

Syllabus
Linear Algebra
Math 314
Spring 2015

Class Times	Tuesday, Thursday 10:00-11:15 a.m.						
Classroom	ESH 205						
Instructor	Dr. Mark Fitch						
Blackboard	All class materials can be found on Blackboard at http://blackboard.uaa.alaska.edu/ . If Blackboard is not accessible the materials may also be found at http://www.math.uaa.alaska.edu/~afmaf/classes/ .						
Office Hours	Monday-Friday 1:00-2:15 p.m. See http://www.math.uaa.alaska.edu/~afmaf/classes for additional available times.						
Email	mafitch@uaa.alaska.edu						
Phone	786-1656						
Office	SSB 154D						
Tutors	Tutoring is available in the Math Tutoring Lab in SSB 170.						
Textbook	<i>Linear Algebra and Its Applications</i> 4 th edition by Lay (required)						
Computational Devices	You will benefit from the use of various computational devices in and out of the classroom. <table><tr><td>Calculators</td><td>Graphing calculators including apps on phones and laptops will be useful for exploration and checking computations.</td></tr><tr><td>Computer Algebra Systems</td><td>You will be required to use a computer algebra system for some assignments. The Mathematical Sciences department provides Mathematica in the Math Tutoring Lab (SSB 170). Students may use any system to which they have access though support may be limited.</td></tr><tr><td>Web Access</td><td>You may find it useful to have a laptop or other device in class for accessing web pages and displaying pdf files.</td></tr></table>	Calculators	Graphing calculators including apps on phones and laptops will be useful for exploration and checking computations.	Computer Algebra Systems	You will be required to use a computer algebra system for some assignments. The Mathematical Sciences department provides Mathematica in the Math Tutoring Lab (SSB 170). Students may use any system to which they have access though support may be limited.	Web Access	You may find it useful to have a laptop or other device in class for accessing web pages and displaying pdf files.
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Web Access	You may find it useful to have a laptop or other device in class for accessing web pages and displaying pdf files.						
Prerequisites	You need to be proficient with vector arithmetic and be able to interpret them geometrically. You need to be proficient differentiating and integrating functions.						
Topics	The course covers matrix algebra, vector spaces, independence, dimension, eigenvectors, inner products, and orthogonality. This material is found in chapters 1-6 of the text with supplemental material.						
Goals	By the end of the appropriate section you should be proficient with matrix algebra, able to perform operations on arbitrary vector spaces, and be comfortable working with abstract mathematical structures.						
Daily Lesson							

Purpose	The lesson is the presentation of new material. By completing the lesson you will learn new topics.
Assignment	Complete the lesson found online on Blackboard or at http://www.math.uaa.alaska.edu/~afmaf/classes/math314/schedule.html . Note you may work with other students and ask questions of the instructor when working on the lesson.
Due	Lessons must be completed before the class in which they are due.
Feedback	Questions on the lesson will be addressed during class.

Class Time

Purpose	During class you will ask questions about the lesson, work on the homework, and ask questions as needed while working on the homework. Class time will ensure that you have the opportunity to understand each topic.
Assignment	You will work with the group to which you are assigned to develop understanding of the topics.

Daily Homework

Purpose	Text book problems provide an opportunity to realize questions, ask them, and develop skills at procedures. Be aware that most text book problems emphasize mechanical skills rather than understanding. As such they are not representative of test questions.
Assignment	Complete the problems from the textbook found online on Blackboard or at http://www.math.uaa.alaska.edu/~afmaf/classes/math314/schedule.html . Next to each problem on which you have a question write the specific question. These will be answered in class as time permits or in writing when homework is returned.
Due	These problems will be collected at the beginning of each class.
Feedback	If any questions are written on the homework, these will be answered in class or in writing. No other problems will be reviewed.
Grading	Your work will be graded for accuracy and presentation. At the end of the semester an allowance will be made for missed homework.

Quizzes

Purpose	Quizzes test your grasp of the material and therefore provide you with feedback on your progress. They typically require recognition of patterns, not necessarily identical in appearance to homework problems. They may also point out nuances.
Assignment	At the beginning of class a short (approximately 5 minute) quiz over recent material will be given.
Feedback	If incorrect, the first, major wrong step in a problem will be noted with a note about the correct step if possible. Grading symbols, explained online, will be used to identify error types.
Grading	Your work will be graded for accuracy and presentation. At the end of the semester an allowance will be made for missed quizzes.

Exams

Purpose	Exams provide you with an opportunity to demonstrate your mastery of mechanical skills and your understanding of the concepts. The latter are weighted more heavily in the grading.
Assignment	Exams will be given on the dates specified on Blackboard or at http://www.math.uaa.alaska.edu/~afmaf/classes/math314/schedule.html .

Feedback	If incorrect, the first, major wrong step in a problem will be noted with a note about the correct step if possible. Grading symbols, explained online, will be used to identify error types. Full solutions will be provided in a posted answer key.
Grading	Your work will be graded for accuracy and presentation.

Grading Your grades will reflect your ability to perform the tasks outlined in the goals and to clearly explain how you accomplished the tasks. Because understanding is more important than producing results, steps in a solution are more important than the result. Specific criteria are provided above and with individual assignments as required.

Assessments	Quizzes and Homework	20%
	Exams	20% x 3
	Final Exam	20%

The final exam will be on April 28th from 10:00 a.m. - 12:45 p.m.

If you have a certified learning disability, please inform the instructor so that the university sanctioned assistance can be provided.

Scale	A	90-100
	B	80-89
	C	70-79
	D	60-69
	F	0-59

Grades of C or higher indicate preparedness to progress to courses for which this is a prerequisite. A grade of B or higher indicates an ability to explain procedures. A grade of A indicates the ability to extrapolate from these skills to solve related problems.

Academic Expectations **Lessons:** If you do not understand any part of a lesson or an assignment, ask for assistance before the assignment is due. You will need to provide a specific description of the difficulty: instructors cannot read your mind.

Instructions: If you do not understand any instruction or a question, please ask before the work is due. An assignment may be submitted only once, except for projects.

Corrections: If you discover a mistake in any graded work, please bring it to the attention of the instructor as soon as possible.

Incomplete assignments: Lessons, homework, and quizzes not turned in on time receive no credit.

Please arrange excused absences for exams before the exam if at all possible. If you cannot make arrangements before the exam, then the final exam grade will replace that exam score. If the university is closed for an emergency on an exam day, the exam will occur on the next class session.

Projects submitted late are treated as a resubmission.

Attendance	Regular attendance and active participation is expected in all classes. You are responsible for class work even if there are legitimate reasons for your absence. In particular, class attendance is vital to success in this course. Some of the material covered in this course is not included in the textbook nor is it online. If you miss class for university business or civic duty, please inform your instructor as early as possible prior to your absence. More than four unexcused absences may result in a “faculty initiated withdrawal.” Should the last date of your class attendance be required, it will be determined by the last date of any material submitted by you for recording in the class grade record. If you have evidence that your date of last attendance is otherwise, you must inform your instructor of such prior to the assignment of your final grade. The date of last attendance may impact financial aid. Most graded assignments are returned at the beginning of class. If you miss this, you will need to come to the instructor’s office to obtain the assignment. All assignments not collected by the final exam will be destroyed as required by FERPA.
Academic Honesty	Use of any communication device during an assessment is prohibited. The instructor will note when accessing the internet is needed for class. Audio devices may not be worn during any assessment.
Non-Academic Assistance	The mission of the UAA CARE Team is to promote a safe and productive learning, living and working environment by addressing the needs of students. If you, or someone you know, needs support, is distressed, or exhibits concerning behavior help by making a referral to the CARE Team. Contact the CARE Team by: filling out a referral on http://www.uaa.alaska.edu/CareTeam; E-mail your concern to Care@uaa.alaska.edu; or call the Care Team phone number: 786-6065; if an emergency—call UPD or 911.
Courtesy	Courtesy in the classroom is important for learning. Entering a classroom late may disturb other students. Please be prompt. If you need to leave class early, please inform the instructor before class. Lack of attention to the material of the class reduces learning. Use of any communication device or method not requested by the instructor is not permitted. Music playing devices, hands-off phones, and other headset type devices may not be worn during class. Use of any device during a quiz or test will result in a grade of zero and possible charges of cheating. Students required to be on call must notify the instructor ahead of time and use a silent notification method.