**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 pmMTWR/3:00 pm – 3:50 pm  |
| Location | CH 436  |
| Instructor | Shannon Miller-Mace |
| Phone | (304) 696-3796 |
| E-Mail | 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% B70 – 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**