Drake University

Math 70: Calculus II Online

Summer 2020

Instructor: Milan Sherman

Email: [milan.sherman@drake.edu](mailto:milan.sherman@drake.edu)

**Text/Calculator**: Calculus Early Transcendental Functions, 6th Edition, by Larson and Edwards. Any graphing calculator will work for the course.

You will need WebAssign for homework assignments. After you create a log in, the class key for WebAssign is drake 5661 6982. If you don’t have an access code yet, you can purchase one through the WebAssign portal (webassign.net).

**Grading:** Grades will be weighted in the following areas:

Homework: 50%

Chapter Exams: 50%

**A** 93 – 100

**A-** 90 – 92

**B+** 87 – 89

**B** 83 – 86

**B-** 80 – 82

**C+** 77 – 79

**C** 73 – 76

**C-** 70 – 72

**D+** 67 – 69

**D** 60 – 66

**F** 59 or less

**About this course**

This course is designed to address the major topics and applications of integral calculus, including differential equations, and sequences and series. Although all of the assignments are available at the beginning of the course, certain assignments are due each week (see the schedule at the end of the syllabus). This will help you to keep up with the material, while still allowing students to work ahead if they want to.

**Course Learning Tools**

**Video Lectures**

I have created brief (15-30 minutes) video lectures for each section in the text which are posted in Blackboard. You may want to take notes during the lectures (just as you would in class) so you can easily reference them later on. Keep in mind that since these are video lectures, you can pause, rewind, re-watch, etc. There are additional videos embedded in the e-copy of the text that comes with WebAssign.

**Web Assign**

WebAssign will be used for online homework assignments and chapter exams. These are generally fill-in-the-blank types of problems. As WebAssign is an online suite associated with our textbook, the exercises will be very similar to those found in your text. One difference is that the problems are algorithmic, which means that while the basic question remains the same, a few numbers in each problem will be different for each time the assignment loads. A few important notes about WebAssign:

* **Getting started with WebAssign:** In order to learn how to input answers using mathematical notation correctly, please be sure to complete the *Getting started with WebAssign* assignment before beginning of the graded assignments so that you don’t lose points unnecessarily.
* **Ask your Instructor:** WebAssign has an “Ask your Instructor” feature that can be used with any particular problem in an assignment. I strongly encourage students to use this feature (instead of email) if you have a question about problem, as it will show me the problem and your current answer, which allows me to give you a more specific answer to your question.
* **Homework:** homework assignments are untimed, and you are allowed three attempts on each. Your last attempt will be your grade for the assignment. Due dates for each assignment will be posted in WebAssign. Extensions can be requested on a homework assignment within WebAssign. The first request will be granted without penalty, regardless of the reason. Subsequent requests will be granted with a 50% penalty, regardless of the reason. After each attempt you should be able to check to see which problems you got wrong, and after the due date you should be able to check the solutions, which you will want to do before the chapter exams.
* **Chapter exams:** there will be four comprehensive chapter exams (see the schedule below) that will consist of a subset of problems very similar to those included on the homework assignments. Three important ways that the exams differ from the homework:
  + Only one attempt per problem is allowed for the chapter exams
  + Chapter exams are timed (2 hours)
  + You must submit your written work for exams, showing all work including the final answer. You may scan your work or take a picture of it with your phone, and upload it Blackboard. Written work should be submitted no later than 24 hours after the exam is due in order to receive credit for your exam.

The idea is that you will use the feedback on the homework assignments to learn from your mistakes before taking the exam.

**Discussion Board**

I will directly answer any questions about the video lectures. I encourage students to work together and share ideas on homework assignments via the discussion board. If you have a question about a specific problem in WebAssign, use the Ask your Instructor feature in WebAssign.

**Late Work/Makeup Policy**: The weekly deadlines are to keep you up with the material in a course that is being offered at an accelerated pace. Falling behind even a little will compound quickly. Therefore, homework, exams and labs must be turned in by the deadline specified - I will not accept late work. If you have extenuating circumstances that you anticipate (for example, being away without internet access for a period of time), please try to work ahead in anticipation of those circumstances, and/or contact me *beforehand* if you foresee needing an extension.

**Disability accommodations:** The instructor will be happy to discuss any academic accommodations needed for students with disabilities. However, any student seeking accommodation must coordinate them with Student Disability Services (contact Michelle Laughlin, [michelle.laughlin@drake.edu](mailto:michelle.laughlin@drake.edu), (515) 271-1835). No retroactive accommodations will be made.

**Academic Integrity:** All students are expected to know and abide by the Drake University Academic Integrity Policy:

<http://www.drake.edu/studentrecords/academicpolicies/academicintegritypolicy/>

**Topics to be addressed**

5.5 Integration by Substitution

5.6 Numerical Integration

5.7. Log Integration

6.1 Slope Fields

6.2. Differential Equations: Growth and Decay

6.3. Differential Equations: Separation of Variables

7.1 Are of a Region between two curves

7.2. Volume: The Disk Method

7.3  Volume: The Shell Method

7.4. Arclength and Surfaces of Revolution

8.1 Basic Integration Rules

8.2. Integrations by Parts

8.3. Trigonometric Integrals

8.4. Trigonometric Substitution

8.7. Indeterminate Forms and L’Hopital’s Rule

8.8. Improper Integrals

9.1 Sequences

9.2 Series and Convergence

9.3 The Integral Test and p-Series

9.4 Comparisons of Series

9.5 Alternating Series

9.6 The Ratio and Root Tests

**Summer 2020 Schedule**

The following schedule denotes which homework sections and exams are due each week.

Week #1 (due 6/14) Getting Started with WebAssign, HW sections 5.5, 5.6, 5.7, 5.8

Week # 2 (due 6/21) HW Sections 6.1, 6.2, 6.3, Chapter 5 & 6 Exam

Week # 3 (due 6/28) HW Sections 7.1, 7.2, 7.3, 7.4 & Chapter 7 Exam

Week # 4 (due 7/5) HW Sections 8.1, 8.2, 8.3, 8.4

Week #5 (due 7/12) HW Sections 8.7, 8.8 and Chapter 8 Exam

Week # 6 (due 7/19) HW Sections 9.1, 9.2, 9.3, 9.4

Week # 7 (due 7/26) HW Sections 9.5, 9.6 and Chapter 9 Exam

All assignments are due by midnight on the date indicated (generally Sunday at 11:59pm) . Due dates for homework and exams are also listed in WebAssign.