Course Title: Matrix Algebra and Its Applications
Course Code: MA 322 - Section 021
Meeting Time: MTWRF, 11:30 AM - 12:30 PM
Classroom: Whitehall Classroom Building, CB 337
Website: http://www.ms.uky.edu/~houghw/MA322

Instructor: Mr. Wesley K. Hough
E-mail: wesley.hough@uky.edu (preferred method of communication)
Office: Patterson Office Tower, POT 706
Office Phone: 859-257-6805
Office Hours: TBD (Eventually posted to course website.)

Overview of Course: MA 322 is a junior-level course covering algebra of matrices, elementary theory of vector spaces and inner product spaces, and the solution of simultaneous linear equations using Gaussian elimination and triangular factorization. Also covered are determinants, eigenvalues and eigenvectors, and diagonalization. Additional topics may include orthogonal projections, pseudo-inverse and singular value decompositions, and least squares approximation. Most sections of chapters 1 through 6 of Lay’s book will be covered. MA 114 (Calculus II) is prerequisite.

Grading:  
<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grade Range</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>100</td>
<td>A 450 - 500</td>
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<tr>
<td>Exam 2</td>
<td>100</td>
<td>B 400 - 449</td>
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<tr>
<td>Exam 3</td>
<td>100</td>
<td>C 350 - 399</td>
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<tr>
<td>Homework</td>
<td>150</td>
<td>D 300 - 349</td>
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<tr>
<td>Participation</td>
<td>50</td>
<td>E 0 - 299</td>
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Exams: The three in-class exams will primarily consist of free-response questions, though some true-false or multiple choice may show up for good measure. Each exam will be cumulative up to that point in time, and the tentative exam dates are June 27, July 18, and August 7.

If you have a legitimate university conflict for the day of the exam, please notify me at least a week before the exam. Alternate exam arrangements will be made on a case-by-case basis. I reserve the right to levy a 10-point penalty on your exam score if I’m not notified of your exam conflict at least a week before the exam.

Homework: The homework for this course comes in two distinct flavors. Most days, I will assign some problems through the WeBWorK online homework system (http://webwork.as.uky.edu/webwork2/MA322-021/). These problems are not optional and serve as practice for the computational aspects of the course. Usually, you’ll have until 11:59 PM of the next class day to finish the assignment. (For example, Friday assignments are due Monday night.)

Also, for each section of Lay covered, I will assign one or two “written problems” for which you are expected to carefully write out complete solutions, clearly showing and explaining your work. These problems will be more challenging and require a fair bit of time to solve and write up. I will usually collect these problems at the beginning of class on Wednesdays. Late homework will not be accepted without prior permission.
Participation and Attendance: Class meets every weekday from June 12 through August 7, except for the University holiday on July 4. I expect that not only will you attend class, but that you come prepared each day to actively participate. I expect that you will have done the suggested reading and worked the practice problems at the end of each reading. When the mood strikes me, we may have in-class pop quizzes that address the reading assignment and recent content. Other days, we may spend the first part of class going over questions about the homework, and I may ask students to present at the board to address these questions. Your preparedness for the quizzes and willingness to present will determine your participation grade.

This class will be as beneficial or as boring as you make it. That being said, there will be no specific attendance grade. You have the authority to decide whether or not to attend class, and you will neither gain nor lose points directly for that choice. However, frequent absence will impact your in-class participation and harm your overall grade.

Calculator (optional): Since the course is a mixture of computation and theory, a calculator may be useful for the computational parts of the course conducted outside of class. You will not be permitted to use any type of calculator on the exams.

Suggestions: I welcome suggestions that will improve the course both this semester and in semesters to come. I will create a persistent link on the course webpage for you to submit comments and suggestions through a SurveyMonkey interface.

Important Dates: Please mark the following on your calendar:

- June 13: Last day to add a course
- June 23: Last day to drop a course without it appearing on a student’s transcript
- June 27: Exam 1
- July 4: Independence Day, No Class
- July 16: Last day to withdraw from a course
- July 18: Exam 2
- August 7: Exam 3
Legal Information

**Excused Absences:** Make-up exams and homework extensions will be granted only for reasons defined as acceptable for excused absences by University Senate Rule 5.2.4.2, namely:

1. serious illness;
2. illness or death of family member;
3. University-related trips;
4. major religious holidays;
5. other circumstances your instructor finds to be “reasonable cause for nonattendance.”

If you anticipate any absence for a major religious holiday, let me know in writing no later than Friday, June 13. It is almost always possible to notify me of an excused absence before class. If you will be absent from class for a University-related trip or major religious holiday, you must inform me prior to the absence. If you are ill, please let me know as soon as possible; I may ask you to provide documentation to demonstrate that your absence(s) was/were excused. Students with excused absences due to illness or the death of a family member will be allowed to make up any missed work in a timely manner. These arrangements are made on a case-by-case basis. Documentation for illness or death of a family member must be provided with one week of returning to classes.

**Academic Integrity, Cheating, and Plagiarism:** You should feel free to study with friends and classmates, but any work you submit for a grade should be your own work. This applies to all exams, quizzes, and writing assignments, with the exception of assignments that are specifically designated as group assignments. **Academic dishonesty, in any form, will not be tolerated.** This includes, but is not limited to, copying a classmate’s work, allowing a classmate to copy your work, modifying an exam after it has been handed back in an attempt to deceive the instructor into believing the assignment was graded incorrectly, using a cell phone during an exam, etc. A student found guilty of academic dishonesty will receive an automatic E on the assignment, and in some cases the offense may lead to an E for the course, academic suspension, or even expulsion. See sections 6.3.1 and 6.3.2 at www.uky.edu/StudentAffairs/Code/part2.html for more information regarding academic integrity.

**Help and Conflicts:** If you ever find yourself in need of extra course help, feel free to visit me during my office hours or contact me for an appointment. In the event that you disagree with one of my decisions and feel that outside intervention is necessary to resolve the conflict, the first person to contact is the service course coordinator (Dr. David Royster; POT 759; david.royster@uky.edu). Further recourse is available through the offices of the Department Ombud and the Department Chair. Both the Ombud and the Chair can be reached from the main office in POT 719.

**Disability Accommodations:** If you have a documented disability that requires academic accommodations, please let me know as soon as possible. In order to receive accommodations in this course, I will need to see your Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 859-227-2754, email address jkarnes@email.uky.edu).
**Personal Conduct:** While class can be relatively informal, I ask that you exhibit common courtesy toward me and your fellow students and that you refrain from disruptive behavior. If I have to ask you to quiet down or to quit distracting another student, your participation grade will be negatively impacted. It is unnecessary to use any electronic device other than perhaps a calculator during class.

The university, college, and department has a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time to time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right and the responsibility to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin, or other such irrelevant factors. Students who are disrespectful, not civil, or disruptive in any way may be asked to leave the class.