SYLLABUS FOR CALCULUS II, SUMMER 2018
MATH 1207 MEETS MTWR 6-9PM

COURSE INSTRUCTOR: DR. BRAKALOVA
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OFFICE HOURS: BEFORE OR AFTER CLASS AND BY AN APPT.


The electronic material for the course can be purchased at https://www.cengage.com/c/calculus-8e-stewart/9781305266636 .


We will use webassign, the class key will be provided on the first day of class. It will allow you to access the homework. WebAssign includes an electronic copy of the textbook and an access to additional helpful resources.

Beware of different editions or similar versions of the physical copy of the textbook. You could purchase a new or used print copy of the textbook or rent one, but it should be the edition listed on the syllabus. However, such purchase of the textbook is optional since you will get an electronic copy when you purchase the single term electronic platform WebAssign. An interesting article on the use of physical vs electronic copies of textbooks is available at the following Huffington Post link.

Please read the textbook regularly, you will gain insight into the course material.

Prerequisites. Mastery of precalculus, algebra, geometry, and trigonometry, and of course MATH 1206, Calculus I, is necessary for success in Calculus II, MATH 1207. Recommended supplementary materials that can help with some of the prerequisites: "Just in Time, Algebra and Trigonometry for Students of Calculus" by Brent and Mueller, Addison Wesley, 2006. You should, most importantly, review the material from Calculus 1, Chapters 1-5.2 from Stewart’s textbook plus exponential and logarithmic functions from Chapter 6.

Course Objectives and Lectures. In this course we study mostly Integral Calculus (involving integrals of functions of one variable) and then Sequences and Series. We also focus on some important applications. Calculus II course material includes the following topics: Inverse trigonometric functions, Hyperbolic functions, L’Hopital’s rule, Integration by parts, Trigonometric integrals, Trigonometric substitution, Partial fractions, Approximate integration, Improper integrals, Arc length, Volumes of revolution, Areas of revolution, Parametric curves, Calculus of curves, Polar coordinates, Polar area and length, Conic section, Polar conic sections, Sequences, Integral test, Comparison test, Alternating series, Absolute convergence, Power series, Taylor series and Taylor polynomials and applications.
Reading/Preparation. This is a four credit course which means that you should spend on average at least 8 hours per week in addition to the class time on it. This should include reading the text, doing homework/additional problems, reviewing course notes.

Course materials and Blackboard. The syllabus, written homework assignments, some solutions, and other course materials and announcements will be posted on Blackboard or e-mailed. Please retrieve such information from Blackboard or your Fordham e-mail on a regular basis. You can also use Blackboard for posting questions and having discussions about the material we are working on.

Quizzes, Tests and Final Exam. There will be short quizzes throughout the session, and a couple of Midterm Tests. The final exam is on the last day of class.

Homework. There are two kinds of homework: on-line homework, which uses WebAssign and a few written assignments. Please try do the homework after you have read the text and/or the class notes. The on-line WebAssign platform provides instantaneous feedback and multiple opportunities to correct one’s work. The written homework is posted on Blackboard and also e-mailed. In the written homework, you are asked to copy down the assigned problems and then write the solutions. The homework is evaluated on correctness, precision and clarity of the work. Extra credit assignments will be provided for the total of at most 3 points.

Attendance. It is important for you and it is also your responsibility to make sure that you know what is happening in class, to be present and engaged. It is beneficial to the class and to you if you participate and ask questions about the material.

Meeting with the instructors. Please let me know if you would like to meet with me. You could also stop by my office, JMH 417 before or after class.

Calculators. You need to have at least a scientific calculator. A TI Graphing Calculator (TI 83 or higher) is recommended. Its use may be restricted on tests.

Grade distribution. 45% on tests and quizzes, the lowest quiz will be dropped (I weigh the higher test score higher) 25% to the average homework score (written and on-line), and the remaining 30% are based on the final exam. Percentages of at least 90, 80, 70, 60 guarantee grades of at least A-, B-, C-, D, respectively.

College Policy on Academic Integrity. I would also like to draw your attention to the College Policy on Academic Integrity. It explains the Colleges expectations and procedures. A university, by its nature, strives to foster and recognize originality of thought, which can be recognized only when people produce work that is their’s alone, properly acknowledging information and ideas that are obtained from the work of others. It is therefore important that students must maintain the highest standards with regard to honesty, effort, and performance.

In particular ”Academic integrity is honest, thoughtful, and responsible scholarship. Fordham students are expected to maintain the highest standards with regard to honesty, effort and performance in their academic work.”
Disclaimer. The course syllabus is a general plan. The instructor may slightly deviate from the syllabus but all such deviations will be announced.

Best wishes for a successful Summer Session.

1. Schedule of classes and Topics (tentative)

07/05 Sections 6.1-6.4 Exponential and logarithmic functions, Inverse trigonometric functions.

07/09-07/12 Section 6.7 Hyperbolic functions and L’Hospital’s rule, Section 7.1 Integration by parts, Section 7.1-7.2 Integration by parts and trigonometric integrals, Section 7.2-7.3 Trigonometric integrals and trigonometric substitution Section 7.4 Partial fractions

07/16-07/18 Section 7.7-7.5 Partial fractions and strategies for integration Section 7.7-7.8 Approximate integration and improper integrals, Section 5.2 and 5.3 Volumes and volumes of revolution, Section 8.1 and 8.3 Arc length and areas of revolution

07/19 Midterm Test I

07/23-07/26 Sections 10.1-10.2 Parametric curves and calculus of curves, Sections 10.1-10.2 Parametric curves and calculus of curves, Section 10.3 Polar coordinates Section 10.4 Polar area and length, Section 11.2-11.3 Series and the Integral test

07/26 Midterm II

07/30-08/02 Section 11.3-11.4 Integral test and Comparison test, Alternating series and Absolute convergence, Section 11.8-11.9 Power series and Common power series. Section 11.10 Taylor series, Section 11.11 Taylor polynomials. Review

08/06 Final Exam