Class Meetings MWRF 3:00PM - 3:50PM in STAG 110

Instructor Chris Jennings-Shaffer
- Office: KIDD 268 (early January), KIDD 312 (beginning late January)
- E-mail: jennichr@math.oregonstate.edu
- Office Hours: Wednesday 4:00PM - 4:50PM, Thursday 11:30AM - 12:20 PM, Thursday 4:00PM - 4:50PM

Required Text Linear Algebra Done Right Third Edition by Sheldon Axler

Prerequisites MTH 341

Webpage http://people.oregonstate.edu/~jennichr/MTH342W16/
This page will be updated throughout the course.

Attendance Regular attendance is expected. Attendance below 85% will result in your course grade dropping by one full letter grade.

Honor Code Students are expected to be familiar with the Oregon State University’s Student Conduct Code. The code of conduct can be found at http://studentlife.oregonstate.edu/studentconduct

Students with Disabilities Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

Course Description This is a one quarter course serving as a second course in linear algebra, revisiting the topics of 341 from a more abstract perspective. Topics include finite dimensional vector spaces (real and complex), linear transformations, invariance of dimension, linear operators, eigenvectors, and inner product spaces.

Learning Outcomes Upon completing MTH 342 a successful student is expected to be able to do the following:
- Know and apply the definition and properties of abstract (real or complex) vector spaces.
- Understand the invariance of dimension for finite dimensional vector spaces.
- Know and apply the definitions of linear transformation and its nullspace and range,
- Understand and use the Rank-Nullity Theorem.
- Know and apply the definition of inner product on an abstract vector space.
- Understand and use the Gram-Schmidt Orthogonalization Process.
- Determine whether or not an operator is diagonalizable.
- Know and apply the Spectral Theorem for symmetric matrices.

Course Assessment Your overall grade will be determined by the following:
- Homework 30%
- Attendance 10%
• Midterm Exam 1 20%
• Midterm Exam 2 20%
• Final Exam 20%

Your course grade will be determined by a scale no harsher than the following:

• 93% A
• 90% A-
• 87% B+
• 83% B
• 80% B-
• 77% C+
• 73% C
• 70% C-
• 67% D+
• 63% D
• 60% D-
• 0% F

**Homework** Homework will be assigned weekly. While students may collaborate with others, each student must write up their own solutions independently. Late homework will not be accepted. All solutions should be written clearly and in the form of full sentences.

**Exams** There are two midterm examinations in class, tentatively scheduled on Wednesday February 3rd and Friday March 4th. The final examination is on March 18th from 9:30AM - 11:20AM at a location to be determined.

**Faculty Evaluations** You are strongly encouraged to complete an evaluation of the course at the end of the quarter. The online Student Evaluation of Teaching form will be available in week 9 and close at the end of finals week. Students will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. Students will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted. Course evaluation results are very important and are used to help improve courses and the learning experience of future students. Results from questions are tabulated anonymously and go directly to instructors and unit heads/supervisors. Unless a comment is “signed”, which will associate a name with a comment, student comments on the open-ended questions are anonymous and forwarded to each instructor. “Signed” comments are forwarded to the unit head/supervisor.