Framingham State University
Syllabus

MATH 220: Calculus II

General Information
Session: Summer 2018(July 2nd,2018-August 3rd,2018)
Credit: 4
Teaching Hours: 50 Hours
Time: 2 hours/day, Mon.-Fri.
Professor Name: Wanchunzi Yu
Home Institution: Framingham State University
Email: wyu@bridgew.edu

FSU Course Catalog Description
Topics will include integration techniques and applications of integration using algebraic and transcendental functions. In addition, sequences and series will be discussed.

Prerequisite
Calculus I with a minimum grade of "C-" or consent of department.

Textbook
Calculus – Early Transcendentals, 3rd edition, by James Stewart

Topic Calendar

No.	Sections Covered (Tentative)	Day
	Week 1 (July 2nd – July 6th)	
1	Review of Calculus I	1
2	5.5 Substitution Method	1.5
3	6.1 Area Between Two Curves	1
4	6.2 Volumes	1
5	6.3 Volumes by Cylindrical Shells & Exam 1 Review	1.5
	Week 2 (July 9th - July 13th)	
6	7.1 Integration by Parts	1

7	7.2 Trigonometric Integrals	0.5
8	7.3 Trigonometric Substitution	0.5
9	7.4 Integration of Rational Functions by Partial Fractions	1
10	7.5 Strategy for Integration	0.5
11	7.8 Improper Integrals	1.5
	Week 3 (July 16th - July 20th)	
12	11.1 Sequences	0.5
13	11.2 Series	0.5
14	11.3 The integral Test and Estimates of Sums & Exam 2 Review	1
15	11.4 The Comparison Tests	0.5
	Week 4 (July 23rd - July 27th)	
16	11.5 Alternating Series	0.5
17	11.6 Absolute Convergence and the Ratio and Root Test	1.5
18	11.7 Strategy for Testing Series	0.5
19	11.8 Power Series	1.5
	Week 5 (July 30th - August 3rd)	
20	11.9 Representations of Functions as Power Series & Exam 3 Review	1
21	11.10 Taylor and Maclaurin Series	1.5
22	11.11 Applications of Taylor Polynomials & Final Exam Review	1

Course Outcomes

By the end of this course, you will be expected to:

• Correctly evaluate indefinite, definite and improper integrals using various integration formulas and techniques covered in class

• Understand the connection between integrals and area, and find the area of a region between curves

• Use integrals to find the volume of a solid of revolution

• Determine convergence or divergence of sequences

• Understand the relationship between sequences and infinite series

• Determine convergence or divergence of infinite series using various tests (Divergence Test, Geometric Series Test, p-Series Test, Integral Test, Comparison Test, Limit Comparison Test, Alternating Series Test, Ratio Test, and Root Test)

- Determine the interval of convergence of a power series,
- Find a Taylor or MacLaurin series for a function, and
- Communicate mathematics effectively by using the correct terminology and notation.

Homework

Students are expected to read relevant sections of the textbook prior to attending class. Written homework will be graded. Students may work together on homework, but each individual student is required to submit their own work. Homework will be collected in class at the beginning of the class period, due dates will be given in class, and are on posted on my web page. NO LATE HOMEWORK WILL BE ACCEPTED.

Blackboard

Grades and additional course content will be uploaded to Blackboard. Make sure to check it regularly for updates.

Quizzes (Attendance)

Quizzes/Attendance will be given in class. Often you will be able to work in groups, but each individual student must submit his or her own work. **There will not be any make-up quizzes available.**

Important Notes about Submitted Work

On all of your written assignments you must show all work for the problems to receive full credit, even if the final answer is correct. Do not submit just the final answer not supported by any work. Your handwriting must be legible, your name and class time must be clearly written at the top of the front page. Proper notation is mandated.

Midterm Exams

You will take 3 midterm exams during the summer semester. Exams are given in class, time will be limited to class time. Each will involve a mix of mechanical skills and conceptual reasoning. The best possible preparation for them is regular attendance and completion of assigned homework & quizzes. You may have 1 page 8x11 of hand written notes (1 side only) on each exam, including a final exam, specific problems solved may be included. Make-up exams are only given in case of documented emergencies.

Final Exam

The final exam will take place on Friday, July 3, in class.

Grading

Your final course grade will be determined by
Homework: 20%
Quizzes (Attendance): 10%
Midterms: Each 15%
Final Exam: 25%

Grading Scale:
A 90-100% B 80-89.9% C 70-79.9% D 60-69.9% F 0-59.9%

Extra credit:
If you come to class and do the homework, your grade will take care of itself. Any opportunity for extra credit will be offered to the class as a whole, usually as part of a test or exam. No individual requests for extra credit projects will be considered.

Academic conduct
Students are encouraged to discuss the course material with one another and form study groups to prepare for the quizzes and exams. However, collaboration on individual assignments (homework, quizzes, and exams) is not allowed and will be handled in accordance with FSU's academic integrity policy.
* This syllabus may be amended during the semester.