

MATH 162: Single Variable Calculus II
Summer 2020 Syllabus

Place/Time: Online	Instructor: Wanchunzi Yu
Duration: May26 -June29	Office Hours: TBA (Or by appointment)
Course Credits: 4	E-mail: wyu@bridgew.edu

Course Catalog Description

This course is a continuation of material found in MATH 161, Single Variable Calculus I. Topics will include integration techniques and applications of integration using algebraic and transcendental functions. In addition, sequences and series will be discussed.

Prerequisite

MATH 161/161E Calculus I or consent of department.

Textbook

Calculus – Early Transcendentals (With **WebAssign**), 9th edition, by James Stewart.
 The hardcopy of textbook is optional. Access to WebAssign includes access to an electronic version of the textbook.

Topic Calendar

No.	Sections Covered (Tentative)	Week
1	Review of Calculus I	Week 1
2	5.5 Substitution Method	Week 1
3	6.1 Area Between Two Curves	Week 1
4	6.2 Volumes	Week 1
5	6.3 Volumes by Cylindrical Shells	Week 1
6	7.1 Integration by Parts	Week 2
7	7.2 Trigonometric Integrals	Week 2
8	7.3 Trigonometric Substitution	Week 2
9	7.4 Integration of Rational Functions by Partial Fractions	Week 2
10	7.5 Strategy for Integration	Week 3
11	7.8 Improper Integrals & Midterm Exam	Week 3

12	11.1 Sequences	Week 3
13	11.2 Series	Week 3
14	11.3 The integral Test and Estimates of Sums	Week 4
15	11.4 The Comparison Tests	Week 4
16	11.5 Alternating Series	Week 4
17	11.6 Absolute Convergence and the Ratio and Root Test	Week 4
18	11.7 Strategy for Testing Series	Week 4
19	11.8 Power Series	Week 5
20	11.9 Representations of Functions as Power Series	Week 5
21	11.10 Taylor and Maclaurin Series	Week 5
22	11.11 Applications of Taylor Polynomials & Final Exam Review	Week 5

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

Homework problems are online, we will use the online resource [WebAssign](#) for weekly homework assignments and tutorial videos. Make sure to select the correct course, the url for this section [link](#).

Please refer to WebAssign Instruction on the blackboard for more details. Some written homework may also be collected.

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.

Attendance

Attendance for the course will be the **Watch It/Lecture** videos with questions on WebAssign. For each section, videos with questions are available on WebAssign. Please complete the **Watch It/Lecture** to receive the full attendance credits.

Midterm Exams

You will take 1 midterm exam during the summer semester. Exam is given online, 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. You may have 1 page 8x11 of hand written notes (1 side only) on each exam, including a final exam, specific problems solved can not be included. Make-up exams are only given in case of documented emergencies.

Final Exam

The final exam will take place on online on Blackboard. The official BSU Final Exam Schedule is [here](#).

Grading

Your final course grade will be determined by

Homework: 30%

Attendance: 30%

Midterms: 20%

Final Exam: 20%

Grading Scale:

Letter grades will be assigned as follows:

A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	below 60

The Academic Achievement Center (AAC) provides students with academic services and resources that propel them toward successful and timely degree completion. With all the services available in the center, the AAC is the largest hub of student academic services on campus. Ideally located on the ground floor of the Maxwell Library in the center of the BSU Campus, the AAC is comprised of four major support areas: Academic Advising (*first-semester freshmen*), the Disability Resources Office, Learning Assistance (*tutoring and academic coaching*), and Testing Services. Drop-in learning support areas (*Math Services, Accounting &*

Finance Lab, Writing Studio, Second Language Services), open study space, study rooms available for reserve, and computers are all available for student use. Stop by or call 508-531-1214 for more information about any of the services offered by the Academic Achievement Center.

Disability Resources Office (DRO)

Bridgewater State University is committed to providing equal access to students with documented disabilities. To ensure your access to this course and the BSU community, students with disabilities are encouraged to collaborate with the **Disability Resources Office (DRO)**. Through the DRO, you may initiate the confidential process of requesting reasonable accommodations. The DRO can be reached at Disability_Resources@bridgew.edu or 508.531.2194. If you are granted accommodations, please meet with me confidentially to review how they will be applied in this course. The DRO also provides alternatively worded syllabus statements, as well as other faculty-specific information, [here](#).

*** This syllabus may be amended during the semester.**