

**Math.1432-12007: Calculus II  
Course Syllabus - Spring 2017**

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**Course Number:** Math.1432  
**Section Number:** 12007  
**Lecture Time:** MW 6:00pm – 7:30pm  
**Delivery format:** Online  
**Prerequisites:** Math.1431

**Course Description:** Calculus of transcendental functions: additional techniques and applications of integration, indeterminate forms, improper integrals, Taylor's formula, and infinite series.

**Textbook:** The learning materials for Math 1432, including the textbook, are available online in electronic form (PDF) through [CASA](http://www.casa.uh.edu) website at [www.casa.uh.edu](http://www.casa.uh.edu). **All students are required to purchase an access code at the Book Store to access the learning materials.** The students have free access to [CASA](http://www.casa.uh.edu) for the first two weeks of classes (The deadline is January 29<sup>th</sup>). To have continuing access to all course materials at [CASA](http://www.casa.uh.edu), the students need to enter the access code, which should be purchased for \$55 from the University Bookstore

**The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.**

Upon successful completion of this course, students will understand and be able to apply the ideas of differential and integral calculus to any functions, polar coordinates and parametric curves. They will develop skill in techniques and further applications of integration. They will understand convergence of sequences and series and be able to test for convergence. They will understand and appreciate the importance of power series and Taylor polynomials. Students will be able to use graphical information and symbolic expression simultaneously in solving mathematical problems. They will be able to translate ordinary language descriptions of problems into mathematical expression, derive solutions by rigorous mathematical methods, interpret their results, and explain them.

**A student in this class is expected to complete the following assignments:**

1. 4 Regular Exams
2. Final Exam
3. Online Quizzes
4. Homework Assignments
5. Poppers/Lab Quizzes (in-class quizzes given daily during the online lecture/lab sessions).

**Components and Weights of Semester Assignments:**

- Test 1: 5%
- Test 2: 15%
- Test 3: 15%
- Test 4: 15%
- Final Exam: 25%
- Online Quizzes: 10%
- Poppers/Lab Quizzes: 5%
- Homework(s): 10%

**Grading Scale:** If you call your average “x”:

**As**  $90 \leq x$

**Bs**  $80 \leq x < 90$

**Cs**  $70 \leq x < 80$

**Ds**  $60 \leq x < 70$

**F**  $x < 60$

**Poppers/Lab Quizzes:** You will have daily poppers (short questions on the material from that day’s lecture or from the lectures prior to that day) every day, which will be given during the **online live lectures** and **recitation lab sessions**. You will find these assignments in your CASA accounts.

- The **online live lectures** will be held every **Monday/Wednesday 6:00-7:30pm**.  
Video recordings will be posted on the course webpage or on your CourseWare account.  
There will be attendance popper questions in each lecture. Students who do NOT attend an online live meeting will be required to complete the questions given in the lecture video and notes by Saturday of that same week. Students get the questions by viewing the completed notes and watching the posted video.  
**Note:** *Students are responsible for any content/announcements given during the live online lectures. Videos of the lectures are posted approximately 30 minutes after each class ends.*
- The **recitation (lab) sessions** will be held every **Tuesday/Thursday 8:30-10:00pm**.  
There is no separate recitation grade. You have signed up for lecture section and recitation (lab) section. The two sections are interwoven in the course, and a grade will be given for lecture course, representing the work in the combined classes. The lab session is a problem

working session that will meet twice weekly online. The lab attendance policy is the same as the lecture attendance policy above.

- The total number of popper/labquiz questions for the course will be counted, 85% of the total number of questions will be the 100%. For example, if we ask 5 questions each class for 24 classes, totaling to 120 questions, your grade will be calculated out of  $120(.85) = 102$  points.

**Online Quizzes:** The quizzes are located in the [CASA](#) CourseWare course website under the “Online Assignments” tab. The quizzes will close on the due dates given on CourseWare at 11:59 pm and will not re-open. One of the lowest quizzes will be dropped. You have 20 times to take each quiz. There is a 60 minute time limit for each quiz. The following table shows what sections each quiz covers. All of the quizzes are open starting the first day of classes.

Quiz	Sections Covered	Quiz	Sections Covered
Quiz 1	Integration review	Quiz 14	8.5
Quiz 2	7.2-7.3	Quiz 15	9.1
Quiz 3	7.3	Quiz 16	9.2
Quiz 4	7.4	Quiz 17	9.3
Quiz 5	7.4-7.5	Quiz 18	9.4-9.5
Quiz 6	7.5	Quiz 19	9.5
Quiz 7	Exponentials, Logs review	Quiz 20	9.6
Quiz 8	7.6	Quiz 21	9.7-9.8
Quiz 9	7.7	Quiz 22	10.1
Quiz 10	8.1	Quiz 23	10.2
Quiz 11	8.2	Quiz 24	10.3
Quiz 12	8.3	Quiz 25	10.4
Quiz 13	8.4	Quiz 26	10.5

**Homework:** Homework is going to be assigned weekly covering all the material seen during the prior week of lectures. You need to submit your homework via your [CASA](#) account.

- There are weekly assignments due every week starting the 2<sup>nd</sup> week of the semester.
- There are several grades that count in the homework category:
  - Written homework, problems from the textbook or assigned according to the instructor and uploaded into your [CASA](#) account.
  - Electronic multiple choice problems assigned by your instructor and entered on [CASA](#) CourseWare under the EMCF tab.
- All homework will be submitted in the [CASA](#) CourseWare website. See [https://www.math.uh.edu/~bekki/Math1431and1432\\_usingCASA.pdf](https://www.math.uh.edu/~bekki/Math1431and1432_usingCASA.pdf) for how to upload the homework.
- Two of the lowest homework assignment scores will be dropped.

**Discussion Board Participation:** There is a class discussion board located on CourseWare at <http://www.casa.uh.edu>. Students are expected to post a question or reply to a post once a week. The participation is strongly recommended. Posts must be related to the course content to count. See [https://www.math.uh.edu/~bekki/Math1431and1432\\_usingCASA.pdf](https://www.math.uh.edu/~bekki/Math1431and1432_usingCASA.pdf) for instructions on using the discussion board.

**Tests:** There will be 4 major tests, along with a mandatory final exam. The complete schedule is on your instructor's web page. All tests except Test 1, are taken at [CASA](#) testing center, with reservation. **You can NOT use calculators during the tests; study accordingly.**

- **Test 1:** Covers pre-requisite materials and will be online on CourseWare under Online Assignments with deadline to be **January 28, 2017**.
- **Test 2:** Covers chapter 7 and will be in the [CASA](#) testing center **February 20 – 22, 2017**.
- **Test 3:** Covers chapter 8 and will be in the [CASA](#) testing center **March 20 – 22, 2017**.
- **Test 4:** Covers chapter 9 and will be in the [CASA](#) testing center **April 14, 17 – 18, 2017**
  - Tests 2-4 and the final will be given in [CASA](#) located on the second floor of Garrison or in CBB, see the exam scheduler for details.
  - You can access the scheduler for these exams by logging into [CASA](#) Courseware.
  - The exams given in [CASA](#) will consist of both multiple choice and written questions.
  - The multiple choice questions will be machine graded and the written questions (free response) will be graded by the instructors and teaching assistants.
- **CALCULATORS ARE NOT PERMITTED.**
- There will be a practice test on Courseware for each exam.  
5% of your practice test score will be added to your exam score as bonus.
- The scheduler will be available approximately 2 weeks prior to the exam period.
- **Final Exam:** A comprehensive final exam will be given in [CASA](#).
  - The final will include chapters 7 through 10.
  - You can access the scheduler for this exam by logging into Courseware.
  - Dates: **May 7 – 10, 2017**.

**Late Assignments, Make-Up and Incomplete Policies:**

- This course is a cumulative course. You as a student need to keep up with the reading, homework assignments and exams. Thus late work or make-ups will not be accepted.
- The following is calculated for the final grade:
  - Two of the lowest homework assignments are dropped.
  - One of the lowest quizzes is dropped.
  - 85% of the total number of popper questions will be the 100%.
  - The final exam score can replace the lowest exam score.

**Incomplete policy:** A notation of "incomplete" may be given in lieu of a final grade to a student who has carried a subject successfully until the end of a semester but who, because of illness or other unusual and substantiated cause beyond the student's control, has been unable to take or complete the final examination or to complete some limited amount of term work.

**Special Accommodations:** Whenever possible, and in accordance with 504/ADA guidelines, the University of Houston will attempt to provide reasonable academic accommodations to students who request and require them. Please call 713-743-5400 for more assistance.

## **Calculus II Topics List**

### Chapter 7 - Applications of Integration

- 7.1 Integration Review
- 7.2 Area
- 7.3 Volume
- 7.4 Centroids
- 7.5 Arc Length and Surface Area
- 7.6 Differential Equations and Exponential Growth/Decay
- 7.7 Improper Integrals

### Chapter 8 - Techniques of Integration

- 8.1 Integration by Parts
- 8.2 Powers of Trigonometric Functions
- 8.3 Trigonometric Substitutions
- 8.4 Integrating Rational Functions
- 8.5 Numerical Integration

### Chapter 9 - Sequences and Series

- 9.1 Sequences and Convergence
- 9.2 Numerical Series and Convergence
- 9.3 Tests for Convergence
- 9.4 The Power Series
- 9.5 The Taylor Series

### Chapter 10 - Polar Coordinates and Parametric Equations

- 10.1 Polar Coordinates and Polar Curves
- 10.2 Area and Arc Length in Polar Coordinates
- 10.3 Parametric Equations
- 10.4 Derivatives for Curves Given Parametrically
- 10.5 Arc Length for Curves Given Parametrically
- 10.6 Surface Area