COURSE TITLE: Calculus for Non-Science Majors                      COURSE NUMBER: MAC 2233

COURSE DESCRIPTION (with prerequisites):
This is a brief calculus course designed primarily for business administration majors and other non-science majors. This course includes: limits, basic techniques of differentiation and integration, word problems with applications to business and economics. A graphing calculator is required. Prerequisite: A “C” grade or higher in MAC 1105 or department consent. A “C” grade or higher must be earned to satisfy part of the general education requirements in mathematics or to advance to a higher mathematics course. 3 semester credit.

NAME(S) OF INSTRUCTORS: Stephanie Ward, Stan Young

EFFECTIVE ACADEMIC YEAR: 2017-2018

REQUIRED TEXTBOOKS AND INSTRUCTIONAL MATERIALS:
Calculus and It’s Applications with My MathLab/My StatLab access code, 11th Edition, Bittinger, Pearson
ISBN: 9780133795561]

A graphing calculator is required for this course. The instructor will be using a Texas Instrument, model 83 or 84 for class demonstrations.

GRADING POLICY:
The standing of a student in each course is expressed by one of the following letters and corresponding grading system:
A – 90 – 100
B – 80 – 89
C – 70 – 79
D – 60 – 69
F – 59 or less
The Chipola Catalog provides policies and procedures regarding the grading system. A student’s Grade Point Average is derived from the grading system/quality point scale.

ATTENDANCE AND WITHDRAWAL POLICIES:
Chipola College expects regular attendance of all students, and all instructors record attendance daily. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due
to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor. Chipola policy allows each instructor to specify in the Instructor First Day Handout whether or not an absence is excusable and what affect the absence or tardy may have on the grade.

A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction (unless waived by Student Services), (2) cannot withdraw, and (3) must receive a grade.**

**MAKE-UP POLICY:**
Chipola allows each instructor to specify in the Instructor First Day Handout the makeup policy.

**ACADEMIC HONOR CODE POLICY:**
Students are expected to uphold the Academic Honor Code. Chipola College’s Honor Code is based on the premise that each student has the responsibility to (1) uphold the highest standards of academic honesty in his/her own work; (2) refuse to tolerate academic dishonesty in the college community; and (3) foster a high sense of honor and social responsibility on the part of students. Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

**STUDENTS WITH DISABILITIES POLICY:**
Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola’s goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment. Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.

**NOTICE OF EQUAL ACCESS/EQUAL OPPORTUNITY AND NONDISCRIMINATION:**
Chipola College does not discriminate against any persons, employees, students, applicants or others affiliated with the college with regard to race, color, religion, ethnicity, national origin, age, veteran’s status, disability, gender, genetic information, marital status, pregnancy or any other protected class under applicable federal and state laws, in any college program, activity or employment.

Karan Davis, Associate Vice President of Human Resources, Equity Officer and Title IX Coordinator, 3094 Indian Circle, Marianna, FL 32446, Building A, Room 183A, 850-718-2205, davisk@chipola.edu.

**LIBRARY AND ON-LINE REFERENCE MATERIALS:**
The library is a comprehensive learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. On-line catalogs, e-books and electronic databases can be accessed by using the LINCCWeb icon on the Chipola Library website at [www.chipola.edu/library](http://www.chipola.edu/library). If you have questions about database usage consult the “How to Use the Chipola Databases” on
the Library website or call the Library at 850/718-2274 during regular hours. Library hours are posted each semester at the building entrance and on the Library website. See your Instructor First Day Handout for individual instructor recommendations and resources.

**TECHNOLOGY RESOURCES:**
The college’s learning management system is Canvas. Classes become available on Canvas on the first day of the semester. It is the student’s responsibility to log onto the Canvas system the first day of class to establish the first day of attendance and to check announcements. All official class communication must be through Canvas. For further information, contact your instructor or the Director of eLearning. The Canvas support hotline is available online in live chat and on the phone, toll-free, at 855-308-2812 for any issues in accessing or utilizing Canvas. The Technology Center, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance and on the Library website.

**FREE TUTORING RESOURCES:**
The Academic Center for Excellence (ACE) Lab, located in Building L, offers free tutoring from 8 a.m. to 5 p.m. and is equipped with computer workstations. ACE lab hours are posted each semester at the room entrance and on the website. Additionally, Chipola College has contracted Smarthinking, a Pearson Company, for online tutoring services, accessible especially from 5 p.m. to 8 a.m. and weekends. Smarthinking can be accessed through Canvas.

**ELECTRONIC DEVICE USAGE STATEMENT:**
Classrooms should be free of all unnecessary distractions from the task of learning. Therefore, as a general rule, students should silence and avoid use of all electronic devices (laptops, phones, tablets, etc.) not being used for coursework. Consult first-day handouts for any specific policies related to the use of electronic devices in the classroom, as they may vary depending upon the nature of the course or the guidelines of the instructor. Faculty reserve the right to regulate the use of electronic devices and their accessories in class.

**DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:**
Demonstrate Basic Mathematical Skills and Knowledge

M-1 Apply arithmetic, algebraic, or geometric skills to solve mathematical problems.

M-2 Represent basic mathematical information verbally, numerically, graphically, or symbolically.

M-3 Use technology to solve mathematical problems.

M-4 Interpret mathematical models such as formulas, graphs, tables and schematics.

M-5 Use mathematical processes in solving real world applications.
LINKING COURSE-LEVEL STUDENT LEARNING OUTCOMES WITH DISCIPLINE-SPECIFIC COMPETENCIES, ASSESSMENT METHODS, AND ARTIFACTS

<table>
<thead>
<tr>
<th>COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR MAC 2233</th>
<th>DISCIPLINE-SPECIFIC GENERAL EDUCATION COMPETENCIES</th>
<th>ASSESSMENT METHODS FOR COURSE LEVEL STUDENT LEARNING OUTCOMES</th>
<th>LEARNING ARTIFACTS FOR AA PROGRAM ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Evaluate functions in numerical, algebraic, and graphical formats sometimes using calculators.</td>
<td>M-1, M-2</td>
<td>UT, CF, H, EX</td>
<td>The student will apply the key concepts of carbon-14 dating and use the exponential model and half-life model in problems to determine the approximate age of fossils</td>
</tr>
<tr>
<td>• Model data with linear, polynomial, exponential, logarithmic, or logistic regression functions using calculators.</td>
<td>M-2, M-4</td>
<td>UT, CF, H</td>
<td></td>
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<tr>
<td>• Determine limits numerically (calculator) and graphically.</td>
<td>M-1, M-2, M-3</td>
<td>UT, CF, H, EX</td>
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<tr>
<td>• Determine the derivative of a function by deriving it numerically and algebraically, and identify it as the slope of the tangent line to a point on the curve of the function.</td>
<td>M-1, M-2, M-3, T-1</td>
<td>UT, CF, H, EX</td>
<td></td>
</tr>
<tr>
<td>• Determine the total change in f(x) from x = a to x = b by applying the fundamental theorem of calculus.</td>
<td>M-1, M-2</td>
<td>UT, CF, H, EX</td>
<td></td>
</tr>
<tr>
<td>• Determine the average rate of change of functions that represent business and other real world applications</td>
<td>M-1, M-2, M-3, M-4, M-5, T-1</td>
<td>UT, CF, H, EX</td>
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**Assessment Codes**

- T = Tests
- Pre/Post = Pre- and Post-Tests
- OT = Objective Tests
- UT = Unit Tests
- Q = Quizzes
- F = Final Examination
- CF = Cumulative Final
- EX = Departmental Exam
- SE = Nat'l or State Standardized Exam
- RPT = Report/Presentation
- SP = Skills Performance
- SD = Skills Demonstration
- W = Writing Assignments
- E = Essays
- DE = Documented Essays
- RP = Research papers
- J = Jury
- R = Recital
- Proj. = Projects
- Exp. = Experiments
- Cap. Proj. = Capstone Project
- Cap. Course = Capstone Course
- Prac. = Practicum
- Intern. = Internship
- H = Homework
- PS = Problem Solving
- DB = Discussion Board
- BO = Behavioral Observation
- Clin. = Clinicals
- CS = Case Study
- CP = Case Plan
- Port. = Portfolio
- Obs. = Teacher Observation
- Sk. Check = Skills Check-off
- Curriculum Frameworks
- JP = Judged
- Performance/Exhibition

MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:

Teacher Facilitated: The teacher will be leading class discussions on the material contained in the text during each class period.
Student-Centered: The students will be solving problems during each class period using their own graphing calculators.

Office Hours: The instructor will be available during office hours for individual assistance. The instructor’s schedule can be found posted on their office door and/or via their individual web site.

ACE Tutors: Student tutors are available to provide individualized help. Hours can be found posted each semester on the lab door and/or via the web site.

**ASSIGNMENT AND/OR COURSE OUTLINE**

See your Instructor First Day Handout for individual instructor assignment schedule.