MATH 0520 SYLLABUS
Brown University
Course head: Samuel S. Watson

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Class: Tuesday and Thursday 14:30 to 16:00

Office hours: Tuesday 12:00 to 14:00 and by appointment. Office hours are for everyone! There is no threshold for how poorly or how well you need to be doing in the course to attend office hours.

Topics: Vector spaces, linear transformations, matrices, systems of linear equations, bases, projections, rotations, determinants, inner products, and applications.

Textbook: Lay, Lay, and McDonald: *Linear algebra and its applications*, fifth edition.

Student satisfaction. My top priority is for you to have an excellent experience in this course. I intend to set clear learning objectives and equip you with the right tools to achieve them. I invite comments, criticisms, concerns, and suggestions at any time. If you perceive that you are not doing as well as you'd like, please see me right away. I can help with math concepts, of course, but I am also happy to help you troubleshoot your approach to studying, etc.

MyMathLab homework: Each week you will receive an assignment in the online homework platform MyMathLab. See the website for instructions on how to register for MyMathLab. This part of the homework will provide you with rapid feedback so you know you're on track with your learning objectives.

Gradescope: In addition to the MyMathLab homework, you will have a few written problems each week, which you will scan and submit through a free grading platform called Gradescope. This homework component will give you an opportunity to get consistent feedback on your solution writing, which will be helpful preparation for exams. We will also be grading your exams on Gradescope. Please visit the course website for details on how to sign up. Gradescope has many advantages over a paper-based system, one of which is a protocol for regrade requests, which I encourage students to use in the event that a solution is graded incorrectly.

Homework policy: The deadlines for both homework components will be due each week (except during exam weeks) at the **end of the day on Wednesday**. "End of the day" will be enforced via a 4 AM Thursday deadline to minimize deadline stress on your part, but I do not intend to prolong your waking hours: please think of the deadline as "end of Wednesday".

To preclude the mutually uncomfortable adjudication of late-work excuses, each student is granted **two** opportunities to miss the homework deadline with no penalty (to wit: late work is not accepted for any reason, but the lowest two MML homework scores and the lowest two

Gradescope homework scores will be dropped at the end of the semester). I **strongly encourage** you to use your drops sparingly. I also encourage you to complete your homework well before the deadline, in case of technical difficulties.

Some homework problems will be quite challenging, and much of your learning will come from working on problems. Plan to start early, ask questions, and work together. Each problem set will cover content from the calendar week preceding its due date.

Quizzes: We will occasionally hold brief "pop quizzes" in class and post the solutions on the course website, although we will not take them up or score them. This is purely an opportunity for you to maintain a sense of whether you're learning the material well enough to solve problems correctly in exam-like conditions. You are welcome to ask your instructor if you have a question about the solution you devise.

Grading: There will be two midterms, a final, and weekly homework. The two lowest homework grades will be dropped. Your final grade will be calculated as follows:

MyMathLab homework	10%
Gradescope homework	5%
Midterm 1	25%
Midterm 2	25%
Final exam	35%

Prerequisites: The university's listed prerequisite is Math 0180, 0200, or 0350. However, we will develop the course material starting from basic concepts in high school algebra and geometry.

Exams: Midterms are tentatively scheduled for March 2 and April 11 at 6:00 PM; check the website for rooms and updates. Practice midterms and review sessions will be offered. The final exam is scheduled for 09:00 on Wednesday the 10th of May.

Calculators and computers: No calculators or other electronic devices are allowed (or necessary) for the exams. You may use calculators and computers for the homework, but do bear in mind the exam policy when you choose how to incorporate computational assistance into your homework routine.

Course-related work expectations: Students will meet 3 hours per week in class (42 hours total). Homework and readings are estimated around 8 hours per week (125 hours total). In addition, there is a 3-hour final exam for which approximately 10 hours of review is assumed.

Disability support: Please inform me if you have a disability or other condition that might require modification of these procedures. You should also contact the Student and Employee Accessibility Services at 401-863-9588 or SEAS@brown.edu.

Reading schedule. The sections of the textbook that we will cover in this course are listed below on a calendar which indicates when I advise that you read each section. On Tuesday we will discuss about 1.5 sections (most of the reading covered the previous Friday and Monday), and on Thursdays we will pick up from there and make it to the end of Wednesday's reading.

January

M	T	W	Th	F
				27th §1.1–1.2
30th §1.3				

February

M	T	W	Th	F
		1st §1.4		3rd §1.5
6th §1.6		8th §1.7		10th §1.8
13th §1.9		15th §2.1		17th §2.2
		22nd §2.3		24th §2.8
27th §2.9				

March

M	T	W	Th	F
			MIDTERM	3rd §3.1
6th §3.2		8th §3.3		10th §4.1
13th §4.2		15th §4.3		17th §4.4
20th §4.5		22nd §4.6		24th §4.7

April

M	T	W	Th	F
3rd §5.1		5th §5.2		7th §5.3
	MIDTERM	12th §5.4		14th §5.5
17th §6.1		19th §6.2		21st §6.3
24th §6.4		26th §6.5		28th §6.7

May

M	T	W	Th	F
1st §6.8		3rd §7.1		5th §7.2