**Pittsburg State University**

**MATH 150 – Calculus I**

**Semester, Year and Instructor Name**

**Office Hours**

**Course Syllabus**

Course delivery method: Lecture, discussion, and problem-solving

# PSU CATALOG COURSE DESCRIPTION

The topics studied include fundamental concepts of functions, limits, derivatives and integrals. Applications of these concepts to science, business and technology will also be studied.

# PREREQUISITES

MATH 122 Plane Trigonometry and a grade of C or higher in MATH College Algebra with Review or MATH 113 College Algebra or MATH 126 Pre-Calculus or permission of instructor.

# TEXTBOOK OR OTHER STUDENT PROVIDED MATERIALS

Calculus (Thirteenth Edition), Thomas, Weir, Hass and Heil, Pearson, 2014 (ebook is included in

MyMathLab) Access to MyLab and Mastering (MyMathLab) through Canvas. Scientific or graphing calculator is recommended.

# COURSE OBJECTIVES/LEARNING OUTCOMES

Upon completion of this course, the student should be able to:

* Use numbers, operations, variables, algebraic manipulations and functions in the representation and solution of problems
* Define the concepts of derivative and integral (graphically, algebraically and numerically)
* Understand the concepts of function, limit and continuity (graphically, algebraically and numerically)
* Manipulate trigonometric expressions, identities and graphs
* Perform derivative and integral (symbolic and numerical) computations on elementary functions
* Use calculus concepts to create and analyze graphs of functions
* Utilize appropriate technology in solving calculus problems
* Solve application problems involving elementary and trigonometric functions of one variable using a variety of strategies

**Pitt State Pathways:**

**Quantitative/Analytic Methods:** Quantitative literacy and its methods refer to competency in working with numerical data. Students with strong quantitative skills possess the ability to reason and solve problems from a wide array of contexts and everyday life situations. They can create sophisticated arguments supported by objective evidence and can communicate those arguments in a variety of formats (e.g. text, tables, graphs, mathematical equations, etc.) as appropriate. Competency in this element means:

* *Applying* a set of formal tools to interpret, represent, calculate, and analyze quantitative data;
* *Explaining* assumptions and rationale for selecting a mathematical approach to solve a problem;
* *Explaining* assumptions and rationale for selecting a mathematical or formal logical approach to solve a problem;
* *Drawing* and *communicating* conclusions to support decisions

**Assessment:** As a Milestone I PSP course, the student is expected to:

* Apply tools of analysis and communicate results

# TEACHING METHODS

Lecture, class discussion, assignments, quizzes, and exams will be used. Canvas and MyLab and Mastering will be used.

# CLASS ATTENDANCE POLICY

* Class attendance is the responsibility of each student. Students are expected to attend class and check class materials on Canvas and Canvas, MyLab and Mastering regularly.
* Students with excessive absences could be dropped from class with a grade of “W.” Please be aware of the deadlines to drop a class.
* Students who have school-sponsored activities that will conflict with the class should let the instructor know prior to the activity.

# CLASSROOM CONDUCT POLICY

It is expected that the student will maintain behavior appropriate for a collegiate learning environment.

# METHODS OF EVALUATION

There will be online assignments based on the etext and lectures. There will be quizzes. There will be exams throughout the semester plus a comprehensive final exam. The final exam will include questions to assess your ability to apply tools of analysis and communicate results. The exams will be based on the text, lectures and assignments. Your grade will be calculated by dividing the total points you have accumulated from assignments, quizzes and exams by the total points possible, and using the following scale.

A: 90%-100% B: 80%-89% C: 70%-79% D: 60%-69% F: below 60%

# BASIC SKILLS EXAM

To receive credit in this course you MUST score at least 10 out of 11 correct on a basic skills examination. The basic skills tested are required for success in the mathematics courses for which this course is a prerequisite. The basic skills exam is scheduled for October 10. You may retake different versions of the test until you pass the exam. If you have not passed the exam by November 5, you must either drop the course or else receive a failing grade for the course.

The purposes of this test include: to motivate mastery of basic pencil and paper skills and to validate a high degree of accuracy in performing basic algebra/trigonometry/calculus skills.

# SYLLABUS SUPPLEMENT

For a list of important dates, policies, and other information, please consult the PSU Syllabus Supplement.

<https://www.pittstate.edu/registrar/_files/documents/syllabus-supplement-fall-2018>

# ASSISTANCE

Please inform the instructor if you have a handicap or a disability about which the instructor needs to know.

**THE INSTRUCTOR RESERVES THE RIGHT TO AMEND AND TO REORGANIZE THIS SYLLABUS AT ANY TIME.**