

## Marshall University Syllabus

Course Title/Number	<b>Mathematical Concepts and Applications (CT)</b>			
	<b>MTH 121B – 106</b>	<b>CRN 3101</b>	<b>MTH 121B – 108</b>	<b>CRN 3103</b>
Semester/Year	Fall 2017			
Days/Time	<b>MTWR</b>	11:00 – 11:50 AM	12:00 – 12:50 PM	
Location	CH 436		CH 436	
Instructor	Ms. Tracy Marsh			
Office	SH 526A			
Phone	304 696-3016			
E-Mail	marsh9@marshall.edu			
Office/Hours	MW 9:00 – 10:00 AM and MTWR 10:00 – 10:45 AM			
University Policies	<p>By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to <a href="http://www.marshall.edu/academic-affairs">www.marshall.edu/academic-affairs</a> and clicking on "Marshall University Policies." Or, you can access the policies directly by going to <a href="http://www.marshall.edu/academic-affairs/?page_id=802">http://www.marshall.edu/academic-affairs/?page_id=802</a></p> <p>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</p>			

### Course Description: From Catalog

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 18 or below. *4 credit hours*

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	Class work, 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

1. **Text:** Using and Understanding Mathematics, A Quantitative Reasoning Approach, 6<sup>th</sup> Edition, by Bennett and Briggs
2. **Scientific calculator** with a  $[y^x]$  or  $[^x]$ ,  $[e^x]$  or  $[e^x]$ , 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

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.  
**BE PREPARED FOR CLASS:** Students are expected to read the scheduled textbook section **AND** notes **BEFORE** each class period.  
**Homework:** There is a list of homework at the end of this syllabus as well as posted on MUOnline. Homework for a section is to be completed as soon as possible after a section is completed in class. The problem and a complete explanation of the answer are expected for each problem assigned (usually 10 per section, a yes or no answer required explanation for credit). You can check your answer in the back of the book, but work or an explanation is required to get credit (a homework assignment that only lists answers will not get credit). Homework that is less than 60% complete will not get credit for that assignment. Homework sections completed during a specific week are due on Monday of the following week.  
**Projects:** Project details will be provided in class and on MUOnline.
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 or other electronic devices are becoming a problem during class time, I will give the class a quiz over **all recent topics daily** until cell phone use is no longer an issue. If the issue persists, the person(s) will be asked to leave the class.  
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 this becomes a regular problem, the student(s) will be asked not to return future classes.  
**TUTORING FACILITIES:** Marshall University provides multiple options for free on-campus tutoring. The Mathematics Department tutoring lab is located in Smith Hall 625. The current schedule can be found at <http://www.marshall.edu/math/math-tutoring/>. The University College has a tutoring lab in the Communications Building accessed through the second floor of Smith Hall. It is the student's responsibility to take advantage of these facilities in addition to utilizing office hours.

## Grading Policy

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	45%
Critical Thinking Projects	25%
Homework	10%
Final Exam	20%

## Extra Credit Available

Take a skills quiz for extra credit to show that you know how to do the basic math behind what are applying. Practice problems, websites, and sample quizzes are posted in a folder on MUOnline to help you. You may take up to **5 skills quizzes worth 2 grade points each**. They become available after we have started the chapter that the skills quiz comes from. Come to office hours or make an appointment to take the quiz. **You must score 80% or better on the quiz to get the extra credit point.**

Quizzes available:

Chapter 2

Chapter 3

Chapter 4

Chapter 5 – can be taken when Chapter 6 starts

Chapter 7

Note: These quizzes will not be returned to you. You may come to office hours to review a quiz you have taken.

## Attendance Policy

- Attendance: Attendance:** Students are expected to attend and participate in each class. Unexcused absences from **five** classes will result in a reduction of one letter grade for the semester; unexcused absences from **seven or more** classes will result in an **F**. **To obtain a university excused absence**, please go to the Dean of Students' Office in the MSC.
- 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 Friday) **within one week** after the regularly scheduled exam. *After one week absences are not excusable for make-up exams and, for excused absences, you will need to wait until Dead Week to make the exam up (it will be your job to remind me that I need to make another exam just for you during Week 14).*

**Schedule is subject to change**

Week	Sections
1	Prologue, 1A
2	1B, 1D
3	2A, 2B
4	2C <b>Project 1 Due</b>
5	<b>Exam 1</b> , 3A
6	3B, 3C
7	4B, 4C <b>Project 2 Due</b>
8	4C, 4D
9	<b>Exam 2</b> , 5C
10	6A, 6B <b>Project 3 Due</b>
11	6B, 6C
12	6C, <b>Exam 3</b>
13	7A, 8A <b>Project 4 Due</b>
14	8A
15	Review
<b>12/12 T</b>	<b>106 Final Exam 10:15 AM – 12:15 PM</b>
<b>12/14 F</b>	<b>108 Final Exam 10:15 AM – 12:15 PM</b>

**Homework list**

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
	D p. 52	1, 3, 11, 21, 22, 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, 17, 19, 21, 27, 29
	C p. 392	7, 13, 19, 23, 27, 29, 31, 35, 39, 41
7	A p. 422	11, 15, 27, 29, 33, 37, 39, 45, 53, 75
	B p. 434	7, 13, 17, 23, 25, 29, 39, 41, 54, 59