**Marshall University**

**MTH 140**

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| **Course Title/Number** | MTH 140 (CRN: 4137) Section 201 *Applied Calculus* |
| **Semester/Year** | Spring 2015 |
| **Days/Time** | MWF 8:00—8:50 am |
| **Location** | SH 518 |
| **Instructor** | Rob-Roy Mace |
| **Office** | SH 743E |
| **Phone** | 304.696.7040 |
| **E-Mail** | [mace22@marshall.edu](mailto:mace22@marshall.edu) |
| **Office Hours** | **MWF 9:00—10:00 am, TTr 11—Noon**, and **OTHERS BY APPOINTMENT** |
| **University Policies** | By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to [www.marshall.edu/academic-affairs/policies/](http://www.marshall.edu/academic-affairs/policies/). Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment |

**Course Description**

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| A brief survey of calculus including both differentiation and integration with applications. 3 hours. |

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| **Course student learning outcomes** | **How students will practice each outcome in this course** | **How student achievement of each outcome will be assessed in this course** |
| Students will be able to identify and use functions appropriately. | Homework, quizzes, and classwork | Exams |
| Students will describe the main ideas of Calculus: derivative and integral. | Homework, quizzes, and classwork | Exams |
| Students will compute derivatives and integrals given a table, graph, or equation. | Homework, quizzes, and classwork | Exams |
| Students will use derivatives and integrals to solve real world problems and interpret the results. | Homework, quizzes, and classwork | Exams |
| Students will explain how exponential and logarithmic functions are used in growth and decay models. | Homework, quizzes, and classwork | Exams |

**Required Texts and Other Materials**

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| **Textbook:** *Applied Calculus* by Larson  **Calculator:**  A graphing calculator (such as a TI-84) is recommended but not required.  **Internet Access:** Online homework will be completed through WeBWork, which is accessed through an internet browser.  **Folder/Notebook:** Students’ solutions to various problems from the textbook will be collected. These should be kept in a folder or notebook (along with any notes taken from readings or lectures) as preparation for exams. |

**Course Requirements/Due Dates**

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| **Homework:** Students are expected to **spend a minimum of 75 minutes/day reading the textbook and completing various assignments**—this includes handwritten/typed solutions to textbook problems and online assignments through WeBWork. Late assignments are not accepted without a University Excused Absence.  **Quizzes:** A short “half-sheet” **quiz should be expected every class meeting**. These are low-stakes writings, typically given full credit if completed.  **Classwork:** There will be sporadic opportunities to work in groups and present solutions to other classmates. If a University Excused Absence results in a student missing any of these, it is the student’s responsibility to schedule a make up during office hours within one week of absence.  **Exams:** There will be 3 in-class exams during the semester and a comprehensive final exam. Make-up exams are given only in the even of a University Excused Absence.  *Tentative* exam dates are as follows:   * Exam 1: February 16 * Exam 2: March 6 * Exam 3: April 10 * **FINAL**: Monday May 4, 8:00-10:00 am. |

**Grading Policy**

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| Students’ final course grade will be calculated as follows:  **Homework:** 10%  **Quizzes:** 10%  **WeBWork:** 15%  **In-Class Exams:** 45% (15% per exam)  **Final Exam:** 20% | |  |  | | --- | --- | | 90%--100% | **A** | | 80%--89% | **B** | | 70%--79% | **C** | | 60%--69% | **D** | | < 60% | **F** | |

**Attendance Policy**

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| Attendance **is required**. Unexcused absences from **six** classes will result in a reduction of one letter grade for the semester; unexcused absences from  **twelve or more** classes will result in an F. Y**ou will not be allowed to take quizzes or exams, turn in homework, etc. unless you are in class**. If an excused absence results in missing quiz/exam/hw, then a make-up date (*within one week of absence*) must be scheduled with course instructor. Excessive use of cell phone or sleeping during class will be counted as an unexcused absence. Consult your handbook regarding university excused absences. |

**Course Schedule**

**Week 1:** 1.1, 1.2, 1.3

**Week 2:** 1.4, 1.5, 1.6

**Week 3:** 2.1, 2.2

**Week 4:** 2.3, Review, Exam 1

**Week 5:** 2.4, 2.5,

**Week 6:** 2.6, 3.1

**Week 7:** 3.2, 3.3, 3.4

**Week 8:** 3.7, Review, Exam 2

**Week 9:** 4.1, 4.2

**Week 10:** 4.3, 4.4

**Week 11:** 4.5, 4.6

**Week 12:** Logistic Growth, Review, Exam 3

**Week 13:** 6.1, 6.4

**Week 14:** Applications

**Week 15:** Review

FINAL EXAM: Monday, May 4th, 8:00—10:00 am.