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Carleton University, School of Mathematics and Statistics  
Math 1152A • Introductory Algebra I  
Course Outline • Fall Term 2021

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- INSTRUCTOR:** Brandon Fodden [brandon.fodden@carleton.ca](mailto:brandon.fodden@carleton.ca)  
Online office hour: Wednesday 12:30 - 1:30 p.m. or by appointment
- LECTURES:** Online and asynchronous, posted Tuesdays and Thursdays
- TUTORIAL:** Tuesdays at 4:05 – 5:25 p.m.
- PREREQUISITES:** Ontario Grade 12 Mathematics: Advanced Functions, and Ontario Grade 12 Mathematics: Calculus and Vectors with grades of at least 75% in each; or MATH 0005 and MATH 0006 with grades of at least B in each; or equivalents; or permission of the School
- REFERENCES:** [A First Course in Linear Algebra](#) by Robert A. Beezer  
[Linear Algebra Done Right](#) (3rd edition) by Sheldon Axler  
(the above book is free online from the Carleton library)  
[Linear Algebra Done Wrong](#) (latest edition) by Sergei Treil
- GRADING SCHEME:**
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| Assignments (7) | 35% |
| Quizzes (4)     | 40% |
| Final exam      | 25% |

**Topics:** Properties of numbers. Modular arithmetic. Fields, including complex numbers and finite fields. Vector spaces. Matrix algebra. Solutions of linear systems. Linear dependence. Spanning sets. Bases. Subspaces. The rank-nullity theorem. Linear transformations. An emphasis is placed on proofs and theory.

**Pregnancy or religious obligation:** Write me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see the Student Guide.

**Students with disabilities requiring academic accommodations** in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC every term to have a Letter of Accommodation sent to the Instructor by their Coordinator. In addition, students are expected to confirm their need for accommodation with the Instructor no later than two weeks before the first assignment is due or the first in-class test/midterm. If you require accommodations only for formally scheduled exam(s) in this course, you must request accommodations by the official accommodation deadline published on the PMC website.

## COMMENTS:

- All times given in this document refer to the EDT (eastern daylight time) timezone, in which Ottawa is located. All course material is posted on Brightspace. Be sure to check your Carleton email address throughout the term, as this is how I will communicate any course updates and information. This course is blended, which means that there are both asynchronous and synchronous components.
- On each Thursday beginning with September 23, there will either be an assignment due or a quiz taking place.
- Assignment due dates are the following Thursdays: September 23, October 7, October 14, November 4, November 11, November 25, and December 2. Assignments will be posted a week before they are due, and will cover the material from the lectures that are posted on the days up to and including the day the assignment is posted. Students must write their own assignments in their own words, but are allowed to discuss the questions with others as they work on it.
- Quizzes will take place on the following Thursdays: September 30, October 21, November 18, and December 9. **The quiz questions will be posted at 2:45 p.m., and the quiz is due by 3:30 p.m.** The quiz is designed to take about 30 minutes to write, the remaining time provided for scanning and uploading your work. You may access the course material that has been posted to Brightspace during the quiz, as well as your notes and textbooks, but must not communicate with others about the quiz while the quiz is open.
- Assignments and quizzes must be submitted as a single PDF file. There are numerous free scanning apps for phones that will allow you to do this. Assignments and quizzes must be legible in order to be graded. No provision is made for make-up assignments or quizzes. If you must miss an assignment or quiz for a valid reason, please contact me. If you live in a time zone in which the quiz occurs at an unreasonable time, please contact me.
- The tutorial runs every week on Tuesdays from 4:05 to 5:25 p.m., starting September 21. Two tutorial sections will run online, and one will run in-person. The online and in-person sections will cover the same material. If you have registered for an online section of the tutorial then you cannot attend the in-person section due to limitations on the number of students who may be in a classroom. However, if a student in an in-person section cannot make it to a tutorial, then they may attend an online section in its place. The online tutorials are recorded. A set of tutorial problems will be posted on the Thursday before the tutorial, covering the same material as either the assignment posted that day or the upcoming quiz. During the tutorial session, a TA will work out selected tutorial problems and answer your questions.
- The final exam is to be scheduled by the University. The date and time will be announced by the university at some point during the term (the exam will be held some time between December 11 and 23). The exam will be posted and submitted online.
- Students who miss the final exam may be eligible for a deferred exam. Application for a deferral must be made, with appropriate documentation, to the Registrar's Office.
- In an asynchronous class, it can be too easy to put off watching the lectures. Take care to not fall behind.
- Plagiarism and cheating will not be tolerated and can lead to severe penalties. Note that the dean's office has recently increased the penalties for cheating. Your assignments, quizzes and exam must be your own work, and you must not communicate with others about the

quiz and exam while they are running. This includes the use of “homework help” websites, whether the questions are posted by you or another student.

- Student or professor materials created for this course (including any posted notes, video lectures, tutorials, assignments, quizzes, and tests) remain the intellectual property of the author. They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author.

### **EXTRA HELP:**

There is help available for this course. It is up to you to seek any help you may need. Please do not hesitate to take advantage of the help being offered – that’s why it’s there! Here is a summary of the help available:

- Class tutorial (see first page)
- Your TA (office hour or email)
- My office hours, or email
- Math 1152 Problem Solving Sessions (time to be announced)
- MS-LAP (The Math & Stats Learning Assistance Program is a free of charge program that provides learning support and solutions to homework questions through assistance videos. These services are available on Brightspace. MS-LAP gives students tools to succeed while explaining step-by-step particular problem strategies and associated theory.)