

Math 5B: Math Analysis II, Spring 2013

Instructor: Walid Tayar

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Office Hours: MWF 11:00-11:50am in FEM 1K or by appointment

Phone: 559-638-3641 ext. 3263

Schedule #: 51824 MTWF 12:00pm-12:50pm in room CCI 206

Prerequisites:

Subject Prerequisites: Math 5A or equivalent.

Basic skills advisories: Eligibility for Engl 125 and Engl 126

Required text:

Howard Anton. *Calculus, Early Transcendentals, Single Variable, 10th Edition.*

The Student Solutions Manual (Optional) can be purchased at the bookstore.

Catalog Description:

This class investigates the applications of integration, many techniques of integration, improper integrals, parametric equations, polar coordinates and functions. Further study involves conic sections, exponential growth/decay models, infinite series including Maclaurin and Taylor Series.

Course Materials:

- Calculator (Scientific non-graphing and TI-83 or 84 (I will discuss this in class)
- Notebook paper (no spiral bound will be accepted for HW)
- Graphing paper
- 3-ring binder (for class notes)
- Ruler
- Pencils and Eraser
- Stapler (try the dollar store)

Blackboard:

This course will utilize blackboard for announcements, handouts, assignments, etc. You can access blackboard from the Reedley College homepage or at <http://blackboard.reedleycollege.edu>. Your login and password to blackboard is as follows:

Login ID: "your student ID#"

Password: "your student ID#"

Homework:

HW will be assigned after each lecture and will be collected the following class session. Your homework will be graded on completeness, neatness, and effort. Problems must be written out in pencil and all work must be shown in order to receive credit. I will not accept HW on spiral bound notebook paper. Please staple your HW in the top left corner and clearly highlight the section number at the top of each page or it will not be accepted. I will not provide a stapler, this will be your responsibility). If you come to class after the HW has been collected or are absent it will not be accepted for full credit. All late HW must be turned in by the following class meeting for half credit. If you are absent, you are still

responsible for any HW assignments. It is your responsibility to keep up with the pace of the class.

Attendance:

If you are absent more than once in the first two weeks of the semester, more than twice in the first four weeks or more than 3 times in the first nine weeks, you may be dropped from the course. Attendance is a key factor in your success as a college student. Students are expected to attend all class meetings, be on time, and be in class the entire class session. 5 absences over the course of the entire semester may result in a drop from the course. However, if you decide to drop the course, it is your responsibility to make the drop official in the Admissions and Records office or else possibly receive an F in the course. Also, there are to be no visitors in class for any reason. Pagers, cell-phones, CD/DVD/MP3 players, and any other electronic device must be turned off, silenced, and out of sight before entering class. You will be asked to leave if your phone rings in class. Also, cell phones are NOT to be used as calculators. NO EXCUSES!!

Tardies:

It is distracting, rude and unfair to classmates and to the instructor when a student is late. Leaving class at anytime during the lecture will not be allowed. Please use the restroom/make phone calls before or after class. If you leave class at any time, it will count as a tardy. Two tardies will be counted as an absence. You are responsible for telling me, at the end of class, that you were tardy. If I mark you absent and you do not tell me of your tardy, you will remain absent. If you leave class early, you will be marked absent. Students with chronic tardiness may be dropped from the course.

In-Class Assignments:

There will be quizzes, in-class assignments and possibly group projects assigned throughout the semester. No in class assignments can be made up so attendance is very important. These assignments will be included as part of your HW grade.

Exams:

There will be an exam at the end of each unit, approximately every 2-4 weeks. Each exam will be worth 100 points each. There are no make-ups for missed tests. No exceptions. Calling the day of the exam and telling me that you cannot make it to class is inexcusable. All tests will be taken using pencil. A final exam worth 100 points will be given at the end of the semester during finals week.

Grading:

- Chapter Exams and the Final will be worth 80% of your overall grade. At the end of the semester, your lowest exam score will be replaced by your score on the final.
- Homework will be worth 20% of your overall grade.

<u>Percent</u>	<u>Grade</u>
90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

Lecture Outline:

Applications of the Definite Integral

1. Area between two curves
2. Volumes by disk and washer methods
3. Volumes by shell method
4. Length of a plane curve
5. Work, Pressure and Force
6. Hyperbolic Functions

Techniques of Integral Evaluation

1. Integration by parts
2. Trigonometric Integrals
3. Trigonometric substitution
4. Partial fractions
5. Using tables of integrals
6. Simpson's Rule
7. Improper Integrals

Analytic Geometry

1. Parametric equations
2. Polar coordinates and equations
3. Parabolas
4. Ellipses
5. Hyperbolas
6. Differentiation/Integration of parametric curves

Exponential Growth and Decay Applications

1. Exponential functions
2. Modeling physical phenomena with differential equations

Infinite Series

1. Sequences
2. Infinite Series
3. Convergence Tests
4. Taylor and Maclaurin Series
5. Comparison, Ratio and Root Tests
6. Alternating series and conditional convergence
7. Power Series
8. Differentiation/Integration of power series.
9. Convergence of Taylor Series

Important Dates:

January 7 (M) Spring 2013 instruction begins

January 21 (M) Martin Luther King, Jr. Day observed (no classes held, campus closed)

January 25 (F) Last day to add a full-term fall class for Spring 2013

January 25 (F) Last day to drop a full-term class to avoid a "W" (in person) for Spring 2013

January 27 (Su) Last day to drop a full-term class to avoid a "W" (on WebAdvisor) for Spring 2013

January 28 (F) Last day to change a class to/from a Pass/No-Pass grading basis

February 15 (F) Lincoln Day observed (no classes held, campus closed)

February 18 (M) Washington Day observed (no classes held, campus closed)

March 8 (F) Last day to drop a full-term class (in person) (letter grades assigned after this date)

March 10 (Su) Last day to drop a full-term class (on WebAdvisor - must not have any holds) (letter

grades assigned after this date)

March 11 (W) Summer/Fall 2013 registration begins for continuing students (all locations by date)

March 25-29 (M-F) Spring Recess (no classes, campus open, classes reconvene April 1)

March 29 (F) Spring holiday observed (no classes, campus closed)

May 13-17 (M-F) Spring 2013 final exams week

May 17 (F) End of spring semester/commencement

Special Needs Requests:

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights.

Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

Note: This syllabus is subject to change at the discretion of the instructor.