Math 142: Calculus II
Sections 15 16 Spring 2022

Instructor: Shaoyun Yi
Office: COL 1005D
Office Hours: MW 1:30-3:30 pm, or by appointment
Email: shaoyun@mailbox.sc.edu

Class Meetings: TR 4:25-5:40 pm @ COL 1015
MyMathLab Course ID: yi57707
MS Team Code: wygpum9
Webwork: https://webwork.math.sc.edu/webwork2/MATH142-SPRING-2022-015-016
Web: Visit course website for a tentative course calendar and other information.

Teaching Assistant: Chase Fleming
Office: COL 3004
Email: cf17@email.sc.edu

Recitations Meetings: Wednesday
Section 15: W 3:30-4:20 pm @ Jones Physical Sci Ctr Room 203
Section 16: W 4:40-5:30 pm @ Coker Life Science Room 102

Computer Lab Meetings: Monday
Section 15: M 3:30-4:20 pm @ Carolina Coliseum Room 2013
Section 16: M 4:40-5:30 pm @ Carolina Coliseum Room 2013

SI Leader: Katherine Davis
Email: daviskp@email.sc.edu

Textbook: *Thomas Calculus: Early Transcendentals* (13th ed), by George B. Thomas.

Calculators will not be allowed.

Prerequisite: Qualification through placement or by earning a **C** or better in Math 141.

Bulletin Description: This course is the second course in the traditional calculus sequence. The course o ers a balance between mathematical skills and conceptual understanding, with presentation of ideas geometrically, algebraically, numerically and verbally and with attention to applications.

Learning Outcomes: A student who successfully completes Calculus II (Math 142) should continue to: Develop as an independent learner with the ability to approach problems from a conceptual point of view; Utilize more than one idea in a single problem, and to apply appropriate calculus skills to problems in context; Master concepts and gain skills needed to solve problems related to techniques of integrations, sequences and series, Taylor polynomials and series, parametric and polar coordinate curves.

Expectations:

Students are expected to attend class, arrive on time, and stay for the entire class. Attendance will be recorded daily. The instructor may excuse absences with appropriate documentation of illness, emergency, or official university travel. It is the student's responsibility to provide such documentation in a timely manner. In accordance with university policy, a letter grade may be deducted for students who miss more than 10% of classes for unexcused reasons. Students are responsible for missed classes and announcements.

Students are expected to read assigned sections in the textbook and complete periodic homework, two tests, and a final exam. Students should check email, Blackboard and course website frequently for announcements and course documents such as homework due date and lecture slides; see the tentative course calendar on the course website.

Course Outline: The course will cover Chapters 8 (techniques of integration), 10 (sequences and series), and 11 (parametric and polar coordinates) from the textbook. Please see the tentative schedule below (also in course website).

Covid-19 Safety:

> **Don't come to class if you have Covid-19** (confirmed or suspected).
>
> **Masks are required in university buildings.**
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> Classes will be livestreamed over Microsoft Teams for the initial surge, and later as needed. If you wake up with Covid symptoms let me know, stay home, and participate online.

If you suspect Covid-19, the university requests that you go through official channels: contact the COVID-19 Student Health Services (SHS) nurse line (803-576-8511), complete the COVID-19 Student Report Form and select the option allowing the Student Ombuds to contact your professors.

When talking with the SHS nurse, be sure to ask for documentation of the consult as you will need this to document why you missed class. You will also use the COVID-19 Student Report Form if you have tested positive for COVID-19 or if you have been ordered to quarantine because of close contact with a person who was COVID-19 positive. In each of these situations you will be provided appropriate documentation that can be shared through the Student Report Form.

Make-up work Policy: Make-up work will not be assigned, except in cases of excused absences. In the event of emergency or illness, arrangements for make-up work must be made within **24 hours** of the student's absence. For example, if you have Covid-19 (confirmed or suspected), see related details above. In the case of official university travel, students should contact the instructor at least one week **before** traveling to make arrangements to complete assignments.

Disruptions: Disruptive behavior of any kind will not be tolerated. **Cell phones** should remain **o** during class. No laptops or any other electronic devices are allowed in class.

Withdrawal:
The last day to change/drop a course without a grade of "W" being recorded is **Jan 18 (T)**.
The last date to withdraw without a grade of "WF" being assigned is **Mar 28 (M)**.

Homework: There will be a weekly online homework assignment, via the **Pearson MyMathLab software** (Course ID: yi57707). Please follow these instructions to set up your account and join the course. This requires a Pearson access code; this should have been bundled if you bought your book new at the bookstore.

Homework will be graded for complete and correct solutions, not just the final answer. **All homework must be done before the due date.** Under **NO** circumstances will late homework be accepted after solutions are posted. Students are allowed to work together on homework, but copying homework will not be tolerated.

Quizzes: There will be a weekly quiz in recitations based on the most recent homework and lecture materials. Students will complete quizzes individually. The lowest **one** quiz grade will be dropped. **There will be no make-up's for missed quizzes for unexcused reasons**; see related details above.

WebWork: WebWork is an online homework system developed by the Mathematical Association of America. The location of our course is https://webwork.math.sc.edu/webwork2/MATH142-SPRING-2022-015-016. There is no cost to you for its use. WebWork will be used for gateway exams.

Gateways: There will be **two** gateways exams during the semester. The gateway exams are tests of skills that are important to calculus II. The first test (Gateway Exam 1) covers limits and derivatives, and the second test (Gateway Exam 2) covers integration techniques. These tests are taken online at specific computer lab meetings or at home; during your computer lab sessions, your TA will explain this process.

In order to pass a gateway test, you must correctly answer all but one of the total six problems. Gateway tests can be retaken once a week for the following open periods so that you have up to **3 attempts** for each of the two gateway tests:

Exam	Open	Close
Gateway Exam 1	January 31	February 20
Gateway Exam 2	March 14	April 3

Testing Policy: There will be two tests and a comprehensive final exam. I will **not** drop the lowest test grade. In general, **no** make-up tests will be given. Exceptions may be made for documented illness or emergency; see related details above. Tests are *tentatively* scheduled as follows:

Test 1	Thursday	Feb 17
Test 2	Thursday	Mar 24
Final Exam	Tuesday	May 3, 4:00 pm

All of your tests and final exam will be held at Carolina Coliseum Room 1015 (our regular classroom). In-person tests are generally expected; see related details above for excused reasons.

Note that the instructor does not set the final exam date. **No** accommodations will be made for travel plans, except in cases of documented official university travel; see related details above.

Grade Distribution:

SageMath Labs	10%
Gateways	10%
Homework	15%
Quizzes	15%
Tests (**2** tests)	30%
Final	20%

Grading Scale:

A	90%-100%	C	70%-74%
B+	85%-89%	D+	65%-69%
B	80%-84%	D	60%-64%
C+	75%-79%	F	below 60%

Table 1: **Important Dates:**

Jan	10	M	First Day of Classes
Jan	17	M	Dr. Martin Luther King, Jr. Service Day (No Classes)
Jan	18	T	Last day to change/drop a course without a grade of "W" being recorded
Jan	31	M	*Gateway 1 open*
Feb	17	R	**Test 1**
Feb	20	Su	*Gateway 1 closed*
Mar	6-13	Su-Su	Spring Break (No Classes)
Mar	14	M	*Gateway 2 open*
Mar	24	R	**Test 2**
Mar	28	M	Last day to drop a course or withdraw without a grade of "WF" being recorded
Apr	3	Su	*Gateway 2 closed*
Apr	25	M	Last Day of Classes
Apr	26	T	Reading Day
May	3	T	**Final Exam at 04:00 pm**

Additional Help: Tutors are available in the **Math Tutoring Center** (See https://bit.ly/2slwj18), in **Student Success Center satellite locations** in the residence halls, and **online**. Help is also available through **supplemental instruction**. (See www.sc.edu/success for peer tutoring and SI information.) Students are encouraged to come see me during **office hours** as well.

Disability Services: Any student with a documented disability should contact the Office of Student Disability Services at 777-6142 to make arrangements for appropriate accommodations.

Honor Code: The Honor Code applies to **all** work for this course. Students should review the Honor Code at academicintegrity. Students found violating the Honor Code will be subject to discipline.

Table 2: Spring 2022 Math 142 *Tentative* Schedule [Location: COL 1015]

Lecture #	Date	Text Sections	Topics
1	11-Jan (T)	5 4, 5 5 5 6, 8 1	Review definite integrals, Fundamental Theorem, Substitution
2	13-Jan (R)	8 2	Integration by parts
3	18-Jan (T)	8 3	Trig integrals
4	20-Jan (R)	8 4	Trig substitution
5	25-Jan (T)	8 5	Partial fractions
6	27-Jan (R)	8 8	Improper integrals
7	1-Feb (T)	8 9	Integrals applications
8	3-Feb (R)		
9	8-Feb (T)	10 1	Sequences
10	10-Feb (R)	10 2	Series
11	15-Feb (T)		Review
12	**17-Feb (R)**		**Exam I**
13	22-Feb (T)	10 3	Integral test
14	24-Feb (R)	10 4	Comparison tests
15	1-Mar (T)	10 5	Ratio and root tests
16	3-Mar (R)	10 6	Alternating series
	8-Mar (T) 10-Mar (R)		Spring break Spring break
17	15-Mar (T)	10 7	Power series
18	17-Mar (R)		
19	22-Mar (T)		Review
20	**24-Mar (R)**		**Exam II**
21	29-Mar (T)	10 8	Taylor and Maclaurin series
22	31-Mar (R)	10 10	Applications of Taylor polynomials
23	5-Apr (T)		
24	7-Apr (R)	11 1	Parameterized plane curves
25	12-Apr (T)	11 2	Tangents and arc length
26	14-Apr (R)	11 3	Polar coordinates
27	19-Apr (T)	11 5	Area and arc length in polar coordinates
28	21-Apr (R)		Review
	3-May (T)	**4:00-6:30 pm**	**Final Exam**