**Marshall University MTH 160 (CT) Syllabus**

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| **Course Title/Number** | Applied Mathematical Reasoning (CT)  MTH 160 - Section 203 - CRN 5779 - Credits 5 |
| **Semester/Year** | Spring 2016 |
| **Days/Time** | MTWRF 10:00 am - 10:50 am |
| **Location** | Smith Hall 334 |
| **Instructor** | Dr. JiYoon Jung |
| **Office** | Smith Hall 742D |
| **Phone** | (304) 696-3285 |
| **E-Mail** | [jungj@marshall.edu](mailto:jungj@marshall.edu) |
| **Office Hours** | TR 11:00 am - 11:50 am, R 01:00 pm - 01:50 pm, or by appointment  I am always happy to answer questions or talk about the course material any time. Just send me an email or stop by my office, Smith Hall 742D.  In addition to office hours, there are two free tutoring options for students in Math 160. The Mathematics Department has a free drop-in tutoring lab in Smith Music 115. The University College offers appointment-based tutoring in Laidley Hall. For additional information, please see <http://www.marshall.edu/math/tutoringlab.asp>. |
| **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: From Catalog**

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| A critical thinking course in applied mathematical reasoning. Topics include logic, problem solving, linear modeling, beginning statistics and probability, exponential and logarithmic modeling, formula use.  PR: ACT Math 19 or MTH 099, or equivalent |

**Objectives of Course: The table below shows the following relationships: How each student learning outcome will be practiced and assessed in the course.**

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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** |
| **1: Integrative Thinking:**  Students will **make connections** and **transfer** skills and learning among varied disciplines, domains of thinking, experiences, and situations. | Discussions, group work, board work, low-stakes writing, homework, in-class exercises, and chapter reviews | Class Project |
| **2: Quantitative Thinking:** Students willanalyze real‐world problems quantitatively, **formulate** plausible estimates, **assess** the validity of visual representations of quantitative information, and **differentiate** valid from questionable statistical conclusions. | Discussions, group work, board work, low-stakes writing, homework, in-class exercises, and chapter reviews | In Class Exam based on Quizzes |
| **3: Inquiry Based Thinking:** Students will **formulate** focused questions and hypotheses, **evaluate** existing knowledge, **collect** and **analyze** data, and **draw** justifiable conclusions. | Discussions, group work, board work, low-stakes writing, homework, in-class exercises, and chapter reviews | In Class Exam based on Quizzes |
| **4: Metacognitive Thinking:** Students will **evaluate** the effectiveness of a project plan or strategy to **determine** the degree of their improvement in knowledge and skills. | Discussions, group work, board work, low-stakes writing, homework, in-class exercises, and chapter reviews | Class Project |
| **5. Communication Fluency:** Students will **develop** cohesive oral, written, and visual communications **tailored** to specific audiences. | Discussions, group work, board work, low-stakes writing, homework, in-class exercises, and chapter reviews | In Class Exam based on Quizzes |

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

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| - Applied Mathematical Reasoning, second edition, published by Cengage (ISBN: 978-1-305-75805-6)  - You should bring your calculator, paper, and a pen or pencil to every class meeting.  - Students are required to have a scientific or graphing calculator during the course.  - Students will be required to use Excel and Word. Microsoft Mathematics is optional.  - You must have internet access at your residence. Check your official MU email account daily.  **MU Online:** It is important to visit MU Online regularly for up-to-date information about the course. It hosts all the course materials including announcements, handouts, assignments, and reading materials. Although I will make my best effort to announce everything in class, it is your responsibility to keep up to date with assignments on MU Online. |

**Course Requirements/Due Dates**

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| - Logic Project due on Wednesday, February 10, 2016  - **Exam 1** (Logic) on Friday, February 12, 2016 from 10:00 until 10:50  - Algebra Project due on Wednesday, March 16, 2016  - **Exam 2** (Algebra) on Friday, March 18, 2016 from 10:00 until 10:50  - Statistics Project due on Wednesday, April 27, 2016  - **Exam 3** (Statistics) on Monday, May 2, 2016 from 10:15 until 12:15 |

**Grading Policy**

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| - Exams (50% of grade): There will be two in-class exams (each counts 15% of grade) and one final exam (20% of grade). The Final exam will be comprehensive.  - Projects (25% of grade): There will be three projects (each counts 8.33% of grade) during the semester, one on each of the three main topics of the course. These projects will require you to write prose responses of a modest length (2 pages), and create additional documents using Excel. Detailed instructions will be provided for each project. The due dates are listed above. You will submit your projects electronically using MU Online, and you will be required to upload one of your projects to a website for Marshall’s quality review program. More details will be given during the semester.  - Bi-weekly Quizzes (15% of grade): These quizzes will focus on the topics discussed in the homework. Homework will be assigned on MU Online after each lecture session. You can bring questions about homework problems to class, office hours, or the tutoring lab.  - Daily Quizzes (10% of grade): These quizzes will focus on the topics discussed in class. You will be graded on a credit / no-credit basis, with credit for completing the quiz with a reasonable effort.  - Your overall grade in the course is a weighted average. You can view your grades on MU Online at any time. At the end of the semester, your overall letter grade will be assigned on the following scale:  A: 90.00 – 100  B: 80.00 – 89.99  C: 70.00 – 79.99  D: 60.00 – 69.99  F: Below 60.00 |

**Attendance Policy**

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| Students are expected to attend each class. **Unexcused absences from six or more classes will result in an F.** There will be no credit for the daily quiz you missed unless you have an excused absence. To obtain an excused absence, please go to the Dean of Students’ Office in the MSC. Students must notify the instructor by phone or e-mail **prior to** an exam if they cannot take a scheduled exam. Students must present a serious reason for missing any exam. Makeup exams will be given to students outside of class time at the convenience of the instructor. |

**Course policies**

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| Cheating or plagiarism is a serious oﬀense and will not be tolerated. It will be thoroughly investigated, and might lead to failure in the course or even to expulsion from the university. If you are late to class, if you leave class early, if you are disruptive, if you are sleeping, reading the newspaper, working on other homework, surﬁng the internet or for any other reason are not actively engaged in activities related to math class, you will not receive credit for participating in class that day. I expect that you will not only attend class, but that you will participate in class. If you do not respect yourself, other students, or the instructor during class, you may be asked to leave class. |

**Course Schedule**

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| January 11 – February 12:  Sec. L 1.1 – 1.5, Sec. L 2.1 – 2.5, Sec. L 3.1 – 3.6  February 15 – March 18:  Sec. A 1.1 – 1.4, Sec. A 2.1 – 2.3, Sec. A 3.1 – 3.5, Sec. A 4.1 – 4.6, Sec. A 5.2  March 21 – March 26: Spring Break – Classes dismissed  March 28 – April 29:  Sec. S 1.1 – 1.3, Sec. S 2.1 – 2.3, Sec. S 3.1 – 3.3, Sec. S 4.1 – 4.2, Sec. S 5.1 – 5.2, Sec. S 6.1 - 6.4. |