



**MATH 10 – Linear Algebra**  
**Fall 2013**  
**Kathleen Uyekawa**

WEBSITE: <http://www.pccmathuyekawa.com>

The website is where you will find announcements, assignments, handouts, and useful links. You should check it often. If you ever have a question about the class, PLEASE ALWAYS LOOK HERE BEFORE EMAILING ME.

Office : R322K Phone : (626) 585-7125 email: mkuyekawa@pasadena.edu

Office Hours: M: 12:30-3:00 p.m., T Th 1:20-2:20 p.m. and Friday 12:20-1:20 p.m.

Course Description: Topics to be covered include: Vector spaces, linear transformations, determinants, solutions of systems of equations, algebra of matrices.

Prerequisites: Minimum grade of C Math 5B. If you are repeating this course you should consider it your last try since petitions are required (and seldom granted) to enroll in this course for a third time.

Text: ANTON & RORRES, Elementary Linear Algebra(with or without the applications), 10th Ed.

Attendance: Daily attendance is required. Excessive absences or tardiness may affect course grade. Ten hours of absence constitutes basis for dismissal from the course. Students missing class are responsible for finding out what they missed and what is due

Grading : Grades will be determined based on the following percentages:

Homework/Quizzes	10 %
Tests	60 %
Final exam	30 %.

Letter grades will be given based on the following percentages

90-100%	A
80-89%	B
70-79%	C
60-69%	D
below	F

Homework/Quizzes: Homework will be assigned daily. Your homework grade will be determined in two ways: (1) your homework will be collected most days and checked for completion and/or (2) short, unannounced, quizzes will be given which often include problems taken directly from the homework assignment. So, the way to succeed on the homework portion of your grade ( as well as in the class itself) is to do your homework neatly, completely, and consistently. Please note: no late homework will be accepted and no make-up quizzes will be given, even if you are absent. If you know you are going to be absent, you may turn in your assignment early or have a friend turn it in.

Exams: If you know ahead of time that you will be absent on the day of an exam, it is sometimes possible to arrange to take it early, but NO make-up exams will be given.

- 3 - 4 tests will be given .
- A final exam will be given . This exam will be two hours long and will cover ALL course material. This Exam will be Friday of the Finals week. (Friday December 13. 9:45-11:45)

**NOTE: Math Path class have regular class meetings where new material is being taught all through**

finals week!

### Where to get HELP

Because of the level of this class, you will not have free tutoring available on campus. Options for help include:

- My office hour. Office hours are a great time to get individualized help. It would be helpful if when you come to my office you are organized and prepared with *specific* questions. The office hour is also a good time to discuss your concerns regarding the course and your performance. Again, come as soon as concerns arise. Unfortunately it is not possible for me to repeat entire lectures, teach lacking prerequisite skills or provide daily personal tutoring during this time.
- Study Groups. Forming study groups with classmates is one of the BEST ways to be more successful in this class. Join the Facebook Group.
- The Internet: There are SO many helpful websites. As we encounter useful sites, I will put links on my website. If you find something online that I put on my website, you will earn extra credit.
- The Library: As you progress higher in the mathematics curriculum, you may find it very helpful to additional textbooks as references.
- The Math Path Room R125
- Other services on campus: Health, DSPS, Mental Health, etc

### Personal Conduct

You are expected to be actively involved in your education. This includes being on time and alert in class and participating in class discussion. It is expected that you refrain from activities that could be distracting to your classmates or to me. This includes talking while someone else is talking, texting, falling asleep, doing homework, etc. Electronic devices such as ipods and phones should be turned off in class. Students caught cheating may be given an F in the course and reported to the Dean.

*ACADEMIC INTEGRITY:* In a learning environment such as Pasadena City College, it is vital that we create an atmosphere of mutual trust. Cheating, plagiarism, falsifying information, and related behaviors destroy the very essence of learning and will not be tolerated. Any such action will adversely affect your grade and will lead to disciplinary action by the College. By enrolling in this class, you agree to comply with the *Student Conduct and Academic Honesty Policy* (No. 4520 - [www.pasadena.edu/IPRO/Policies/pcc\\_4520.pdf](http://www.pasadena.edu/IPRO/Policies/pcc_4520.pdf)). Violations of conduct in class or on campus are subject to disciplinary review. Students caught cheating may be given an F in the course and reported to the Dean of Students.

Calculator Usage: A scientific calculator is required. Graphing calculators will not be used in this class.

### Student Learning Outcomes.

At the end of this course, you should be able to:

- SLO #1: Graph and geometrically describe the action of a linear transformation in two and three dimensions.
- SLO #2: Write cogent proofs of basic theorems using direct applications of definitions.
- SLO #3: Prove or disprove if a set, together with an addition and scalar multiplication,

- satisfies the ten axioms of a vector space, and if so, prove if a subset of such is a subspace.
- SLO #4: Prove or disprove if a function from one vector space to another is a linear transformation, and if so, construct its matrix relative to an arbitrary basis in the finite dimensional case.
  - SLO #5: 5. Prove or disprove if a bilinear form is an inner product on a vector space, and if so, use the Gram-Schmidt orthogonalization process to find an orthonormal basis.