

**Marshall University**  
**MTH 121 Sec 114**

Course Title/Number	<b>Concepts and Applications of Mathematics (CT) / MTH 121 Sec 114 (CRN 3011)</b>
Semester/Year	Fall 2015
Days/Time	MUOnline from August 24, 2015 to December 9, 2015
Location	MUOnline
Instructor	Dr. Evelyn Pupplo-Cody
Office	Morrow Library 106
Phone	(304) 696-3047
E-Mail	pupploco@marshall.edu
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 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>  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**

<p><b>Concepts and Applications of Mathematics (CT). 3 hrs.</b> 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 modeling, and financial concepts. (PR: MTH 099 or Math ACT 19 or above)</p>
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<b>Course Student Learning Outcomes</b>	<b>How students will practice each outcome in this Course</b>	<b>How student achievement of each outcome will be assessed in this Course</b>
Students will analyze real-world problems quantitatively, formulate plausible estimates, assess the validity of visual representations of quantitative information, and differentiate valid from questionable statistical conclusions. Students will apply the <b>quantitative thinking</b> skills that they learn to analyze problems dealing with finance, exponential growth and decay, and logarithmic models.	Students will take quizzes to assess knowledge of each section of the course. Students will have two opportunities to take each quiz with the higher score counting toward the semester grade. Students will also take a series of basic skills quizzes to practice and review basic arithmetic and algebra skills, reading and interpreting of graphs, and exponential and logarithmic properties.	Students will take exams on the material covered in this course. They will also be required to submit five projects.
Using <b>metacognitive thinking</b> , students will evaluate the	Students will take quizzes to assess knowledge of each section of the course.	Students will take exams on the material covered in this

<p>effectiveness of their project plan or strategy to determine the degree of their improvement in knowledge and skills.</p>	<p>Students will have two opportunities to take each quiz with the higher score counting toward the semester grade. Students will also take a series of basic skills quizzes to practice and review basic arithmetic and algebra skills, reading and interpreting of graphs, and exponential and logarithmic properties.</p>	<p>course. They will also be required to submit five projects.</p>
<p>When students apply <b>integrative thinking</b>, they will make connections and transfer skills and learning among varied disciplines, domains of thinking, experiences, and situations.</p>	<p>Students will take quizzes to assess knowledge of each section of the course. Students will have two opportunities to take each quiz with the higher score counting toward the semester grade. Students will also take a series of basic skills quizzes to practice and review basic arithmetic and algebra skills, reading and interpreting of graphs, and exponential and logarithmic properties.</p>	<p>Students will take exams on the material covered in this course. They will also be required to submit five projects.</p>
<p>Students will formulate focused questions and hypotheses, evaluate existing knowledge, collect and analyze data, and draw justifiable conclusions as they apply <b>inquiry-based thinking</b>.</p>	<p>Students will take quizzes to assess knowledge of each section of the course. Students will have two opportunities to take each quiz with the higher score counting toward the semester grade. Students will also take a series of basic skills quizzes to practice and review basic arithmetic and algebra skills, reading and interpreting of graphs, and exponential and logarithmic properties.</p>	<p>Students will take exams on the material covered in this course. They will also be required to submit five projects.</p>
<p>Students will demonstrate their <b>communication fluency</b> skills to present their research to specific audiences. Each student will work on five short projects on a variety of topics to be determined by the instructor.</p>	<p>Students will take quizzes to assess knowledge of each section of the course. Students will have two opportunities to take each quiz with the higher score counting toward the semester grade. Students will also take a series of basic skills quizzes to practice and review basic arithmetic and algebra skills, reading and interpreting of graphs, and exponential and logarithmic properties.</p>	<p>Students will take exams on the material covered in this course. They will also be required to submit five projects.</p>

## Required Texts, Additional Reading, and Other Materials

- ***Using and Understanding Mathematics A Quantitative Reasoning Approach***, 6th Ed. by Bennett and Briggs.
- Scientific calculator
- Reliable internet access with the latest version of Java installed on your computer

## Course Requirements / Due Dates

1. Activity 1 – *Global Melting* – due 9/11
2. **Unit 1 Exam and homework quizzes must be completed by 11:59 p.m. on Sept 18<sup>th</sup>**
3. Activity 2 – *Student Loans* – due 10/2
4. **Unit 2 Exam and homework quizzes must be completed by 11:59 p.m. on Oct 16<sup>th</sup>**
5. Activity 3 – *Cell Phones and Driving* – due 10/23
6. **Unit 3 Exam and homework quizzes must be completed by 11:59 p.m. on Nov 6<sup>th</sup>**
7. Activity 4 – *Tower of Hanoi* – due 11/20
8. Activity 5 – *Paper summarizing one of the first four activities* – due 12/4 – must also be uploaded to GEAR
9. **Unit 4 Exam, homework quizzes, and Basic Skills Quizzes must be completed by 11:59 p.m. on Wednesday, Dec 9<sup>th</sup>**

## Grading Policy

Each examination (three exams and a final exam) will be worth 15% of the semester grade. Homework quizzes will be worth 10% of the semester grade. Basic Skills Quizzes will count as 10% of the semester grade. The five activities will be worth a total of 20% of the semester grade.

90.00 - 100	A
80.00 - 89.99	B
70.00 - 79.99	C
60.00 - 69.99	D
Below 60.00	F

The grading scale is rigid. Students will receive the grade that they earn.

All exams will be taken with the *Assessments Tool*. Homework quizzes can be found on the menu bar under Assessments. Activities must be handed in using the *Assignment Drop Box* in MUOnline.

There are two options for taking exams.

1. A few days before the exam, you may make an appointment with the instructor via e-mail to take the exam in a computer lab on campus.

- You may take the exams at your own computer using Respondus Monitor. If you choose this option, you must have a computer with a reliable internet connection, a webcam, and a microphone. Taking exams on cellphones or tablets is not recommended. More information is included in the Exam Info course folder in MUOnline.

### Attendance Policy

There is absolutely no requirement that you come to campus. You can communicate with me via the course *Mail* tool or Marshall University's e-mail service at [pupploco@marshall.edu](mailto:pupploco@marshall.edu). All of your assignments are submitted electronically through the course *Assignments Tool* and all exams are timed and taken online through the *Assessments Tool*. You may take your exams away from campus by using Respondus Monitor.

### Course Policies

There are deadlines for the completion of each exam. **Quizzes and exams will not be available after the deadlines.** Please contact the instructor if there is a legitimate reason to extend the deadline. You may complete exams, quizzes, or activities ahead of time.

The course is divided into 4 units with an exam at the end of each unit. Homework quizzes may be taken up to **two** times. Basic Skills Quizzes may be taken up to **three** times. Exams may only be taken **once**.

Online courses are not for everyone! If you have a problem learning mathematics, you should probably take a face-to-face course. You will be teaching yourself most of the material and some students are just not up to the challenge, so please think seriously before signing up for this course. If you have problems with organization, you should take a course where the instructor will help you stay on track. Instructors of online courses assume that their students are highly organized and very motivated to learn.

You are required to complete the five activities by their deadlines. Activity 5 will be a paper that you write based on one of the four activities that you have completed. To get credit for Activity 5, you must upload it to GEAR. You should include citations for all activities.

### Course Schedule

Week of	Unit	Chapters and Sections
Aug 24	1	Prologue, 1A
Aug 31	1	1B, 1D
Sept 8	1	2A Fractions Review, 2A, 2B Powers of Ten Review, 2B

	1	Activity 1 – <i>Global Melting</i> – due 9/11
Sept 14	1	<b>Unit 1 Exam and homework quizzes must be completed by 11:59 p.m. on Sept 18<sup>th</sup></b>
Sept 21	2	3A Fractions and Ratio Review, 3A, 3B
Sept 28	2	3C, 4B Algebra Review, 4B
	2	Activity 2 – <i>Student Loans</i> – due 10/2
Oct 5	2	4C Algebra Review, 4C, 4D
Oct 12	2	<b>Unit 2 Exam and homework quizzes must be completed by 11:59 p.m. on Oct 16<sup>th</sup></b>
Oct 19	3	5C, 6A
	3	Activity 3 – <i>Cell Phones and Driving</i> – due 10/23
Oct 26	3	6B, 6C
Nov 2	3	<b>Unit 3 Exam and homework quizzes must be completed by 11:59 p.m. on Nov 6<sup>th</sup></b>
Nov 9	4	7A, 7B
Nov 16	4	7C, 8A
	4	Activity 4 – <i>Tower of Hanoi</i> – due 11/20
Nov 30	4	8B, 8B Review of Logarithms

		Activity 5 – <i>Paper summarizing one of the first four activities</i> – due 12/4
Dec 8	4	Review
Dec 9	4	<b>Unit 4 Exam, homework quizzes, and Basic Skills Quizzes must be completed by 11:59 p.m. on Wednesday, Dec 9<sup>th</sup></b>

This course consists of sections from eight chapters. **For each section I suggest that you:**

- **Begin by reading the text for each new section.** The content in my lectures is not meant to replace the text, but to supplement it.
- **Look at my lectures for a guided tour through the section.** Each lecture contains video clips of selected problems, web sites for more help, definitions and rules, worked out examples and explanations.
- **Try the assigned homework problems.** You won't know if you can do this unless you really try.
- **If you are having trouble, please contact me through the MUOnline e-mail or through Marshall's e-mail.** I would be happy to explain to you how to do any of the problems. If you understand the concept being presented, you may be able to skip some of the problems. Only you can be the judge of the work you will have to put in to master the material, but remember that "practice makes perfect." I will have online office hours during the semester.
- **For the homework grade, please complete the homework quizzes after each section.** These you may do with your books, notes, and other resources. You may take each quiz twice and earn the higher of the two grades.
- **The Basic Skills Quizzes are a set of seven quizzes designed to test your knowledge of basic mathematics.** You can take each quiz up to three times with the highest score being the one counted in your grade. They must be completed by the end of the semester. You can find help to learn this material in the set of appendices on the homepage of the course.
- **To review for an exam, go through the PowerPoint slides on the homepage of the course.** These slides will summarize the material. You should also review the homework quizzes and homework assignments that you have completed.

Upon finishing each unit you will need to take a unit examination. You may work ahead if you want to complete the course work sooner. Students who work at a constant pace tend to make better grades than those who try to hurry through or leave it all to the last minute.

**Resources:**

**Me:** Don't hesitate to contact me directly with questions or concerns. You can reach me through the MUOnline *Mail* Tool or by my Marshall e-mail (pupploco@marshall.edu). Please don't let your questions hang out there and simmer. If you are not sure about something the best thing to do is to ask about it right away!

Send me any questions that you may have. [pupploco@marshall.edu](mailto:pupploco@marshall.edu)