Office: 213B Elliott Hall. Email: hiseri@mansfield.edu. Web page: http://faculty.mansfield.edu/hiseri.
Phone: 662-4701 (I like email messages a lot more than phone messages).
Office Hours: 10:30-11:20 MWF and 12:30-1:20 TTh.

Text: (Optional): Calculus, Larson and Edwards (any edition). You will probably use the current edition if you take Calculus III from another instructor next semester. It is very likely that you won’t need it this semester, since we’ll be using my Lecture Notes.

Attendance: The University’s attendance policy is stated below. I will accept a statement from you as documentation, and I will generally use the final exam as a make-up exam for missed tests. I will track attendance with the quizzes and labs, and I will accept late assignments within a reasonable time (basically, before the associated exam).

Catalog Description: This is a continuation of MA 2231, and is intended to develop a good understanding of the definite integral and its uses including calculating area and applying numerical computation and estimation techniques, and to develop basic integration techniques. Differential equations, Taylor polynomials, series, exponential functions, logarithmic functions, and polar coordinates, and analytic geometry are also covered. Prerequisite: MA 2231 or equivalent.

Calculator: You will want to have a calculator for this class. A $10-$15 scientific calculator should be sufficient, although math majors may prefer a graphing calculator.

Assignments:
10% total: Homework, quizzes, and labs.
22% each: Three Tests (Wednesdays, Feb 10th, Mar 2nd, and Mar 6th).
24%: Final Exam (Tuesday, Dec 13th at 10:45).

Letter Grades: I will assign letter grades based on the following percentages. An A is 93% or better. An A- is 90% or better. A B+ is 87% or better. A B is 83% or better. A B- is 80% or better, A C+ is 77% or better, A C is 73% or better, A C- is 70% or better, A D+ is 67% or better, A D is 63% or better, and a D- is 60% or better. Anything below 60% is an F.

Material to be covered: See Course Calendar. (http://faculty.mansfield.edu/hiseri/MA2232/MA2232.htm)

Course Objectives:
1. Define standard integral objects. (Math Out 1)
2. Develop integration techniques. (Math Out 1 and 2)
3. Develop numerical integration techniques. (Math Out 1, 2, 3, and 4)
4. Explore various applications of the integral. (Math Out 1, 3, and 4)
5. Define sequences, infinite series, and convergence. (Math Out 1, 2, 3, and 4)
6. Explore methods of determining convergence and evaluating limits of sequences and series. (Math Out 1, 2, 3, and 4)

Student Learning Outcomes: Students will be able to:
1. Cite basic definitions. (Course Obj 1)
2. Solve definite and indefinite integrals using substitution, integration by parts, and tables. (Course Obj 2)
3. Use Maple to approximate definite integrals using techniques mentioned above. (Course Obj 1, 2, 3, 4, 5, and 6)
4. Solve application problems. (Course Obj 2, 3, and 4)
5. Determine convergence of sequences and series. (Course Obj 5 and 6)
6. Determine the limit of a sequence or series for standard special types (such as geometric series). (Course Obj 5 and 6)

BS Mathematics Program Outcomes:
1. Common Mathematics Content Knowledge: Students will gain an understanding and awareness of the key concepts found in the standard subject areas of
1-1. calculus
1-2. logic
1-3. set theory
1-4. linear algebra
1-5. probability and statistics
1-6. history of mathematics

2. Proof and Justification: Students will develop the skills necessary to formulate and understand proofs and to provide justification.

3. Abstract Reasoning: Students will develop the ability to reason abstractly and rigorously.

4. Technology: Students will develop skills necessary to use technology in doing and learning mathematics.

5. **Applied Mathematics Concentration**: Content Knowledge: Students will gain an understanding and awareness of the key concepts found in the application of the subject areas of
   5-1. differential equations
   5-2. numerical analysis
   5-3. operations research.

6. **Pure Mathematics Concentration**: Content Knowledge: Students will gain an understanding and awareness of the key concepts found in the subject areas of
   6-1. geometry
   6-2. abstract algebra
   6-3. real analysis.

Course Outcomes meet BS Math Program Outcomes as shown below.

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**Mansfield University Attendance Policy**
Regular and punctual class attendance is expected. Documented excuses because of illness, serious mitigating circumstances, or official university representation will be accepted by all faculty members and will permit students to make up missed tests and/or graded assignments in a reasonable manner at a time agreeable to instructor and student. Students must provide documentation before absences can be excused. All instructors are expected to make their class participation and attendance policies clear in the course syllabi.

**Students Requesting Academic and/or Access Accommodations**
Students with documented learning disabilities, physical challenges, or other significant medical conditions that may affect their learning in this course should meet with the Services for Students with Disabilities (SSD) Coordinator in the SSD Office located in the Department of Academic and Human Development (144 South Hall, Phone: 662-4436) as soon as possible. It is recommended that students contact the SSD Coordinator during the first two weeks of classes in order to ensure accommodations are met in an
efficient, appropriate, and timely manner for the best student learning outcome. The Coordinator will arrange to provide your professors with a suitable letter so that we may serve your particular needs more effectively. If you have a disability that requires classroom or testing accommodations, the Coordinator will also clarify appropriate arrangements.

**Academic Integrity**
The integrity of all scholarly work is at the foundation of an academic community. Students are expected to do their own academic work. Dishonesty in academic work, including cheating, academic misconduct, fabrication, or plagiarism, is unacceptable. Faculty are expected to instruct students in ways of avoiding these forms of academic dishonesty. Faculty are also responsible for assessing and reporting all charges of academic dishonesty to the Office of the Provost. MU’s Academic Integrity Policy and the Academic Dishonesty Form are available on the Academic Affairs website under “Faculty Resources.”

**Copyright**
The University fully supports the Copyright Laws of the United States. Respect for intellectual labor and creativity is vital to academic discourse and enterprise. This principle applies to any original work in any tangible medium of expression. Images displayable on computer screens, computer software, music, books, magazines, journals, photographs, and articles are among items subject to copyright. A work need not be explicitly labeled with a copyright notice to be afforded copyright protection. For more information on Copyright please consult the Mansfield University Copyright Information website: http://mansfield.libguides.com/copyright.

**Student Consumer Rights and Responsibilities**
The Higher Education Opportunity Act (Public Law 110-315) (HEOA) was enacted on August 14, 2008, and reauthorizes the Higher Education Act of 1965, as amended. The HEOA (2008) requires colleges and universities to provide students with information necessary to make informed decisions concerning their educational experiences. Mansfield University strives to serve its students fairly and equitably. The following MU website provides an inclusive list by topic of student consumer rights and responsibilities: http://mansfield.edu/HEA/.

**Title IX and Protection of Minors Legislation: Reporting Obligations**
Mansfield University and its faculty are committed to assuring a safe and productive educational environment for all students. **Title IX Requirements:** In order to meet this commitment and to comply with Title IX of the Educational Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University’s Title IX Coordinator. The only exceptions to the faculty member’s reporting obligation under Title IX are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Dia Carleton (dcarleton@mansfield.edu) serves as Mansfield University’s Title IX Coordinator. Additional Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: http://www.mansfield.edu/hr/title-ix/upload/Title-IX-Policy-FINAL-6-2-15.pdf (Sexual Discrimination and Misconduct Policy); http://www.mansfield.edu/hr/title-ix/upload/Title-IX-Resources.pdf (Title IX Resources), and http://www.mansfield.edu/hr/title-ix/upload/Sexual-Misconduct-Victims-Bill-of-Rights.pdf (Sexual Misconduct Victims’ Bill of Rights). **Protection of Minors Requirements:** Faculty members are obligated to report sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred, to Dia Carleton (dcarleton@mansfield.edu), as designated in the University’s protection of minors policy. No exceptions apply to this reporting obligation. Mansfield University’s Protection of Minors policy is available at http://www.mansfield.edu/hr/upload/Protection-of-Minors-Policy-12-22-14.pdf.