

LECTURE: *MWF 11:30-12:20 in A-220 Wells Hall*

INSTRUCTOR: Prof. BAISHENG YAN

- **Office:** D-308 Wells Hall - **Phone:** 353-9692

- **Email:** yanb@msu.edu (*the best way to contact me outside my office hours*)

- **Class Page:** <https://math.msu.edu/classpages/default.aspx?course=320§ion=002>

- **Office Hours:** *MW 2:00–3:30; other times by appointment only*

TEXT: **Understanding Analysis** (*any edition is fine*), by STEPHEN ABBOTT.

Quickly read the section of the text to be covered before coming to each class in order to have an idea of the material to be presented. After class, read (and if possible rewrite) your class notes. Then read the text material thoroughly before attempting the assigned problems.

COURSE CONTENTS: The course will cover most of the materials of Chapters 1-6 of the text, including properties of the real numbers, limits of sequences and series, limits and continuity, properties of continuous functions, derivatives in one variable, sequences and series of functions, power series and uniform convergence. The objective is to obtain a deep understanding of the theory that underlies the elementary calculus and to learn how to do rigorous mathematics.

PREREQUISITES: MTH 299 and some courses of elementary calculus and linear algebra.

ATTENDANCE: You are expected to attend all class meetings. Any changes on this syllabus and the assignment of homework will be announced during the class meetings. Moreover, you should spend six to nine hours of study each week outside of class (2-3 hours for each scheduled class hour) in order to be successful.

HOMEWORK/EXAMS: Your course work will include homework, midterm exam and final exam.

- There will be **seven homework assignments**, mostly consisting of the suggested homework problems listed at the end of this syllabus. Homework assignment papers will be handed out during the lectures and collected about a week later. *No late homework will be accepted; **you must also follow the academic integrity policy given below on all your homework.***
- There will be **one midterm exam** and the **final exam**. The exams are **open-booked** (i.e., *textbook/class notes are allowed during the exam*), and most exam problems will be similar to the homework problems – they are another way to test your homework effort. Therefore, it is important that you work on all suggested homework problems and review the homework to prepare for the exams.
- The midterm exam is scheduled on **Wednesday, 2/28** given during the lecture hour. The final exam is on **Thursday, 5/3, 12:45pm – 2:45pm in A220 Wells Hall (the classroom)**.

- ***Policy on Make-up Exams:*** Make-up exam is given only in the case of an excused absence (e.g., documented medical excuse, religious observance, or conflicting University activity that cannot be rescheduled). Students should inform me ahead of time of any schedules that conflict with the scheduled exam dates. Missing an exam with no valid excuse will result in a 0 point.

GRADING POLICY: Seven homework assignments will add up to 225 points (45%); the midterm exam is worth 100 points (20%); the final exam counts 175 points (35%). Your course grade will be determined by your total accumulative points out of 500 total possible points according to the following cut-line scales:

- ***Approximate cut-line scales for the grades:*** (If necessary, the instructor may adjust the cut-lines based on the overall performance of the class.)
 90% – 100% is 4.0; 85% – 89% is 3.5; 80% – 84% is 3.0; 70% – 79% is 2.5;
 65% – 69% is 2.0; 60% – 64% is 1.5; 50% – 59% is 1.0; below 50% is 0.0.
- ***Borderline Cases:*** If your score is near a border line, it will be handled individually with the consideration of other factors such as attendance, study effort, classroom contributions, performance over time, clarity of homework and exams, etc. By doing this, your grade could be either raised or lowered.

ACADEMIC HONESTY: The University’s policy concerning academic integrity is covered in the Spartan Life booklet, General Student Regulations. According to the handbook, “*no student shall claim or submit the work of another as one’s own*”. This applies to all exams and, especially, the collected homework: **you must turn in the homework that is your own work**. However, you are encouraged to work on the problems in group with other students before you write down your own work.

IMPORTANT DATES: (See more details at <https://reg.msu.edu/R0Info/Calendar/Academic.aspx#divImportantDates>)

- *Monday, 1/8* – Classes begin.
- *Friday, 1/12* – Open adds end.
- *Monday, 1/15* – Martin Luther King Day - Classes cancel.
- *Friday, 2/2* – Last day to drop with refund.
- ***Wednesday, 2/28*** – Middle of Semester. Last day to drop a course without a grade being reported. **Midterm Exam** scheduled.
- ***Monday, 3/5 – Friday, 3/9*** – Spring break.
- *Friday, 4/27* – Last day of classes.
- ***Thursday, May 3 2018, 12:45pm - 2:45pm in A220 Wells Hall.***

SUGGESTED HOMEWORK PROBLEMS

(The sections and problems are as in the first edition of the textbook)

Section	Problems
1.2	1, 3, 5, 6, 9–11
1.3	2, 4–8
1.4	1–8
1.5	3, 4
2.2	1–4, 6–8
2.3	1–4, 6–10
2.4	2–5
2.5	1, 3, 4, 5
2.6	1, 3, 4
2.7	1–6, 9, 10, 11
3.2	1–5, 7, 9, 11, 12
3.3	1, 4, 5, 6, 7
4.2	1, 2, 3, 5, 6, 9
4.3	1–5, 7, 9, 11
4.4	1, 2, 4, 6–10
4.5	2–7
4.6	3, 4, 5
5.2	1, 2, 4, 5, 8
5.3	1–6
6.2	1–5, 7–11
6.3	1, 2, 3, 4
6.4	3, 5, 6, 7
6.5	1, 2, 3, 5, 7, 8
6.6	3, 5, 6, 9–12