

# Andrews University

**Spring Semester 2014**

## **MATH-192 Calculus II**

This syllabus may be revised at any time at the discretion of the instructor.

### **Course Description**

Continuation of MATH 191. Riemann sums, Riemann integral, Fundamental Theorem of Calculus, techniques of integration, improper integrals, applications, sequences, series, and tests of convergence, error estimates, polar coordinates, parameterized curves, vectors, dot and cross products.

1. Integrals: Some Reviews of Basic, Substitution Rule, Integration by Parts, Additional Techniques of Integration, Integration using Tables, Improper Integrals
2. Applications of Integration: Areas, Volumes, Arc length, Average Value of a Function and Applications
3. Differential Equations: Modeling with Differential Equations, Directional Fields, Separable Equations, Exponential Decay and Growth, Logistic Equation and Application
4. Infinite Sequences and Series: Sequences, Series, Integral and Comparison Tests, Other Convergence Tests, Power Series, Taylor and Maclaurin Series, Binomial Series
5. Vectors and Geometry of Space: Three Dimensional Coordinate Systems, Vectors, Dot and Cross Product
6. Additional topics if time permits.

### **Course Pre/Co-requisites**

Prerequisite: Math 191 or 195.

### **General Class Information**

Location: HYH 111

Time/Day: MTWR 12:30-13:20

Credits: 4.0

### **Instructor Contact Information**

Instructor: Dr. Yun Myung Oh

Office Telephone: 269-471-3304

Email: [ohy@andrews.edu](mailto:ohy@andrews.edu) (best way to reach me)

URL: <http://www.andrews.edu/~ohy/>

Office Location: HYH124

Office Hours: To be posted. Also, feel free to schedule other times by appointment.

### **Student Contact Information**

Check your Andrews email address frequently. You are responsible for any information I send the class via the Andrews class email system.

### **Course Materials**

Required: Calculus, Concepts & Contexts, 4th Edition, by James Stewart, Brooks/Cole. For ISBN and price information, please see the listing at the Andrews University Bookstore [www.andrews.edu/bookstore](http://www.andrews.edu/bookstore).

**Graphic calculators and cell-phone calculators will not be permitted on the exams & you must bring a simple scientific calculator for every day of class.**

### **Course Content**

Ch. 5.5 through Ch. 9.4.

Basic techniques of differentiation and integration and knowledge of precalculus (the material in Ch. 1, including trigonometry) are expected.

## Course Objectives

Each student will

1. Recognize and use various techniques of integration.
2. Evaluate definite and improper integrals.
3. Determine the convergence or divergence of infinite series.
4. Evaluate definite integrals by numerical methods.
5. Derive power series for functions using these to help in differentiation, integration, and computation.
6. Learn some ideas of differential equations and multivariable calculus
7. Develop useful problem-solving techniques

## Homework, Quizzes, Worksheets

1. Daily assignments will be given on the page: <https://courses1.webwork.maa.org/webwork2/andrews-math192/> and details will be given at the first day of class.
2. Each paper assignment is due **at the beginning** of Monday's class. Please read the board or class webpage (<http://www.andrews.edu/~ohy>) carefully for the due date of every assignment.
3. **(VERY IMPORTANT!) No late homework and take-home quiz are accepted for any reason.** Instead, up to three times, your missed homework will be excused if you can bring me some valid official document when you have some emergencies.
4. There will be a frequent surprise quiz for each class and no make-up is available.
5. You can use your note and textbook for all worksheets provided in class and these should be finished in class unless other instructions are announced.
6. Solutions lacking neatness and/or proper evidence will be discounted at the grader's discretion and you must have your name, your box number and assignment number written clearly on every assignment.

## In-class Exams

There will be five 50-minute in-class exams. Make up exam will not be given without an *excuse from the proper authority*.  
The comprehensive Final Exam is **Tuesday 29 2014 at 1:30pm-3:30pm in HYH111**.

## Collaboration Policy

Collaboration on homework is permitted and even encouraged, but **each student must independently write up his or her own solutions** and any two identical works will receive no credit. There is no collaboration on exams.

## Assessment and Grading Scale

A course percentage grade will be calculated from homework & quiz & worksheets (10% each), the midterm exams (50%), and the Final Exam (20%). The final grade is determined by the scale:

93-100 A; 90-92 A-; 87-89 B+; 83-86 B; 80-82 B-; 77-79 C+; 73-76 C; 70-72 C-; 60-69 D; 0-59 F

Cutoffs may be lower if warranted. A grade of "I" is available only under the conditions stated in the Bulletin.

## Getting Help

There are three easy ways to get help.

- 1) Office Hours: TBA. Also, other times by appointment.
- 2) Math Center: HYH 112. Free math tutoring. The hours will be posted outside the door.
- 3) Student Success Center: success@andrews.edu. See [http://www.andrews.edu/academics/student\\_success.html](http://www.andrews.edu/academics/student_success.html).

## Other Course Policies

### Attendance Policy

Regular attendance is required of each student. Whenever the number of absences exceeds 20% of the total course appointments, the teacher may give a failing grade. Merely being absent from campus does not exempt the student from this

policy. Absences recorded because of late registration, suspension, and early/late vacation leaves are not excused. Three tardies equal one absence.

### **Academic Integrity Policy**

Honesty in all academic matters is a vital component of personal integrity. Breaches in academic integrity principles are taken seriously. Acts of academic dishonesty as described in the University *Bulletin* are subject to incremental disciplinary penalties with redemptive intent. Such acts are tracked in the office of the Provost. Repeated and/or serious offenses will be referred to the Committee on Academic Integrity for further recommendations on penalties, including dismissal.

### **Disability Accommodation**

If you qualify for special assistance under the American Disabilities Act, please contact the Student Success office at Nethery Hall 100 or [disabilities@andrews.edu](mailto:disabilities@andrews.edu).

### **Professionalism**

Respect for each student and the teacher will be shown at all times. In order to prepare students for the professional world, certain behaviors/activities are not allowed in the classroom.

- Cell Phones, Personal Laptops, and Recording devices: Cell phones should be silenced before entering the classroom. Picture-taking during class is not allowed. Recording devices are allowed only if pre-approved by instructor, and if approved, under no circumstance are recordings—visual or verbal—to be posted on a public website. Laptops, iPads, etc. are not to be used unless requested by the instructor. It is disrespectful and unprofessional to use these devices inappropriately during class.
- Eating in class: Do not bring food to class. Water and a hot drink are permitted.
- Talking; Walking in and out of class: Don't talk when the instructor is talking. Use the restroom before you enter the classroom. It is disrespectful and unprofessional to walk in and out of class unless you have an emergency.
- Your personal presentation: Your attention to detail, demeanor, and attire factor into how you are perceived as a professional. Active participation in class discussions and critiques is an essential part of learning. Without participating and expressing opinions and thoughts, it is impossible to clarify your goals and develop a personal style.

### **Emergency Protocols**

Andrews University takes the safety of its student seriously. Signs identifying emergency protocol are posted throughout buildings. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting that specific location. It is important that you follow these instructions and stay with your instructor during any evacuation or sheltering emergency.

### **Excused Absence**

"Excuses for absences due to illness are granted by the teacher. Proof of illness is required. Residence hall students are required to see a nurse on the first day of any illness which interferes with class attendance. Non-residence hall students should show written verification of illness obtained from their own physician. Excuses for absences not due to illness are issued directly to the dean's office. Excused absences do not remove the student's responsibility to complete all requirements of a course."

### **Teacher Tardiness**

"Teachers have the responsibility of getting to class on time. If a teacher is detained and will be late, the teacher must send a message to the class with directions. If after 10 minutes no message has been received, students may leave without penalty. If teacher tardiness persists, students have the right to notify the department chair, or if the teacher is the department chair, to notify the dean."