BOSTON
COLLEGE

MATH 1100 – Calculus I (4 credits) – Fall 2017

Section 13   MWF   2:00PM   Fulton 230
Section 14   MWF   3:00PM   Cushing Hall 001

You are *required* to also register for one of the following **discussion groups**. Once registered, you are not permitted to switch groups except under exceptional circumstances.

MATH 1125 01   Tue   12:00PM   Gasson Hall 309
MATH 1125 02   Tue   01:00PM   Gasson Hall 309
MATH 1125 03   Tue   02:00PM   Gasson Hall 302

Instructor

Patrick Orson
Office: Maloney 540
Office hours: Mon + Wed 12:00-01:00PM, and Fri 10:00AM-12:00PM
patrick.orson@bc.edu

Please use you BC email address when contacting me. Messages from other email providers may be automatically deleted without being opened.

Teaching assistant

Ian Hoover
Office: Maloney 537
Office hours: Mon + Tues 04:00-05:00PM, and Wed 01:00-02:00PM
ian.hoover@bc.edu

Course description and prerequisites: MATH 1100 is a first course in single-variable calculus, intended for Biology, Computer Science, Economics, Management, and Premedical students. It is open to others who are qualified and desire a more rigorous mathematics course at the core level.

MATH 1100 is not open to students who have completed a calculus course at the college level. Students contemplating majors in Chemistry, Computer Science/B.S., Geology/Geophysics, Mathematics, or Physics should enrol in MATH 1102 Calculus I for Math and Science Majors, rather than MATH 1100. More information to help you choose the right calculus course for you is available at https://www.bc.edu/bc-web/schools/mcas/departments/math/undergraduate/about-calculus.html.

The prerequisites are standard high-school algebra, including trigonometry and exponential and logarithmic functions. No previous experience of calculus is necessary. I will begin the course with a brief review of polynomials, trigonometric, exponential, and logarithmic functions. I will then introduce the big concepts of *limit* and *derivative*. We will spend some time learning tools to calculate and manipulate these things. We will then learn how to apply all of this to solve a variety of problems, including applications of differential calculus to real-world problem areas. An introduction to integration concludes the course.

Textbook: *Single Variable Calculus (Early Transcendentals)* – **Stewart, custom edition for Boston College**. The custom addition comes with an access code for WebAssign, an online tool which will be used throughout the course. Be careful to keep this code.

- If you want to buy the paper book, buy the custom edition in the BC bookstore.

- If you do not need a paper book you can buy the WebAssign access code online. This also gives you access to an online version of the book. Go to `www.webassign.net` and follow the instructions.

WARNING! The custom edition is based on the eighth edition of the Stewart textbook, which is the newest edition. Buying the non-custom, full eighth edition will not give you WebAssign access. Buying the access code separately and buying the non-custom edition will cost you more than simply buying the custom version from the BC bookstore.

Syllabus: The following material from the Stewart textbook will be covered.

- Chapter 1, all sections. Appendices A, B, D.

- Chapter 2, Sections 1–3, 5–8.

- Chapter 3, Sections 1–10.

- Chapter 4, Sections 1–7.

Course website: The course website is supported by Canvas (access through Agora). Use your BC username and password.

WebAssign: Register for our course on WebAssign using your individual access code and the class key. The class keys are as follows. Section 13: bc 0084 7741, Section 14: bc 2502 0174.

Calculators: You do not need a calculator for this course. Moreover, calculators will not be permitted in any of the exams (quizzes, midterms and final).

Homework and assessment: There are several methods of continuous assessment and homework in this course, in addition to a final exam.

- **Quizzes**

  Quizzes are five-minute long tests conducted by the TA at the start of each meeting of the discussion group. The lowest scoring two of these will be dropped from your final grade. No make-up quizzes will be given.

- **Written homework**

  Each week you will be assigned one piece of written homework, posted on the Canvas course website. Solutions will be posted after the homework due date. Solutions must be submitted on 8.5x11 paper, clearly laid out – do not submit torn pages. If there are multiple pages, you should staple them together, or they may get lost. Always show all your work and write clearly. If you make a mistake, start writing afresh – do not submit rough work with many crossings-out. If the grader cannot read or understand your work, you will receive no credit! If you know you will have to miss class on a day a homework is due, ask a fellow student to put it in the right folder for you on the due day. No late homework will be accepted. Contact me in advance if you have to be excused for a homework for a valid reason.

- **WebAssign homework**

  Each week, online homeworks will be posted on WebAssign for you to try. These homeworks are designed to help you keep up with the course and give you immediate feedback as you can see the solutions straight away. They do not count towards the final grade, they are a tool to help you learn. To reinforce your learning of a concept, try to do the parts of the homeworks corresponding to a lecture shortly after the lecture. Use your class notes, the section of the book and the online homework simultaneously. Practice is often needed with the online homeworks

- **Midterms and final exam**

There will be three in-class exams (midterms), held at your usual class time. There will be one final exam. For the midterms and finals you are permitted to take one double-sided page of notes (8.5x11 paper). Calculators are not permitted in the midterms, nor the final exam.

Midterm 1	**Wednesday 27th September**	Covers material from Chapters 1 & 2.
Midterm 2	**Wednesday 25th October**	Covers material from Chapters 2 & 3.
Midterm 3	**Friday 17th November**	Covers material from Chapters 3 & 4.
Final exam	**4:00PM, Friday 15th December**	Covers all material from the course.

Unexcused absence from any exam will earn a zero; no make-up exam will be given without legitimate and documented reasons. Contact your Dean if you cannot get a doctor's note.

There is a make-up final exam on Tuesday 19th December. You may only take this exam if you know you have more than two exams scheduled on Friday 15th December. **15th and 19th of December are very late dates! Make your travel plans accordingly.** If you are comparing this with the exam schedule, note that this is a large course so it is a 'common final', so does not follow the calendar of the regular exam schedule.

Approach to classes and learning: You are expected to attend all classes and discussion groups. Classes start on the hour. Be respectful of your fellow students by being on time. Cell phones are to be turned off during class. Laptops are not to be used during class.

My objective, and the objective of BC, is to provide you with as many tools and resources as possible for you to master this course and find it rewarding. You will get the most out of this course by engaging with it all the way through the semester, and practicing the material continuously. Ultimately, you are responsible for your own learning, but a lot of help is available for this course. If you are struggling with something, react quickly! Contact me or the TA and/or come to my office hours or those of the TA. We are always very happy to chat with you about the course. And don't forget about your classmates! Discussing mathematics together can be one of the most effective and rewarding ways to learn something you find tricky (although work you submit must ultimately be your own and not paraphrased from someone else). In addition, you may be interested in the tutoring services:

- **Tutoring services:** Walk-in tutoring, usually in Maloney 536 – check the room and schedule on Canvas. Connor Family Learning Center, 2nd floor, O'Neill Library by appointment, call (617) 552-0611.

If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan, (617) 552-8093, `kathleen.duggan@bc.edu`, at the Connors Family Learning Center (CFLC) regarding learning disabilities and ADHD, or the Disability Services Office (DSO) regarding all other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.

Academic Integrity: Boston College, and I, take academic integrity *very* seriously. Any work with your name on is presumed to be your own. If you are found to have violated the university's Academic Integrity Policy there will be serious consequences, beginning with the reporting of the incident to the Dean. Please read more about this at `http://www.bc.edu/integrity`.

Grade determination: There are two options for how your grade for this course will be calculated. Whichever gives you the higher grade will be used.

	Option 1	Option 2
Quizzes	0%	10%
Written homework	12%	12%
Best midterm score	20%	20%
Other two midterm scores	16% each	16% each
Final exam	36%	26%