every week thereafter.**

## INSTRUCTIONAL METHODS

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This class will provide you with the flexibility to learn Calculus II without needing to attend lecture at a fixed time. The course is composed of 14 modules, each divided into two parts, usually consisting of 2 or 3 individual lessons. Each lesson mimics the lesson (lecture + homework) you would get in an in-person course. To allow you flexibility, lessons and assignments will be available in advance, with enforced due dates each week.

Each lesson will have a video, worksheet, and WebAssign homework assignment. The videos were recorded by Beth Zirbes and teach the lesson as if it were an in-person class. You can pause, think, rewind, and re-watch at your own pace. If you are feeling confident, you can pause the video and attempt to solve a problem on your own before watching for the solution. While watching the video, students must take notes on the associated worksheet. Watching the lesson and filling out the notes for each lesson should take between 30 and 60 minutes for each lesson. This mimics the time spent in an in-person class. It is best to space out your video watching sessions and attempt to complete one set of notes each day. You must submit a PDF file containing your notes to Blackboard for grading on a bi-weekly basis. The notes for each week (or module) are broken into sets of one or two. The first set is (usually) due on Tuesdays at 11:59 AKST, the second set is (usually) due on Thursdays at 11:59 PM AKST. The notes for the two lessons should be scanned and submitted as one PDF file to Blackboard. Files that are not PDF files will not be given any credit and will be subject to penalties for late work. Files that are not a single file will lose 5 points the first week and thereafter receive half credit.

To check your understanding, each lesson also has an associated homework assignment on WebAssign. Instructions explaining how to get into WebAssign are given on Blackboard in the "Welcome Letter" under "Start Here." WebAssign assignments for one module are usually due on Wednesdays (Part 1) and Fridays (Part 2) at 11:59 AKST. It is up to you to start the assignments early enough to complete them by the deadline. You will have five chances to get a problem correct for full credit. Use this opportunity to learn from your mistakes. Late WebAssign will be accepted for 50% credit up to one week after the due date. Note that the late penalty will only be applied to problems that have not been completed by the due date. Any problems completed before the due date still receive full credit. To access this extension you must "request an extension" inside of WebAssign. You will be prompted to accept the extension with the 50% off penalty. This process should be automatic, and if it is not, please let me know.

To demonstrate that you can also write up clear solutions to problems there will be weekly, written homework assignments. These problems may be challenging or sometimes require the use of technology. You will be expected to show all work neatly for full credit. All written homework assignments are open book, notes, calculator, tutor, et cetera. You are allowed to use resources for help, as long as you can explain what you are doing. However, any solutions copied directly from Wolfram Alpha (especially those which use techniques that you did not learn in this class) will not receive any credit. Written homework will (usually) be due on Mondays at 11:59 PM AKST and all due dates are given in the course schedule at the end of the syllabus. Written homework assignments that are submitted 24 hours before the deadline will receive 2 bonus points, and quizzes will be accepted until 3 PM on the class day after the deadline with a 5-point penalty. After 3 PM on the class day immediately following the due date late quizzes will not be accepted for credit as solutions will automatically post in Blackboard at 3:30 PM. Forgetting to upload an assignment or uploading the incorrect file are not acceptable reasons to turn in work after this 3 PM due date. **Make sure you carefully verify that the assignment you have uploaded is (a) actually uploaded and (b) the correct assignment. Failure to do so will result in a zero that is not redeemable.**

Here is an outline of the tasks you must complete on your own to finish each module:

- 1) Notes for all lessons (due bi weekly, 2 x 2 lessons per module)
  - a. Must be scanned as a single PDF file and uploaded to Blackboard.
  - b. Due on Tuesdays and Thursdays by 11:59 PM.
  - c. Late policy: Five points off if one hour or less late and then ½ credit until the unit exam.
- 2) WebAssign problems for all lessons (due bi weekly)
  - a. Due on Wednesdays and Fridays by 11:59 AKST. Due dates also appear in WebAssign.
  - b. Late policy: ½ credit on unfinished problems one week after the original due date.
- 3) Written homework
  - a. Must be scanned as a single PDF file and uploaded to Blackboard.
  - b. Due on Mondays by 11:59 PM AKST. Two bonus points if submitted 24 hours before the deadline.
  - c. Late Policy: Five points deducted if submitted after the due date but before 3 PM on the day immediately following the due date. Not accepted for any credit after 3 PM.
- 4) Optional additional practice problems in your text. Problems are listed on the final page of the note sheets. The solutions are available online or you can purchase the student solutions manual to the text.

## **EFFORT AND STUDENT INVOLVEMENT**

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This distance course will mimic the rigor and time commitments of an in-person course. The only difference is the ability to “attend” class at any time of day. It is up to you to structure your week so that you can complete all assignments in a timely fashion! UA policy states that for each one hour spent in class the workload should be, at a minimum, two hours outside of class. In this class lecture is on your own as well as the homework and you should expect to spend at least 3 hours per day, four days a week on this class. Under-prepared students with weak Calculus 1 knowledge can expect to spend more time in this course. Expect to spend 12-20 hours a week on this class, or 3-4 hours per day, four or five days per week. You, and you alone, are responsible for meeting any deadlines.

As all of the deadlines and assignments will be posted well in advance, extensions will only be granted in extreme cases. Emergency situations will be dealt with as needed. It is the students’ responsibility to communicate with the instructor in the event of an emergency. Students are expected to maintain a working backup plan to be implemented in the event of a computer malfunction or an interruption of their normal Internet service during the course. Do not wait until the last minute to turn in your work! If possible, work ahead! All of the lessons are available now, and the entire course will be completely ready by the end of the first week of class.

## **FACULTY INITIATED WITHDRAWAL POLICY**

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You will be withdrawn from this course if you do not participate substantially in the course. Students will be withdrawn from the course if:

- The student misses the content of two weeks in a row (notes and written homework)
- The student’s average in the WebAssign category falls below 70%
- The student’s average in the Notes category falls below 70%
- The student misses a midterm exam.
- The student misses three (3) weekly homework assignments.

It is ultimately up to the student to make sure that they do not violate any of these policies.

## **EVALUATION POLICIES**

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In this course you will be evaluated based on your performance on online homework, written homework, proctored quizzes, midterm exams and a final exam. Student grades will be dependent upon: notes (5%), WebAssign homework (5%), written homework (5%), proctored quizzes (10%), midterm exams (50%), and the (cumulative) final exam (25%). More details on each of the categories are described below.

**Notes:** While watching a video you must print (or download) and fill out the associated note-taking guide. These assignments will be graded on a completion basis and are (usually) due on Tuesdays and Thursdays by 11:59 AKST. Notes submitted within one hour of the due date will lose 5 points. Notes submitted more than one hour after the deadline will receive half credit up until the unit exam. Any extra credit set of notes will be worth 5 points.

**Online Homework:** Homework is assigned through WebAssign. You will have five chances to get a problem correct for full credit! Use your chances to learn from your mistakes. Homework will (usually) be due weekly on Wednesdays and Fridays 11:59 PM AKST. Late homework may be completed one week after the original due date for 50% credit on the problems which were not completed by the due date. You are not penalized on problems completed before the due date. This extension is requested in WebAssign by clicking “request extension.” You will see a prompt that says you accept the penalty and you can then work on the problems you did not complete.

**Written Homework:** Written homework that summarize the content of the module will be assigned weekly. Written homework will be posted with the appropriate module in Blackboard. You need to print, complete, scan and submit the written homework assignment. The written homework that you submit should be your best work and the instructor reserves to deduct up to two points for sloppiness. Erase incorrect work, crossing out or scribbling will be grounds for deducted points. Work out the problems on scratch paper and give me your **final** draft. I would suggest working on the written homework a little at a time as you complete each lesson. You can use notes, your textbook and a calculator. You are free to use software to check your work. However, keep in mind that test will be closed book, closed notes and no calculator. Written homework assignments are usually due on Mondays at 11:59 AKST. Completed written homework assignments that are submitted 24 hours before the deadline will receive 2 bonus points. Written homework will be accepted until 3 PM on the day immediately following the due date with a 5-point penalty. After 3 PM on the day after the due date, I will not accept late quizzes for credit as solutions are set to automatically release at 3:30 PM in Blackboard. Once solutions are posted, no late assignments are accepted for any reason.

**Proctored Quizzes:** There will be weekly proctored quizzes that must be taken with an approved proctor. These are valuable opportunities to learn what you do and do not know before you take an exam. To set up such a proctor select “Schedule a Proctor” in Blackboard. These quizzes will always be closed book, closed notes, no calculator and have a 30-minute time limit. The only exception to this is the first quiz that reviews Calculus 1. It will be given on a Friday and is 60 minutes long. Proctored quizzes are the best predictor of exam scores and thus grade in the course. As these are learning opportunities, not exams, these quizzes are just 5% of the grade. Use them to learn what you do and do not need to know before you take a midterm exam.

**Exams & Final Exam:** There will be three hour-long midterms and one two hour-long final exam in this course. All exams are proctored and timed. All midterms are closed book and closed notes. On the final exam you will be allowed one 4 by 6 inch note card with handwritten notes on both sides. The midterm exams will be one hour each, and the final exam will be two hours. Exams cannot be made up unless you provide me with a convincing reason to do so in advance. It is your responsibility to ensure that your exam is submitted to eLearning by the

end of the testing window. Below are the chapters and dates of the midterm and final exam.

- Midterm # 1 – Chapter 7 – Wednesday, September 19<sup>th</sup>
- Midterm # 2 – Chapters 11 - Wednesday, October 24<sup>st</sup>
- Midterm # 3 – Chapters 6 & 8 – Thursday, November 15<sup>th</sup>
- Final Exam – Chapters 6-8, 10-11 – Tuesday, December 11<sup>th</sup>

The grading scale used will be the plus/minus letter grades (93-100 %= A, 90-92 %= A-, 87-89 %=B+, 83-86 %= B, 80-82 %= B-, 77-79 %= C+, 70-76 %= C, 67-69 %= D+, 63-66 %= D, 60-62 %= D-, and below 60 %= F). Grades will be rounded to the nearest whole number. An 89.5% rounds up to a 90% and an 89.49% rounds to an 89%. **I will not round grades up any more than this or allow you to do extra credit or submit late work once the final exam is given.**

To compute your grade you must find averages in each of the categories and compute the weighted average of these averages. Specifically, find your average on the following: (1) Notes, (2) WebAssign (3) Written Homework, (4) Quizzes, (5) Midterms, (6) Final exam. Then, compute the following:

$$0.05(\text{Notes Avg}) + 0.05(\text{WA Avg}) + 0.05(\text{WH Avg}) + 0.10(\text{P Quiz Avg}) + 0.50(\text{Midterm Avg}) + 0.25(\text{Final Avg}) = \text{Final Grade}$$

Incompletes will be given out due to extreme circumstances beyond your control and you will need to provide verifiable proof. After the drop date, students who do not wish to continue with the course will be responsible for withdrawing themselves.

C– (1.7) is the minimum acceptable grade that undergraduate students may receive for courses to count toward the major or minor degree requirements, or as a prerequisite for another course. A minimum grade of C (2.0), however, MAY be required by specific programs for prerequisite and/ or major / minor courses. Please consult specific program listings in the UAF Catalog.

C– (1.7) is the minimum acceptable grade required for all Core (X) Courses.

## INSTRUCTOR RESPONSE TIME

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Please e-mail me if you need any assistance. I will answer e-mail inquiries from students promptly, but e-mails received outside of the workday will not receive a response until the following workday. Students should see a response within one business day. Any e-mails received after 5PM might not see a response until the next workday. Any e-mails received over the weekend will not receive a response until the following Monday. If I do not respond in one business day, please e-mail me again. If you do not receive a response within two business days, please contact the Department of Mathematics and Statistics directly.

## COURSE POLICIES – LATE WORK

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All deadlines in this course are firm. Late work may be accepted for partial credit, but policies vary for different types of assignments. Late policies were outlined in the descriptions of the types of assignments above.

## IMPORTANT DATES TO REMEMBER

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| First day of instruction                               | Monday, August 27 <sup>th</sup>             |
| Deadline for adding classes, late registration         | Friday, September 7 <sup>th</sup>           |
| Deadline for tuition and fee payment                   | Monday, September 10 <sup>th</sup>          |
| <b>Midterm # 1 – Chapter 7</b>                         | <b>Wednesday, September 19<sup>th</sup></b> |
| <b>Midterm # 2 – Chapters 11</b>                       | <b>Wednesday, October 24<sup>th</sup></b>   |
| Deadline for student and faculty-initiated withdrawals | Friday, November 2 <sup>nd</sup>            |
| <b>Midterm # 3 – Chapters 6 &amp; 8</b>                | <b>Thursday, November 15<sup>th</sup></b>   |
| Last day of instruction                                | Saturday, December 8 <sup>th</sup>          |
| <b>Final Exam Date</b>                                 | <b>Tuesday, December 11<sup>th</sup></b>    |
| Deadline for faculty to post grades, noon              | Wednesday, December 19 <sup>th</sup>        |

More dates and deadlines can be found here: <http://catalog.uaf.edu/calendar/>.

## HOW TO CHECK YOUR GRADE

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Grades for this course will be posted in Blackboard. To check your grades for assignments and find comments from your instructor, click on the My Grades link in the sidebar menu. All the assignments and their due dates are listed. If your instructor has left comments, there will be a Comments link. Click on this link to view comments. All written homework will be returned with an annotated PDF file. Click on this file to see instructor comments. Solutions to all written homework assignments will be posted in Blackboard and students are expected to use this to see how to do problems that were missed.

If the score is for a test or quiz, click on the check mark or your score to see results and feedback.

If the score is for an assignment, the title of the assignment is a link and by clicking this link you'll be taken to your submission, grade and comments.

If you see a green explanation point, your assignment has not been graded yet.

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## **EXPLANATION OF NB/I/W GRADES**

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**This course adheres to the UAF eLearning Procedure regarding the granting of NB Grades** *The NB grade is for use only in situations in which the instructor has No Basis upon which to assign a grade. In general, the NB grade will not be granted.*

### **Your instructor follows the University of Alaska Fairbanks Incomplete Grade Policy:**

“The letter “I” (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the student’s control, such as sickness, he has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an “I” grade.”

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## **ACADEMIC INTEGRITY**

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As described by UAF, scholastic dishonesty constitutes a violation of the university rules and regulations and is punishable according to the procedures outlined by UAF. Scholastic dishonesty includes, but is not limited to, cheating on an exam, plagiarism, and collusion. Cheating includes providing answers to or taking answers from another student. Plagiarism includes use of another author’s words or arguments without attribution. Collusion includes unauthorized collaboration with another person in preparing written work for fulfillment of any course requirement. Scholastic dishonesty is punishable by removal from the course and a grade of “F.” For more information see the Student Code of Conduct at: <http://uaf.edu/usa/student-resources/conduct>.

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## **SUPPORT SERVICES & FREE TUTORING**

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**UAF eLearning Student Services** helps students with registration and course schedules, provides information about lessons and student records, assists with the examination process, and answers general questions. An Academic Advisor can help students communicate with instructors, locate helpful resources, and maximize their distance learning experience. Contact the UAF eLearning Student Services staff at 907- 479-3444 or toll free 1-800-277-8060 or contact staff directly – for directory listing see: <http://uaf.edu/usa/student-resources/conduct>.

**UAF Math Lab** is a no-cost tutoring center based in Chapman 305. Hours will be announced and posted on the door as well as online. The Math Lab provides tutoring on a walk-in basis, private tutoring (you must schedule an appointment), and even online tutoring, which is only available for distance students! If you are able to go to campus, a good way to use the Math Lab is to simply show up and work on your homework. If you have questions you can immediately get help. For more information about the Math Lab and the various services they offer see their webpage at: <http://www.uaf.edu/dms/mathlab/>.

**UAF Help Desk:** Go to <http://www.alaska.edu/oit/> to see about current network outages and news.

Reach the Help Desk at:

- e-mail at [helpdesk@alaska.edu](mailto:helpdesk@alaska.edu)
- fax at (907)-450-8312
- phone in the Fairbanks area is 450-8300 and outside of Fairbanks is 1-800-478-8226

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## **DISABILITIES SERVICES**

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The **UAF Office of Disability Services** operates in conjunction with UAF eLearning. Disability Services, a part of UAF's Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services.

If you believe you are eligible, please visit their web site (<http://www.uaf.edu/disability/>) or contact a student affairs staff person at your nearest local campus. You can also contact Disability Services on the Fairbanks Campus by phone, (907) 474-5655, or by e-mail ([uaf-disabilityservices@alaska.edu](mailto:uaf-disabilityservices@alaska.edu)).

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## COURSE SCHEDULE

The listed due date is for the notes and WebAssign for each lesson. Due dates for WebAssign and Take-Home Quizzes can also be found in WebAssign and Blackboard, respectively. It is up to the students to begin assignments well enough in advance so that they can meet the deadline. Starting the assignments the day they are due is not recommended.

| Module             | Sections  | Due Date                              |
|--------------------|---|---------------------------------------|
| 1.1                | 7.0 – Calculus 1 Review<br>7.1 – Integration by Parts   | Notes: Tues. 8/28<br>WA: Wed. 8/29    |
| 1.2                | 7.2 – Trigonometric Integrals (Part 1)<br>7.2 – Trigonometric Integrals (Part 2)  | Notes: Thurs. 8/30<br>WA: Fri. 8/31   |
| WH 1               | 7.1 to 7.2  | Tuesday, 9/4                          |
| 2.1                | 7.3 – Trigonometric Substitution (Part 1)<br>7.3/7.4– Trigonometric Sub. (Part 2) and Partial Frac. (Part 1)                  | Notes: Wed. 9/5<br>WA: Thurs. 9/6     |
| 2.2                | 7.4 – Partial Fractions (Part 2)<br>7.5 – Strategy for Integration  | Notes: Fri. 9/7<br>WA: Fri. 9/7       |
| WH 2               | 7.3 to 7.5  | Monday, 9/10                          |
| 3.1                | 7.7 – Approximate Integration<br>7.7/7.8 – Approx Int. (Part 2) and Improper Integrals (Part 1)                               | Notes: Tues. 9/11<br>WA: Wed. 9/12    |
| 3.2                | 7.8 – Improper Integrals (Part 2)<br>Chapter 7 Review   | Notes: Thurs. 9/13<br>WA: Fri. 9/14   |
| WH 3               | 7.7 to 7.8  | Monday, 9/17                          |
| Prac. Mid. 1       | Practice Midterm 1  | Tuesday, 9/18                         |
| <b>Midterm # 1</b> | <b>Chapter 7 - Integration</b>  | <b>Wednesday, 9/19</b>                |
| 4                  | 11.1 – Sequences<br>11.2 – Series (Part 1)<br>11.2 – Series (Part 2) – (optional, extra credit)                               | Notes: Fri. 9/21<br>WA: Fri. 9/21     |
| WH 4               | 11.1 to 11.2  | Monday, 9/24                          |
| 5.1                | 11.3 – The Integral Test<br>11.3/11.4 – The Integral Test (Part 2) and Comp. Test (Part 1)                                    | Notes: Tues. 9/25<br>WA: Wed. 9/26    |
| 5.2                | 11.4 – The Comparison Tests (Part 2)<br>11.5 The Alternating Series Test  | Notes: Thurs. 9/27<br>WA: Fri. 9/28   |
| WH 5               | 11.3 to 11.5  | Monday, 10/1                          |
| 6.1                | 11.6 – The Ratio and Root Test (Part 1)<br>11.6 – The Ratio and Root Test (Part 2)  | Notes: Tues. 10/2<br>WA: Wed. 10/3    |
| 6.2                | 11.7 – Strategy for Testing Series<br>11.8 – Power Series   | Notes: Thurs. 10/4<br>WA: Fri. 10/5   |
| WH 6               | 11.6 to 11.8  | Monday, 10/8                          |
| 7.1                | 11.9 – Functions as Power Series (Part 1)<br>11.9 – Functions as Power Series (Part 2)  | Notes: Tues. 10/9<br>WA: Wed. 10/10   |
| 7.2                | 11.10 – Taylor and Maclaurin Series (Part 1)<br>11.10 – Taylor and Maclaurin Series (Part 2)                                  | Notes: Thurs. 10/11<br>WA: Fri. 10/12 |
| WH 7               | 11.9 to 11.10   | Monday, 10/15                         |
| 8.1                | 11.11 – Applications of Taylor and Maclaurin Series (Part 1)<br>11.111 – Applications of Taylor and Maclaurin Series (Part 2) | Notes: Tues. 10/16<br>WA: Wed. 10/17  |
| 8.2                | Chapter 11 Review Part 1 – Sections 11.1 to 11.7<br>Chapter 11 Review Part 2 – Sections 11.8 to 11.11                         | Notes: Thurs. 10/18<br>WA: Fri. 10/19 |
| WH 8               | 11.11   | Monday, 10/22                         |
| Prac. Mid. 2       | Practice Midterm 2  | Tuesday, 10/23                        |
| <b>Midterm # 2</b> | <b>Chapter 11 – Sequences and Series</b>  | <b>Wednesday, 10/24</b>               |
| 9                  | 6.1 - Area Between Curves<br>6.2 – Volumes: The Disc Method (Part 1)<br>6.2 – Volumes: The Disc Method (Part 2)               | Notes: Fri. 10/26<br>WA: Fri. 10/26   |
| WH 9               | 6.1 to 6.2  | Monday, 10/29                         |
| 10.1               | 6.3 – Volumes : The Shell Method (Part 1)<br>6.3 – Volumes : The Shell Method (Part 2)  | Notes: Tues. 10/30<br>WA: Wed. 10/31  |
| 10.2               | 6.4 - Work<br>6.5 – Average Value   | Notes: Thurs. 11/1<br>WA: Fri. 11/2   |
| WH 10              | 6.3 to 6.5 (might include some 6.2)   | Monday, 11/5                          |
| 11.1               | 8.1 – Arc Length<br>8.2 – Area of a Surface of Revolution   | Notes: Tues. 11/6<br>WA: Wed. 11/7    |
| 11.2               | 8.3 – Centroids and Centers of Mass (Part 1)<br>8.3 – Centroids and Centers of Mass (Part 2) (Extra Credit)                   | Notes: Thurs. 11/8<br>WA: Fri. 11/9   |

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|--------------------|--|---------------------------------------|
|                    | Chapter 6 & 8 Review   |                                       |
| WH 11              | 8.1 to 8.3   | Monday, 11/12                         |
| Prac. Mid. 3       | Practice Midterm 3   | Tuesday, 11/13                        |
| <b>Midterm # 3</b> | <b>Chapters 6 &amp; 8 – Applications of Integration</b>                                  | <b>Thursday, 11/15</b>                |
| 12                 | 10.1 – Parametric Curves<br>10.2 – Calculus with Parametric Curves                       | Notes: Mon. 11/19<br>WA: Tues. 11/20  |
| WH 12              | 10.1 to 10.2   | Monday, 11/26                         |
| 13.1               | 10.3 – Polar Coordinates (Part 1)<br>10.3 – Polar Coordinates (Part 2)                   | Notes: Tues. 11/27<br>WA: Wed. 11/28  |
| 13.2               | 10.4 – Calculus with Polar Curves (Part 1)<br>10.4 – Calculus with Polar Curves (Part 2) | Notes: Thurs. 11/29<br>WA: Fri. 11/30 |
| WH 13              | 10.3 to 10.4   | Monday, 12/3                          |
| 14.1               | Chapter 7 Final Review<br>Chapter 10 Final Review  | Notes: Tues. 12/4<br>WA: Wed. 12/5    |
| 14.2               | Chapter 11 Final Review (2 parts)<br>Chapter 6 & 8 Final Review                          | Notes: Thurs. 12/6<br>WA: Fri. 12/7   |
| Prac. Final        | Practice Final   | Monday, 12/10                         |
| <b>Final</b>       | <b>Chapters 6-8 and 10-11</b>  | <b>Tuesday, 12/11</b>                 |