**Marshall University Syllabus**

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| Course Title/Number | Mathematical Concepts and Applications (CT) MTH 121B – 107 CRN 2989 |
| Semester/Year | Fall 2016 |
| Days/Time | M/W 4:00 – 5:40 pm |
| Location | MOVC 146 |
| Instructor | Jean Daniels |
| Office | MOVC 146 |
| Phone | MOVC: 304-674-7400; Call or text: 740-645-3097 |
| E-Mail | [danielsje@marshall.edu](mailto:danielsje@marshall.edu); mathemadam@yahoo.com |
| Office/Hours | 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 be 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 <http://www.marshall.edu/academic-affairs/?page_id=802>  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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| Critical thinking course for non-science majors that develops quantitative reasoning skills. Topics include logical thinking, problem-solving, linear modeling, beginning statistics and probability, exponential and logarithmic models, formula use, and financial concepts.  PR: ACT Math 17 - 18, OR permission of University College. 4 hours |

The table below shows how each student learning outcomes 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** |
| Students will develop strong critical and logical thinking skills to navigate the media and be an informed citizen | Classwork, discussion, homework | In-class activity, homework, projects, exam questions |
| Students will have a strong number sense and be proficient in estimation so they can put numbers from the news into a context that makes them understandable | Classwork, discussion, homework | In-class activity, homework, projects, exam questions |
| Students will be able to read news reports of statistical studies in a way that allows them to evaluate them critically and decide whether they should affect their personal beliefs | Classwork, discussion, homework | In-class activity, homework, projects, exam questions |
| Students will be familiar with basic ideas of probability and risk, and be aware of the impact on their lives | Classwork, discussion, homework | In-class activity, homework, projects, exam questions |
| Students will possess the mathematical tools needed to make basic financial decisions | Classwork, discussion, homework | In-class activity, homework, projects, exam questions |
| Students will understand how mathematics helps them study important social issues, such as the growth of populations, the depletion of resources, and the extermination of flora and fauna | Classwork, discussion, homework | In-class activity, homework, projects, exam questions |

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

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| 1. **Text:** Using and Understanding Mathematics, A Quantitative Reasoning Approach, 6th Edition, by Bennett   and Briggs   1. **Homework:** For all sections covered, do all of the odd numbered problems and check your answers in the back of the book. This homework will not be collected but is assigned for your benefit. 2. **Take home assignments and projects** will be assigned and are expected to be completed by the given due date. One of these assignments will be uploaded as an artifact into the university’s GEAR assessment website as part of the CT requirement for the class. These assignments will be discussed in class and will be collected. The general due date for Projects 1 – 4 will be on Thursday. 3. **Scientific calculator** with a [] or [^] , [] or [], and [LOG] and [LN] keys. I suggest TI 30X IIS (you can see the operations on the screen). Students may **not** utilize cell phones as calculators during tests. |

**Course Requirements / Due Dates**

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| 1. **OUTSIDE CLASSROOM REQUIREMENTS:** Students will need to work at least 2-4 hours outside of class for every 1 hour spent in class, studying notes and the textbook, and completing projects assigned in class. ***Students are expected to be prepared for class*** by reading the scheduled textbook section(s) and notes relating to them before each class. 2. **CLASSROOM ETIQUETTE:** During class, cell phones must *be turned off and out of sight*. Please make the instructor aware ahead of time if access to these devices is needed. If I determine that cell phones are becoming a problem during class time, I may give the class a quiz over all recent topics daily until cell phone use is no longer an issue.   All conversations during class time should be on topic. If personal conversations become distracting to the class or myself, those students will be asked to leave the class to continue their conversations elsewhere.  If either of these issues become a regular problem, the student(s) involved will be told not to return to future classes.   1. **TUTORING FACILITIES:** Marshall University provides multiple options for free on-campus tutoring. The Mathematics Department tutoring lab is located in Smith Music Hall 115. The current schedule can be found at www.marshall.edu/math/tutoringlab.asp. The University College has a tutoring lab on the first floor of Laidley Hall. It is the student’s responsibility to take advantage of these facilities in addition to utilizing office hours. |

**Grading Policy**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| The following point totals will assure the accompanying letter grade:  90% A 80% B 70% C 60% D Below 60% F  The grading scale is rigid. Students will receive the grade that they earn from the work that they do.   |  |  |  | | --- | --- | --- | | **Category** | **% of Grade** |  | | In-Class Exams | 40% |  | | Comprehensive Final Exam | 20% |  | | Homework | 10% |  | | Projects | 20% |  | | Skill Quizzes | 10% |  | |

**Attendance Policy**

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| 1. **Attendance:** Students are expected to attend and participate in each class. Unexcused absences from **four** classes will result in a reduction of one letter grade for the semester; unexcused absences from **six or more** classes will result in an **F**. **To obtain an excused absence**, please go to the Dean of Students’ Office in the MSC. 2. **Make-up exams:** Students must notify the instructor in person or by e-mail prior to an exam if they cannot take a scheduled exam. Students must present a university excused absence before scheduling a make-up exam. Makeup exams will be given to students **outside of class time** at the convenience of the instructor (Monday through Thursday) within one week after the regularly scheduled exam. *After one week absences are not excusable for make-up exams.*   Current Marshall University Class Attendance Policy Statement  Students are expected to attend punctually all class meetings, laboratory sessions, and field experiences and to participate in all class assignments and activities as described in the Course Syllabus. Absences are counted from the first class meeting after the student registers. Students registering late are expected to make up all missed assignments in a manner determined by the instructor. Students should be aware that excessive absences, whether excused or unexcused, may affect their ability to earn a passing grade.  The instructor of each class shall establish a policy on class attendance and make-up work, and provide the policy to students in the Course Syllabus. This policy must not conflict with university policies, including this policy. Class attendance may be a criterion in determining a student’s final grade in the course if the instructor provides a statement to this effect in the course syllabus.  Students must promptly consult with their instructors about all class absences. Instructors will work with students to identify appropriate documentation and discuss any missed class time, test, or assignments.  Except in the case of University Excused Absences, it is the decision of the instructor to excuse an absence or to allow for additional time to make up missed tests or assignments. A student may not be penalized for an excused absence, provided that the student, in a manner determined by the instructor, makes up the work that has been missed.  Instructors are required to honor valid University Excused Absences and to provide reasonable and equitable means for students to make up work missed as a result of those absences. Academic obligations that cannot be made up should be addressed by the course instructor in consultation with the student to ensure that continued enrollment is feasible while there is still an opportunity to drop the course within the established withdrawal period.  This policy excludes academic endeavors that require the completion of a specific number of clock hours, such as clinical experiences, practica, and internships. For those courses, the department chair or program supervisor will determine the maximum number of absences. This policy does not supersede program accreditation requirements.  This policy also excludes laboratory courses that require significant preparation and monitoring. For such courses, departments will determine the minimum number of laboratories a student must complete to pass the course. If a student cannot complete this number of labs, the instructor my recommend that the student withdraw from the class.  If the instructor believes that the number of absences accrued under the terms of this policy (whether excused or unexcused) is such that a student cannot fulfill the learning experience and mastery that a course requires, the instructor may recommend that the student withdraw from the class.  **University Excused Absences**  These are addressed by the instructor or the Dean of Student affairs as described in each item. Appropriate documentation is required for each absence. The Dean of Student Affairs will notify course instructors of his or her actions using the university e-mail system.  **1) University-sponsored activities.** Student participation in authorized activities as an official representative of the university. Such activities include official athletic events, ROTC, student government and student organization activities, regional or national meetings or conferences when endorsed by an academic or organization faculty advisor, performances, debates, and similar activities. The Dean of Student Affairs addresses these absences.  **2) Medical circumstances.**  a) A student who is briefly ill or injured with fewer than three consecutive hours of class (see (b) below), and is therefore unable to attend class, should first consult with his or her course instructor about the absence. If necessary, the instructor may refer the student to the Dean of Student Affairs.  b) The Dean of Student Affairs will address absences of three or more consecutive hours of class. This includes absences of three consecutive one-hour class meetings, one three-hour class meeting, etc.  **3) Death or critical illness of an immediate family member.** Immediate family is defined as parents, legal guardians, siblings, children, spouse or life partner, grandparents, and grandchildren. The Dean of Student Affairs addresses these absences.  **4) Other official activities**.  a) Short-term military obligations. The Dean of Student Affairs addresses these absences. Students who are subject to federal military activation are covered by a separate policy. Please consult the catalog for this policy.  b) Jury duty, subpoenas for court appearance, religious holidays, and other official activities deemed by the Dean of Student Affairs to warrant an excused absence.  **5) Extreme personal emergencies.** Examples of such events include house fires, serious crimes, and other grave emergencies deemed by the Dean of Student Affairs to warrant an excused absence. |

**121B Schedule (Schedule is subject to change)**

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| Week | Sections |
| 1 | Prologue, 1A |
| 2 | 1B, D |
| 3 | 2A, B |
| 4 | 2C Exam 1 |
| 5 | 3A, 3B |
| 6 | 3C, 4B |
| 7 | 4B, 4C |
| 8 | 4D Exam 2 |
| 9 | 5C, 6A |
| 10 | 6A, 6B |
| 11 | 6C Exam 3 |
| 12 | 7A, 7B |
| 13 | 8A, 8B |
| 14 | 8B |
| 15 | Review |
| **12/14** | **Final Exam during regular class time** |

Please note: Project information is not yet in this schedule. This will

be provided within a week.

121B Homework List

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| Chapter | Section pg # | Problem # |
| 1 | A p. 12 | 5, 7, 13, 15, 23, 27, 35, 39, 41, 43 |
|  | B p. 23 | 13, 15, 17, 21, 27, 33, 43, 55, 61, 77, 79 |
|  | C p. 52 | 1, 3, 11, 19, 21, 25, 29, 39, 46, 51 |
| 2 | A p. 88 | 23, 25, 33, 41, 45, 49, 67, 69, 83, 93 |
|  | B p. 99 | 23, 29, 33, 37, 41, 43, 49, 51, 57, 65 |
|  | C p. 114 | 7, 9, 11, 13, 17, 19, 21, 27, 31, 39 |
| 3 | A p. 132 | 21, 23, 37, 45, 49, 59, 63, 65, 79, 89 |
|  | B p. 148 | 19, 23, 27, 29, 33, 41, 49, 53, 63, 71 |
|  | C p. 160 | 23, 29, 37, 45, 51, 55, 63, 65, 73, 75 |
| 4 | B p. 214 | 51, 55, 59, 65, 69, 73, 77, 83, 95, 103 |
|  | C p. 233 | 9, 15, 19, 25, 27, 29, 33, 57, 61, 69 |
|  | D p. 250 | 7, 13, 19, 25, 27, 31, 39, 43, 45, 51 |
| 5 | C p. 321 | 11, 15, 17, 23, 25, 27, 29, 31, 37, 44 |
| 6 | A p. 370 | 3, 7, 9, 19, 21, 31, 35, 37, 41, 43 |
|  | B p. 381 | 1, 7, 9, 11, 13, 19, 21, 27, 29 |
|  | C p. 392 | 7, 13, 19, 23, 27, 29, 31, 35, 39, 41 |

Note: If your major is Math Education, this class will not count as part of your degree requirements. This class will count as an elective only. This is a terminal course which does not count as a prerequisite for any other math class.