MAT 1302 E MATHEMATICAL METHODS II

University of Ottawa, Fall 2014

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Either http://mysite.science.uottawa.ca/crada102/ or log into Virtual Campus (for grades and announcements

KED B07-B 613-562-5800 X 2029

LEC 1 Tuesday 13:00 - 14:30 FSS 2005

LEC 2 Thursday 11:30 - 13:00 FSS 2005

DGD 1 Monday 16:00 - 17:30 FTX 227

DGD 2 Monday 16:00 - 17:30 VNR 3075

DGD 3 Tuesday 14:30 - 16:00 FSS 1030

DGD 4 Tuesday 14:30 - 16:00 MNT 201

NOTE: DGDs begin the week of January 13.

Official Course Description

Solution of systems of linear equations. Matrix algebra. Determinants. Complex numbers, fundamental theorem of algebra. Eigenvalues and eigenvectors of real matrices. Introduction to vector spaces, linear independence, bases. Applications.

Prerequisites

One of Ontario grade 12 Geometry and Discrete Mathematics (university preparation), Ontario grade 12 Mathematics of Data Management (university preparation), MAT1340, MAT0341, OAC Algebra and Geometry or OAC Finite Mathematics.

Official Textbook

Robert A. Beezer, A First Course in Linear Algebra.

http://linear.ups.edu/html/fcla.html — ONLINE version

http://linear.ups.edu/download.html — .pdf version

http://linear.ups.edu/physical.html — hardcover version

This is an open access text that can be viewed online or downloaded by students free of charge by clicking on the above links.

Optional/Additional Text

In the past, a commercial text was used for MAT 1302 instead of the open access text mentioned above. Students who would like an additional reference (besides the official textbook) have the option of purchasing the former textbook.

David C. Lay, Linear Algebra and its Applications, Fourth Edition, Pearson/Addison-Wesley, 2011. ISBN-13: 978-0321385178.

David C. Lay, Student Study Guide for Linear Algebra and Its Applications, Pearson/Addison-Wesley, 2011. ISBN-13: 978-0321388834.

The old edition of LAY:

David C. Lay, Linear Algebra and its Applications, Third Edition, Pearson/Addison-Wesley, 2006. ISBN-13: 978-0321287137.

David C. Lay, Student Study Guide Update for Linear Algebra and Its Applications, Pearson/Addison-Wesley, 2006. ISBN-13: 978-0321280664.

Recommended Exercises. The numbers of the recommended exercises apply to both the 3rd and the 4th editions of the **optional textbook Lay**.

Sec 1.1 : Practice Problem 3.

Sec 1.1 : 1, 3, 11, 13, 15, 19. Sec 1.2 : 1.

Sec 1.2 : 3, 5, 7, 9, 11, 13.

Sec 1.2 : 15, 17–21, 23–26.

Sec 1.3 : 1, 3, 5, 7, 9, 11, 13, 15, 17, 19.

Sec 1.4 : 1, 3, 5, 7, 9, 11, 13, 17, 19. Sec 1.6: 12, 13.

Sec 1.5 : 1, 3, 5, 7, 9, 11, 15, 17, 19, 21, 23.

Sec 1.7 : 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 22, 27, 33, 34, 35, 37.

Sec 2.1 : 1, 3, 7, 9, 11, 13.

Sec 2.1 : 15, 23, 27. Sec 2.2 : 1, 3, 5, 9, 13, 17.

Sec 2.1 : 17. Sec 2.2 : 18, 19, 20, 23, 29, 31, 32, 35. Sec 2.3 : 1, 3, 5, 7.

Sec 2.6 : 1, 3, 5, 7, 9.

Sec 2.8 : 7, 9, 11, 15, 17, 19, 21, 22. Sec 4.1 : 3, 9, 11, 13.

Sec 2.9 : 9, 11, 13, 15, 17, 19, 21, 23. Sec 4.2 : 1, 3, 5, 15, 17, 19.

Sec 3.1 : 1, 3, 5, 7, 9, 11, 13, 19, 21, 23, 37.

Sec 3.2: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 39.

Appendix B: see class notes.

Sec 5.1 : 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 26.

Sec 5.2 : 1, 3, 5, 7, 9, 11, 13, 15, 17, 19.

Sec 5.3 : 1, 3, 4, 7, 9, 11, 13, 15, 17, 19.

Sec 1.10 : 9.

Sec 4.9 : 1, 3, 5, 7, 9, 11, 13.

Exams There will be three midterm exams, scheduled (during the usual class time) on the following dates:

Midterm Exam 1: January 30, 2014

Midterm Exam 2: February 27, 2014

Midterm Exam 3: March 20, 2014

Midterm exams cannot be rescheduled. If you miss a midterm exam for a legitimate (properly documented) reason, its weight will be added to the weight of the final exam in the computation of your course grade.

All (midterm and final) exams are closed-book exams. Calculators are not allowed, nor are they needed. You may not enter a test after, or leave before, the first 20 minutes have elapsed. You may also not leave an exam during the final 10 minutes. You must present your student card during the exam.

Unless otherwise announced, marked exams will be returned in the DGDs. Unclaimed tests will be kept by the instructor and can be claimed during office hours. Six months after the end of term, unclaimed exams will be shredded.

Computation of Grades

You must obtain a passing grade on the final exam in order to pass the course. If you pass the final exam, then your final course grade will be calculated as follows:

Midterms: 45% (3 midterms worth 15% each)

Final Exam: 55%

Your lowest midterm exam score will be replaced by your score on the final exam if this is to your advantage. Note that this includes missed midterms. That is, if you miss a midterm, that is the one that will be replaced.

HELP

http : *//www.mathstat.uottawa.ca/ugrad/help_center_en.html*