

Marshall University
MTH 121 Sec 213

Course Title/Number	Concepts and Applications of Mathematics (CT) / MTH 121 Sec 213 (CRN 5794)
Semester/Year	Spring 2018
Days/Time	MUOnline from January 8, 2018 to May 2, 2017
Location	MUOnline
Instructor	Stacy Scudder
Office	Smith Hall 743 F
Phone	(304) 696-3035
E-Mail	scudder@marshall.edu
Office/Hours	MWF 8:30 a.m. – 8:50 a.m. MWF 12:00 p.m. – 12:50 p.m. MW 2:00 p.m. – 3:00 p.m. Other 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 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

<p>Concepts and Applications of Mathematics (CT). 3 hrs. 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>

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 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 quantitative thinking 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 four projects.

Using metacognitive thinking , students will evaluate the effectiveness of their project plan or strategy to determine the degree of their improvement in knowledge and skills.	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 four projects.
When students apply integrative thinking , they will make connections and transfer skills and learning among varied disciplines, domains of thinking, experiences, and situations.	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 four projects.
Students will formulate focused questions and hypotheses, evaluate existing knowledge, collect and analyze data, and draw justifiable conclusions as they apply inquiry-based thinking .	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 four projects.
Students will demonstrate their communication fluency 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.	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 four projects.

Required Texts, Additional Reading, and Other Materials

- **Using and Understanding Mathematics: A Quantitative Reasoning Approach**, 6th Ed. by Bennett and Briggs.
- Scientific calculator (not graphing, but feel free to use one if you have it already)
- Reliable internet access with the latest version of Java installed on your computer

Course Requirements / Due Dates

1. Activity 1 – *Global Melting* – due 1/26
2. **Unit 1 exam and homework quizzes must be completed by 11:59 p.m. on Friday, February 2nd**
3. Activity 2 – *Student Loans* – due 2/23
4. **Unit 2 exam and homework quizzes must be completed by 11:59 p.m. on Friday, March 2nd**
5. Activity 3 – *Cell Phones and Driving* – due 3/16
6. **Unit 3 exam and homework quizzes must be completed by 11:59 p.m. p.m. on Friday, March 30th**
7. Activity 4 – *Paper on carbon tax* – due 4/20 – must be submitted as a single file to MUOnline
8. **Unit 4 exam, homework quizzes, and Basic Skills Quizzes must be completed by 11:59 p.m. on Wednesday, May 2nd**

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 four 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.
2. 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 content section of the course.

Attendance Policy

There is absolutely no requirement that you come to campus. You can communicate with me through Marshall University's e-mail service at scudder@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 up to two times with the higher grade counted.

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 four activities by their deadlines. Activity 4 will be a paper that you write based on a YouTube video that you are required to watch. **You should include citations for all activities.**

Course Schedule

Week of	Unit	Chapters and Sections
Jan 8	1	Prologue, 1A
Jan 15	1	1B, 1D
Jan 22	1	2A Fractions Review, 2A, 2B Powers of Ten Review, 2B
	1	Activity 1 – Global Melting – due 1/26
Jan 29	1	Unit 1 Exam and homework quizzes must be completed by 11:59 p.m. on Feb 2 nd
Feb 5	2	3A Fractions and Ratio Review, 3A, 3B
Feb 12	2	3C, 4B Algebra Review, 4B

Feb 19	2	4C Algebra Review, 4C, 4D
	2	Activity 2 – Student Loans – due 2/23
Feb 26	2	Unit 2 Exam and homework quizzes must be completed by 11:59 p.m. on Mar 2 nd
Mar 5	3	5A, 5B, 5C
Mar 12	3	6A, 6B, 6C
	3	Activity 3 – Cell Phones and Driving – due 3/16
Mar 19		Spring Break
Mar 26	3	Unit 3 Exam and homework quizzes must be completed by 11:59 p.m. on Mar 30 st
Apr 2	4	7A, 7B
Apr 9	4	7C, 8A
Apr 16	4	8B
		Activity 4 – Paper on Sessions’ statement about marijuana laws – due 4/20
Apr 23	4	Review
May 2	4	Unit 4 Exam, homework quizzes, and Basic Skills Quizzes must be completed by 11:59 p.m. on Wednesday, May 2 nd

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 Marshall's e-mail (scudder@marshall.edu).** 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 hold 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 basic skills 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. If you have trouble reading the graphs, please zoom the view on your computer. If you answer a problem correctly and it is marked wrong, take a screen shot and send it to me to get credit.
- **To review for an exam, go through the PowerPoint slides on the Course Aids section 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 my Marshall e-mail (scudder@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. scudder@marshall.edu