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COLLEGE OF SCIENCE & LIBERAL ARTS

Department of Mathematical Sciences

Spring 2020 Syllabus Addendum
Transitioning to Online Instruction

Math 213
Course Title: Calculus IIIB
Instructors: Alpetekin, Barreto, Ward
Coordinator: Professor A. Bose
Date: March 17, 2020

<u>Math 213 Addendum to Syllabus</u>

Dear Students,

Going forward in Math 213, we will use a combination of ways to continue instruction of Multi-Variable Calculus. It will involve a significant effort on your part to individually read the book and notes that we provide, as well as watch videos that we suggest for various topics. The use of MyMathLab for regular homework and quizzes will continue as before. We are still working on a format for the 3rd Common Exam.

Our suggestion is the following,

1. In the days prior to your regularly scheduled class time, please read the section of your text book that will be covered. In addition, we will provide a 1-page summary of important ideas, concepts and examples to try.
2. Below we have listed some suggested videos that cover the topics related to the subject material for Chapter 15. Please view them prior to class. They are NOT completely aligned with our text book, but are meant to give you a general demonstration. Sometimes the notation used by the instructor is different than what you may be used to.
3. During your regularly scheduled class time, your instructor will be on-line, either in Canvas/BBB, Webex, Zoom or Google Hangouts (he will let you know). The purpose of this on-line interaction is for you to get a chance to ask questions directly to your professor, listen to anything asked by a classmate, and finally to hear directly from your professor regarding coursework. Focus on asking questions from the book that all of your classmates also have access to. We will see how this goes for the first week. Please provide candid feedback to your instructor with suggestions on content and how to improve this aspect of the course.
4. **MOST IMPORTANT –** The most important way for you to continue learning is to really embrace reading the book, working through the examples in each section and doing problems at the end of each section. Answers to odd problems are in the back of the book. Minimize the time you spend watching videos in favor of working off-line. It's ok and in fact encouraged to work on-line with small groups of friends in problem solving sessions; but again, use examples from the book.

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SUGGESTED VIDEO LINKS FOR CHAPTER 15.

Section 15.4 Polar Coordinates – Video Link to MIT Open Course Ware (OCW) -
https://ocw.mit.edu/courses/mathematics/18-02-multivariable-calculus-fall-2007/video-lectures/lecture-17-polar-coordinates

Section 15.5 Triple Integrals in Rectangular Coordinates – Video Links to Khan Academy
https://www.khanacademy.org/math/multivariable-calculus/integrating-multivariable-functions/triple-integrals-topic/v/triple-integrals-1
https://www.khanacademy.org/math/multivariable-calculus/integrating-multivariable-functions/triple-integrals-topic/v/triple-integrals-3

Section 15.7 Triple Integrals in Cylindrical and Spherical Coordinates. – Video Links Youtube
Cylindrical coordinates - https://www.youtube.com/watch?v=tsbFhR-A_JA
Spherical coordinates - https://www.youtube.com/watch?v=JMOttmQBtmY
Both sets of coordinates - https://www.youtube.com/watch?v=LhphjdYE_Eg

Section 15.8 Change of Variables Video Link to MIT OCW
https://ocw.mit.edu/courses/mathematics/18-02-multivariable-calculus-fall-2007/video-lectures/lecture-18-change-of-variables