The George Washington University  
MA in Applied Economics  

Course: Economics 6300 Mathematical Methods for Economists  
Semester: Fall 2016  
Time: Thursday 6:10-8:40  
Location: MON 452  

INSTRUCTOR  
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Office hours: By appointment  

COURSE DESCRIPTION  
This course provides an introduction to the mathematical methods useful in modern economic analysis. Over the course of the term, we will cover basic mathematical concepts such as single and multi-variable calculus, unconstrained and constrained optimization, matrix algebra, and integration. Students turn in 13 graded homework assignments and take a midterm and a final exam.  

PREREQUISITES  
None.  

TEXTBOOK  

LEARNING OUTCOMES  
Students will  
- learn basic rules of calculus;  
- how to locate stationary points, such as maximums, minimums, and inflection points;  
- learn how to apply rules to determine whether a point is a maximum, minimum, or something else;  
- learn matrix operations;  
- learn how to find the antiderivative of a function and find the definite integral.  

GRADING  
- Homework assignments 20%  
- Midterm 40%  
- Final 40%
Discussions: Each class will feature discussions about the week’s readings. Students are expected to have completed the readings before coming to class. Questions are encouraged.

Final exam: The final is cumulative.

UNIVERSITY POLICY ON RELIGIOUS HOLIDAYS
1. Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance;
2. Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations;
3. Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities.

For GW’s teaching policies, see http://www.gwu.edu/~academic/Teaching/main.htm

ACADEMIC INTEGRITY
The GW Code of Academic Integrity states: “Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” Allowing another student to copy your work is defined as cheating under the Academic Integrity code.

For the remainder of the code, see: http://www.gwu.edu/~ntegrity/code.html

SUPPORT FOR STUDENTS OUTSIDE THE CLASSROOM

DISABILITY SUPPORT SERVICES (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: http://gwired.gwu.edu/dss/

UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300
The University Counseling Center (UCC) offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:
- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals
  http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices

SECURITY
In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.
**SCHEDULE**

All readings are from Simon and Blume.

| Date       | Reading          | Handout | Assigned | Assignment Due |
|------------|------------------|---------|----------|----------------|-----------------|
| Week 1     | Ch. 2.1-2.5      | Notes 1 | PS. 1    |                 |                 |
| Week 2     | Ch. 2.6; 3.1-3.3; 3.5; & 4.1 | Notes 2 | PS. 2    | PS. 1          |                 |
| Week 3     | Ch. 5.1-5.5      | Notes 3 | PS. 3    | PS. 2          |                 |
| Week 4     | A.4.1-4.3        | Notes 4 | PS. 4    | PS. 3          |                 |
| Week 5     | A.4.1-4.3        | Notes 5 | PS. 5    | PS. 4          |                 |
| Week 6     | Ch. 7.1-7.3; 8.1-8.3; 9.1 | Notes 6 | PS. 6    | PS. 5          |                 |
| Week 7     | Ch. 9.2          | Notes 7 | PS. 7    | PS. 6          |                 |
| Week 8     |                  |         | MIDTERM  | PS. 7          |                 |
| Week 9     | Ch. 14.1-14.3    | Notes 8 | PS. 8    | PS.            |                 |
| Week 10    | Ch. 2.7, 14.4-14.8 | Notes 9 | PS. 9    | PS. 8          |                 |
| Week 11    | Ch. 17.1-17.3    | Notes 10 | PS. 10  | PS. 9          |                 |
| Week 12    | Ch. 18.1-18.2    | Notes 11 | PS. 11  | PS. 10         |                 |
| Week 13    | Ch. 19.3         | Notes 12 | PS. 12  | PS. 11         |                 |
| Week 14    | Ch. 18.3-18.6    |          | PS. 13   | PS. 12         |                 |
| Exam Week  |                  |         |          |                | FINAL           |