## Math 451 Class Policies - Spring 2017

Instructor: Dr. Kurt Ludwick
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Office Hours: 108 Devilbiss hall; MWRF 11-12, T 2-3, and by appointment
Course Textbook: "An Introduction to Analysis," Second Edition, by Bilodeau, Thie and Keough
Class Meetings: MWRF, 10-10:50 AM, 109 Henson Hall

## Objective

To develop the foundations for the analysis of real-valued functions. The primary focus will be on proof.

## Tests

There will be three tests given during the semester, plus a cumulative final exam. Altogether, these tests will be worth $50 \%$ of your semester average going into the final exam. See "Evaluation" (below) to learn how the final exam affects your course grade.

To receive credit for correct answer on a test, all work must be shown, and your work must be neat and organized. You must show all of the necessary steps to solve the given problem, and/or (if a proof is required) a clear, concise, logical argument. You should practice this standard of writing mathematics when doing the homework (see below).

Tentative test dates
Test \#1: Friday, February 24
Test \#2: Friday, March 31
Test \#3: Monday, May 8
Final Exam: Tuesday, May 23, 8:00-10:30AM
The "tentative" test dates are subject to change, if necessary. Any changes to these dates will be announced in class with as much advance notice as possible. The final exam date and time is in accordance with the Salisbury University Final Exam Schedule.

If you cannot be in class on a test date, please let me know as soon as possible - preferably well in advance of the test date - and be ready to provide written verification for your excuse if requested. If I accept your reason for missing the test, then I will attempt to arrange to have you take the test at an alternative time and location. If we are unable to make such arrangements, I will use your other scores in the course (e.g. other test scores, homework average, etc.) to determine your semester average (see "Evaluation" below).

## Homework

## Collected Homework:

There will be frequent collected homework assignments. These assignments will usually consist of exercises from the text. The work you turn in for collected homework assignments is expected to be neat, legible and well organized. If your collected homework is difficult to read or is poorly organized, then it will not be accepted. If more than one sheet of paper is being turned in, make sure your name is on each page, and clip or staple the pages together.

Each collected assignment will be graded according to a "check" system, which is based primarily on whether you made a sincere effort to complete the assignment:

- A checkmark (or "check") grade indicates that the assignment was adequately done - not necessarily that it is entirely correct, but rather that you made a reasonable attempt, showed your work and/or explained your answers, and clearly put an appropriate amount of time and effort into the assignment.
- A check-plus indicates superior work - that is, your answers are entirely (or almost entirely) correct and well explained, with all necessary work shown. Also, a check-plus requires that the above policies on neatness, legibility, etc. are followed. (For example - an assignment on which all answers are correct and well justified, but which is difficult to read or otherwise sloppy, will receive only a check rather than a check-plus.)
- A check-minus indicates inadequate work that is only minimally acceptable but inadequate due to low quality of work and/or what appears to be insufficient timed and effort spent on the assignment.
- Homework that is unacceptable - that is, which shows little to no effort, or is completely disorganized and/or impossible to read - will be returned ungraded. In this case, you will receive no credit for the assignment.

The details of how the check system will be converted into a percentage score are as follows: each "check" grade will count as $80 \%$ or your test average, whichever is higher (so that getting checks or better on all homeworks can only help your grade, not hurt it); each "check plus" will count as $100 \%$; each "check minus" will count as $50 \%$.

Late homework may or may not be accepted, at my discretion. In most such cases, your grade will be reduced as a result of handing in your homework late.

## Boardwork

At the beginning of the semester, the class will form groups, each consisting of 4 or 5 members. Each group will be given a large set of problems from the book from which to select problems to present on the board. (You may also present a problem from the book that has not been assigned to any group, as long as you check with me first to make sure it's acceptable.)

I would like for the better part of each class meeting to consist of students presenting homework problems on the board, followed by class discussion of these problems. Your board work grade will be determined primarily by the number of problems you successfully present. Some consideration may also be given to the average level of difficulty (i.e., higher if you tend to present more challenging problems, lower if you always present the easiest problems available). If a problem you present is not initially correct, but can be fixed after class discussion, you will still receive credit for it.

I expect each student to present a problem at least three times during the semester. I'll come up with a precise formula later in the semester. Roughly speaking, I expect a student who presents two problems (of average difficulty) will get a score of about $10 / 20$, and a student who presents three (average) problems will get about $14 / 20$. Beyond that, board work scores will be relative - whoever does the most in the class will get 20/20; others will get less.

NOTE: The preceding paragraph IS NOT set in stone. I reserve the right to modify how I score board work based on how the semester progresses. By mid-semester I will review and update this section of the policies.

## Class Meetings

As noted above under "board work," I would like for the majority of class meetings to consist of presentation and discussion of your work. In turn, I intend to keep lecture to a minimum. I will generally introduce new sections by outlining the main ideas (e.g. some definitions, a few important examples, prominent theorems), but beyond that my intention is for YOU to read the book and to learn the material by working on, presenting, and discussing examples from the exercises.

I will lecture on additional topics from the book (e.g., a proof you don't entirely understand, or a definition or theorem whose statement is unclear to you) by request - just ask! But again, unless necessary, I would rather that we spend most of our time discussing your work, rather than by having you listen to me talk about analysis. I believe you will learn more about mathematics from the former than the latter.

## Portfolio

During the semester, you will assemble a portfolio consisting of about five of your favorite proofs from the semester, with accompanying narratives. These will typically be drawn from collected homework problems and/or problems presented as board work. More information about the portfolio assignment will be provided later in the semester.

## Evaluation

Your semester average up to, but not including, the final exam will be determined by the following scores: Test \#1, Test \#2, Test \#3, Boardwork, Homework, Portfolio. These scores will be weighted roughly equally. Details will be determined later, but barring unforeseen circumstances (such as a missed test, prolonged absence due to illness, etc.), each score will be weighted between $15 \%$ and $20 \%$ of your semester average.

Your grade for the course will be determined by your semester average (described above) and by your letter grade on the final exam, as indicated by the Course Grade Table below. On the table, your semester average (not including the final) indicates your row of the table; your letter grade on the final exam then determines your overall grade for the course.

Here is a list of possible final exam grades, with explanations as needed. All percentage ranges/estimates take into account any "curve" that may be used in scoring the exams.

- A+ - requires a $100 \%$ score (curved) on the final exam
- A - 90-99\% score
- B-80-89\%
- C $-70-79 \%$
- D - 60-69\%
- "D-minus" - 40-59\%. This is technically a failing grade for the exam itself, but for the purpose of calculating course grades, I distinguish between an D- (which indicates some degree of preparation and understanding of course content, even if not at a passing level) and an F .
- F - less than $40 \%$. This grade is given to a student who demonstrates a complete lack of preparation. This is counted as the equivalent of not showing up for the final exam at all.

COURSE GRADE TABLE

|  | COURSE GRADE |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Average going into the final exam | A | B | C | D |
| High A (95\%-100\%) | C | D- | F | --- |
| Low A (90\%-94\%) | B | D- | F | --- |
| High B (85\%-89\%) | A | D | D- | F |
| Low B (80\%-84\%) | A+ | C | D- | F |
| High C (75\%-79\%) | --- | B | D | D- |
| Low C (70\%-74\%) | --- | A | D | D- |
| High D (65\%-69\%) | --- | A+ | C | D- |
| Low D (60\%-64\%) | --- | --- | B | D |
| High F (50\%-59\%) | --- | --- | --- | D |
| Low F (0\%-49\%): F for the semester, regardless of final exam grade. |  |  |  |  |

## Examples:

- Suppose you had an $83 \%$ average going into the final. This would put you in the "Low B" row of the table, which means (reading across that row of the table) that you would earn an A for the course by getting an $\mathrm{A}+$ on the final. If you did not get an $\mathrm{A}+$ on the final, then you would need at least a C on the final exam to get a B for the course. If you did not get a $C$ or better on the final, then a $D$ - on the final exam would give you a C for the course. The "F" in the next column indicates that if you failed the final, you would still get a $D$ for the semester.
- Suppose you had a 99\% average going into the final. This puts you in the "High A" row of the table. This row indicates that you would get an A for the course as long as you earned a C or better on the final exam. However, if somehow you didn't get a C or better on the final exam, then a D- or better on the final would still give you a B for the course. An F on the final would drop you all the way down to a C for the course.
- Suppose you had a $72 \%$ average going into the final. The "Low C" row of the table indicates that an A on the final exam would give you a B for the course; otherwise, a grade of $D$ or better on the final would give you a C for the course. If you didn't get a $D$ or better on the final exam, then an $E$ on the final would give you a $D$ for the course. An $F$ on the final exam would result in an $F$ for the course.

See me if you have any questions about how to read the course grade table.

## Attendance

As a student in this class, you are expected to attend all class meetings. You are responsible for all material covered in class, including test dates and homework assignments. If you know that you must miss a particular class meeting, let me know ahead of time, and make sure to get the notes and assignments me or from a classmate.

If you miss class more than once per three weeks on average, or are late more than once per week on average, then your grade going into the final exam may be lowered by as much as one letter grade, at my discretion. If you are at risk of a grade penalty due to attendance and/or late arrivals, you will receive a warning before any such penalty is applied. Extenuating factors (illness, family emergencies, etc.) will be taken into consideration.

## Collaboration

Students are encouraged to form study groups, and to discuss any problems from the text that are not being turned in as homework. However, for graded assignments, you should be working on your own. The standard that applies to any writing-intensive course applies here as well: if you turn in an assignment with your name on it, you are asserting that what you have turned in is entirely your own work.

## Academic Integrity

Unless specifically instructed otherwise, you are to do your own work on all graded assignments such as tests and collected homework. A student who is caught cheating on any graded assignment will receive a zero on that assignment, and may (at my discretion) receive an F for the course as well. If you receive an F for the course due to academic misconduct, you will not be permitted to withdraw to avoid the F on your grade report. For more details, please read the University policy on academic misconduct:
http://www.salisbury.edu/provost/AcademicMisconductPolicy.html

## Electronic Device Policy

Any device capable of receiving calls, text messages, etc. is to be turned off and kept out of sight during class meetings - particularly during tests. (Note that this means you cannot use such a device as your calculator during a test.)

Computers and/or tablets may be used during class meetings (except during tests, at which time they are prohibited). Any such use during class must be appropriate to the classroom environment (e.g. taking notes, or finding a web page that is relevant to current class discussion). If your activity is inappropriate and/or distracting to any of your classmates, then you will be asked to discontinue using your device for the rest of the class meeting.

Repeated violations of this policy may result in a grade penalty, at my discretion.

## Grade Notification

I intend to periodically post grades on MyClasses. To find out where you stand in the course, consult MyClasses or (preferably) come to my office to discuss your grades confidentially. At the end of the semester, I intend to post final exam and course grades on MyClasses as soon as quickly as possible.

## Disability Support Services

If you require an accommodation in this course due to the effects of a documented disability, contact me as soon as possible to arrange for a meeting to discuss accommodations. In particular, see me For further information on Salisbury University's disability accommodations, visit the Disability Support Services website: http://www.salisbury.edu/students/dss/

## Henson School Course Repeat Policy

This course is subject to the Henson School Course Repeat Policy. The short version of this policy is that a student is allowed to repeat a Henson course (due to a poor grade or withdrawal on the first attempt) at most one time without special permission. For more details, visit the Henson Course Repeat Policy page at http://www.salisbury.edu/henson/advising/course_repeat_policy.html .

If you have any questions about the class policies or about the course in general, please send me an email or drop by my office to ask. In particular, please address any questions or concerns about the class policies during the drop-add period (i.e. the first week of classes).

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1/29/17

