

Metropolitan State University
College of Arts and Sciences
MATH 211-01 Calculus II

Term: Fall 2015
Meeting: Thursdays 6—9:30 pm
Instructor: Dr. Pangyen Ben Weng, Associate Professor of Mathematics
Email: Pangyen.Weng@metrostate.edu

Course Description: This is a continuation of Math 210 Calculus I and a working knowledge of that material is expected. Through a conceptual and theoretical framework this course covers the definite integral, the fundamental theorem of calculus, applications of integration, numerical methods for evaluating integrals, techniques of integration and series.

Prerequisite: C- or better in Calculus I, or placement at equivalent levels.

Calculators: Graphing calculators such as TI-83 are recommended, and may be used in quizzes or exams unless otherwise notified.

Course Material: Access to *MyMathLab* is required for this course. (The textbook, *Thomas' Calculus: early transcendentals*, by Weir, Hass, and Thomas, 12th ed., is available online through MyMathLab.) Student do **NOT** need to buy another kit if they already have used MyMathLab for Calculus I.

MyMathLab: The course code is **weng48465**. Every student needs an access kit, which allows him/her to create a student account.

Homework: Mathematics is not a spectator's sport. Solving problems independently and as much as possible is the only way to strengthen your math understanding and skills. Homework is an important part of your learning: expect to spend 8 to 10 hours each week on assignments. **No late homework will be accepted.** All homework assignments are online through MyMathLab.

Attendance: Students sign in at 6 pm and sign out at 9:20 pm. Students who are absent for more than 3 classes will automatically receive an F. Students who miss more than 1 class during 8/27 and 9/17 cannot make up for Exam I, and those who miss more than 1 class during 10/8 and 10/29 cannot make up for Exam II.

Exams: There are three exams, and each one is 3 hours long. Calculators may be used, but not tablets, cellphones or other types of electronic devices. No notes, books or any kind of help is allowed. The passing score of each exam is 70 or above. Unless the instructor has been contacted and provided with legitimate reasons, students who are absent from an exam will receive a score of 0. Students who fail Exams I or II must make up within 10 days of the original exam and will receive up to 70% of the full credit. Students must have a passing Exam I to be eligible for Exam II, and a passing Exam II for Exam III.

Testing Center: Phone: 651-793-1460; email: testing.center@metrostate.edu

Course Requirements and Grading Policy: Students must score at least **50% in Exam III and 90% in homework** to be considered for a passing grade. Grades are determined by homework (20%), Exam I (30%), Exam II (30%) and Exam III (20%). Letter grades are given based on the following scale.

Score	[0,60)	[60,70)	[70,73)	[73,76)	[76,80)	[80,83)	[83,86)	[86,90)	[90,93)	[93,100]
Grade	F	D	C-	C	C+	B-	C	B+	A-	A

Policy on Academic Integrity: The Metropolitan State University Student Handbook states “*In simple terms, plagiarism is using another person's words or ideas and presenting them as your own, without acknowledging the original source. This is a serious academic offense. Academic sanctions can include receiving a failing grade for an assignment or an entire course.*”

Assignments and exams are to be completed independently unless specified otherwise. Copying and/or utilizing another person's work in order to complete your assignments or exams constitutes plagiarism. In situations where I suspect academic dishonesty, I reserve the right to either reassess your understanding of the material or assign a grade of 0 points. Repeated offenses will result in a grade of F for the entire course. For additional information on the university's policies regarding plagiarism, please refer to the student handbook found at <http://www.metrostate.edu/msweb/pathway/gateway/handbook/handbook.html>.

Classroom Diversity: The instructor strives to provide a welcoming learning environment to students of diverse backgrounds with diverse learning needs. Students who have questions or concerns about the course policy or how the course is conducted are encouraged to discuss them with the instructor.

Students with Disabilities: Special accommodations can often be made for those with learning disabilities. Students who have or may have documented learning disabilities are recommended to contact the instructor as well as the Disability Services Office at (651) 793-1540 or (651) 772-7687.

Email Communication: In accordance with University's policy, this class will use your university email address (name@metrostate.edu) to communicate with you about all course-related matters.

Tentative Schedule:

8/27 and 9/3. Lesson 1 Fundamental Theorem of Calculus (4.8, 5.1—5.6)
Antiderivatives, Summations, Estimating Area with Finite Sums, The Definite Integral,
The Fundamental Theorem of Calculus, and The Substitution Method

9/10 and 9/17. Lesson 2 Techniques of Integration (8.1—8.7)
Integration by Parts, Trigonometric Integrals, Trigonometric Substitutions, Integration by Partial Fractions
Numerical Integration, and Improper Integrals

9/24. No class.

10/1. Exam I.

10/8 and 10/15. Lesson 3 Applications of Integrals (5.6, 6.1—6.6)
Area between Curves, Calculating Volumes by Cross-Sections, Calculating Volumes by Cylindrical Shells
Arc Length, Areas of Surfaces of Revolution, Work, Fluid Forces, Moments, and Centers of Mass

10/22 and 10/29. Lesson 4 Series and Sequences Part I (10.1—10.6)
Sequences, Infinite Series, The Integral Test, Comparison Tests, The Ratio and Root Tests and
Absolute and Conditional Convergence

11/5. Exam II

11/12. Lesson 4 Series and Sequences Part II (10.7—10.10)
Power Series, Taylor and Maclaurin Series I, Taylor and Maclaurin Series II and Applications of Taylor Series

11/19 and 12/3. Lesson 5 Introduction to Differential Equations (7.2, 9.1—9.3)
Separable Differential Equations, Introduction to Differential Equations, First-Order Linear Equations and
Applications of Differential Equations

11/26. Thanksgiving holiday; no class.

12/10. Exam III