**Marshall University**

**MTH 121B Syllabus**

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| Course Title/Number | **Concepts and Applications of Mathematics with Algebra Review (CT)/MTH 121B** |
| Semester/Year | Fall/2017 |
| Section/CRN | 112/3107  114/3109 |
| Days/Time | MTWR/2:00 pm – 2:50 pm  MTWR/3:00 pm – 3:50 pm |
| Location | CH 436 |
| Instructor | Shannon Miller-Mace |
| Phone | (304) 696-3796 |
| E-Mail | [miller207@marshall.edu](mailto:miller207@marshall.edu) |
| Office/Hours | SH 741B, MW 9:30am – 12:00pm, or by appointment. |
| University Policies | <http://www.marshall.edu/academic-affairs/?page_id=802> |

**Course Description: From Catalog**

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| A quantitative reasoning skills course for non-science majors. Topics include logical thinking, problem solving strategies, beginning statistics and probability, exponential and logarithms modeling, formula use, with basic algebra review. **4 hrs**. |

**Required Texts, Additional Reading, and Other Materials**

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| 1. Using and Understanding Mathematics: A Quantitative Reasoning Approach by Jeffrey Bennett and William Briggs, 6th Ed. 2. Students will be required to create a critical thinking project using a **computer or other approved medium**. 3. Students are required to be able to use a **scientific or graphing calculator** for the course. 4. Students may access supplemental course materials using **MUOnline/Blackboard.** |

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| **Course Student Learning Outcomes** | **How students will practice in this Course** | **How students will be assessed in this Course** |
| **Students will show mastery of basic Algebra Skills.** | interactive in-class lectures, group discussions, low-stakes writing, and out-of-class homework exercises and project rough drafts | quizzes, exams, and final project draft |
| **Students will demonstrate an ability to analyze arguments and construct fallacies.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will solve real-world problems using unit analysis.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will interpret and analyze numbers that they will encounter in the real world.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will demonstrate a proficiency in utilizing formulas from basic financial concepts such as loan payments, credit cards, and mortgages.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will interpret and analyze statistical studies.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will create tables and graphs from statistical data.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will analyze and interpret statistical concepts such as measures of central tendency, measures of variation, and normal distributions.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will demonstrate a proficiency in the fundamentals of probability including expected value.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will compare linear growth and exponential growth rates and their real-world applications.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |
| **Students will apply techniques employing common logarithms to solve equations.** | lecture and group discussions, low-stakes writing assignments and homework exercises, classroom activities and project rough drafts | quizzes, exams, and final project draft |

**Attendance Policy**

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| Students are expected to attend each class. Students must obtain a **University excused absences** in order to receive the opportunity to turn in work past the due date or take a make-up test. Missing assignments and tests will be recorded in the gradebook as a 0. |

**Course Requirements / Due Dates**

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| Skills Quizzes – Students will take 7 to 10 quizzes (time permitting) that focus on specific arithmetic and algebraic topics that are useful throughout the text. See the Calendar for approximate quiz dates.  Activities/Homework – Students will complete worksheets, activities to engage that day’s material, complete textbook problems that relate to the lecture/activity. Due dates will be announced in-class and will be approximately twice per week.  Critical Thinking Project – Students will complete a Critical Thinking Project focusing on their ability to synthesize Information Literacy with Quantitative Thinking and present their thoughts using Communication Fluency. See the Calendar for approximate draft due dates.  Semester Exams – Students will take four in-class exams covering about six sections each from the textbook. See the Calendar for approximate exam dates.  Final Exam - Students must take a comprehensive MTH 121B Final Exam to complete the course and receive a grade. |

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| Skills Quizzes (7-10 assessments) – 10%  Activities/Homework (collectively one grade) – 10%  Project**\*\*\*** (rough and final drafts) – 20%  Semester Exams (4 exams @ 10% each) – 40%  Final Exam\* (1 exam @ 20%) – 20%  Total – 100%    A student’s final letter grade is \*Students must take the MTH 121B Comprehensive Final  determined on the] scale: Exam which is scheduled for Monday, December 11th, 2017  at 12:45pm – 2:45pm and 3:00pm – 5:00pm in CH 436.  90 – 100% A  80 – 89% B  70 – 79% C \*\*\*Students are required to submit an artifact before  60 – 69% D the end of the semester. More information will be  Below 60% F provided. |

**Grading Policy**