Kenny Fister
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Office Hours: MWF 10:30am-11:30am, MW 1:30-2:30pm and others by appointment

Department: Mathematics and Statistics
Course Prefix: MAT **Course Number:** 330-1 (CRN# 11714) **Credit Hours:** 3
Time: MWF 11:30am-12:20pm **Location:** Faculty Hall 307

I. Title: Technical Math III

II. Catalog Description and Prerequisites: Continuation of MAT 230. Includes differentiation and integration of transcendental functions, series expansions of functions, and differential equations.
Prerequisites: MAT 230.

III. Course Objectives: Students should understand how to
A. Solve a problem using a four-step process (Understanding the problem, Devising a logical plan, Carrying out the plan, and Interpreting the result)
B. Be competent in solving problems from a variety of disciplines by using techniques of integration, differentiation, and differential equations;
C. Have an appreciation for oral and written communication to explain scientific and engineering problems in mathematical terms;
D. Gain an appreciation for the history of mathematics.

IV. Content Outline: We will discuss portions of chapters 27-31 from the assigned book.
The topics covered will be
A. Differentiation of Transcendental Functions (logarithmic, exponential, and trigonometric functions),
B. Integration of Transcendental Functions,
C. Various Integration Techniques (integration by parts, trigonometric integrals, trigonometric substitutions, and integration tables),
D. Solving First Order Ordinary Differential Equations (exact equations, equations with separable variables, homogeneous equations, linear equations
E. Solving Higher Order Differential Equations (homogeneous equations, non-homogeneous equations, and using Laplace Transforms)

V. Instructional Activities: The first part of most classes will be spent going over questions from the homework assigned in the previous class. The next part of class will be spent lecturing over any new material. On occasion time will be given for the class to work in groups on problems.

VI. Field, Clinical, and/or Laboratory Experiences: None.

VII. Text(s) and Resources:
Basic Technical Mathematics with Calculus, 9th ed, by Allyn J. Washington.
Occasional handouts may be provided.
A graphing calculator is required for portions of this course and will be necessary for exams. Acceptable models include any TI-82, TI-83, TI-84, TI-85, and TI-86. The TI-80, TI-81, TI-89, and TI-92 are not allowed.

VIII. Evaluation and Grading Procedures:
The final grade will be determined by adding together attendance bonus points, class points (group work, homework, and any projects) worth 100 points, three test grades each worth 100 points, and the final exam worth 100 points. This total is the final semester points. The final grade is then determined by dividing the semester points by 5.

Grading Scale: A = 90 or above, B = 80-89, C = 70-79, D = 60-69, and E = 59 or below.

Class Points:
- Homework assignments will be done online at www.mathxl.com . Homework will count 50% of the Class Points. Some might be occasionally assigned from other sources.

- Throughout the semester Group Work will be assigned to be done in class. Group Works will count 50% of the Class Points. Typically, there is no makeup for Group Works. At least 10% of the total Group Work points will be dropped when figuring the Group Work Grade to take into account missing for legitimate excuses.

- An absence will count as 2 missed class points.

- EXAMPLE: At the end of the semester a student has a total of 95 out of 120 from homework, 110 out of 130 from group work, and 3 absences. The student's class points will be calculated as $100\left[.5\left(\frac{95}{120}\right)+.5\left(\frac{110}{130+3(2)-.1(130)}\right)\right]=84.3$.

Tests: There will be 3 tests each worth 100 points. They are tentatively scheduled for **February 11, March 8, and April 10.** If a test is missed for a reasonable excuse, it is the student's responsibility to contact the instructor **within 1 day** of the exam. Otherwise, the test grade will be 0. If arrangements for a makeup cannot be made in a timely fashion the final will count as the test grade in addition to counting as the final.

Final: The final exam is part **cumulative** and part material since the third test. It will be from **10:30 am to 12:30 pm** on **Tuesday, May 7**.

Grade Change Option: A student has the option to replace their lowest test grade with the average of the original test grade and the final. This will only be applied if it helps the grade.

Auditing: The student MUST have the permission and signature of the instructor to audit or change to audit the course. An auditor MUST continue to do all the graded assignments, to attend classes regularly after the audit is given, to miss no more than 5 class periods after the audit is given, and to maintain at least a 40% average in the course. If these requirements are not followed, then an "E" will be earned for this course.

Tutoring: Come and see me!

IX. Attendance Policy:

Students are expected to adhere to the MSU Attendance Policy outlined in the current MSU Bulletins. Attendance is a vital part of instruction especially for a Math course. Attendance will be figured into the grade in two ways. First, absences count as 2 missed class points. In addition, 10 bonus points will be added to the final semester points if a student misses 3 or fewer days. 5 bonus points will be added if a student misses 4 or 5 days. Habitual tardiness also counts as an absence. If a student is late, it is the responsibility of the student to contact the instructor at the end of class.

X. Academic Honesty:

Murray State University takes seriously its moral and educational obligation to maintain high standards of academic honesty and ethical behavior. Instructors are expected to evaluate students' academic achievements accurately, as well as ascertain that work submitted by students is authentic and the result of their own efforts, and consistent with established academic standards. Students are obligated to respect and abide by the basic standards of personal and professional integrity.

Violations of Academic Honesty include:

Cheating - Intentionally using or attempting to use unauthorized information such as books, notes, study aids, or other electronic, online, or digital devices in any academic exercise; as well as unauthorized communication of information by any means to or from others during any academic exercise.

Fabrication and Falsification - Intentional alteration or invention of any information or citation in an academic exercise. Falsification involves changing information whereas fabrication involves inventing or counterfeiting information.

Multiple Submission - The submission of substantial portions of the same academic work, including oral reports, for credit more than once without authorization from the instructor.

Plagiarism - Intentionally or knowingly representing the words, ideas, creative work, or data of someone else as one's own in any academic exercise, without due and proper acknowledgement.

Instructors should outline their expectations that may go beyond the scope of this policy at the beginning of each course and identify such expectations and restrictions in the course syllabus. When an instructor receives evidence, either directly or indirectly, of academic dishonesty, he or she should investigate the instance. The faculty member should then take appropriate disciplinary action.

Disciplinary action may include, but is not limited to the following:

1) Requiring the student(s) to repeat the exercise or do additional related exercise(s).
2) Lowering the grade or failing the student(s) on the particular exercise(s) involved.
3) Lowering the grade or failing the student(s) in the course.
If the disciplinary action results in the awarding of a grade of E in the course, the student(s) may not drop the course.

Faculty reserve the right to invalidate any exercise or other evaluative measures if substantial evidence exists that the integrity of the exercise has been compromised. Faculty also reserve the right to document in the course syllabi further academic honesty policy elements related to the individual disciplines.

A student may appeal the decision of the faculty member with the department chair in writing within five working days. Note: If, at any point in this process, the student alleges that actions have taken place that may be in violation of the Murray State University Non-Discrimination Statement, this process must be suspended and the matter be directed to the Office of Equal Opportunity. Any appeal will be forwarded to the appropriate university committee as determined by the Provost.

Note: Faculty reserve the right to invalidate any examination or other evaluative measures if substantial evidence exists that the integrity of the examination has been compromised.

XI. Non-Discrimination Statement:
Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or the provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact the Director of Equal Opportunity, 103 Wells Hall, (270) 809-3155 (voice), (270) 809-3361 (TDD).

XII. Other required departmental or collegiate committee information: none

MathXL®

How to Register and Enroll in Your Course

Welcome to MathXL! Your instructor has set up a MathXL course for you.

The course name is: Math 330 Spring 2013

It is based on this textbook: *Washington: Basic Technical Mathematics with Calculus, 9e*

To join this course, you need to register for MathXL and then enroll in the course.

1. Registering for MathXL

Before you begin, make sure you have the access code that comes with your MathXL Access Kit.

To register or buy access, go to www.mathxl.com, click the **Student** button in the Register section, and then follow the instructions on the screen.

2. Enrolling in your instructor's course

After registering, log in to MathXL with your username and password. To enroll in this course, enter the following Course ID:

The Course ID for your course is: `XL14-U1O9-001Y-5J92`

Need more help?

To view a complete set of instructions on registering and enrolling, go to www.mathxl.com and visit the Tours page.