COURSE DETAILS
Title: Economics 6300 Mathematical Methods for Economists
Section: DE (CRN 27753)
Semester: Fall Semester 2018
Location: ON-LINE

INSTRUCTOR
Name: Ken Danger
Campus Address: Monroe 340, Department of Economics
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E-mail: Danger@gwu.edu
Telephone: (202) 994-6150
Office hours: By appointment

TEACHING ASSISTANT
Name: Mr. Feng Zhang
Email: zhangfeng@gwmail.gwu.edu
Time and Location: Monday and Thursday from 3:30 to 4:30 in Monroe 324

COURSE DESCRIPTION
Instruction in the mathematical background required to appreciate and understand the use of mathematics in economic analysis, including multivariable calculus, integral calculus, and linear algebra. Emphasis on techniques for solving systems of equations, unconstrained and constrained optimization, comparative static analysis, difference equations, and analysis of dynamic models and their application to a range of economic problems.

PREREQUISITES
None.

TEXTBOOK
You may find that purchasing textbooks at gettextbooks.com will save you money. It’s an alternative to Amazon, among others.


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.

AVERAGE MINIMUM AMOUNT OF INDEPENDENT, OUT-OF-CLASS, LEARNING EXPECTED PER WEEK
In a 15 week semester, including exam week, students are expected to spend a minimum of 100 minutes of out-of-class work for every 50 minutes of direct instruction, for a minimum total of 2.5 hours a week. A 3-credit course should include 2.5 hours of direct instruction and a minimum of 5 hours of independent learning or 7.5 hours per week.

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
I personally support the GW Code of Academic Integrity. It 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.” Please note that allowing another student to copy your work is defined as cheating under the Academic Integrity code.

Common examples of academically dishonest behavior include, but are not limited to
1) Cheating
2) Fabrication
3) Plagiarism
4) Falsification and forgery of University academic documents
5) Facilitating academic dishonesty

Sanctions range from failure of the assignment, to failure of the course, to suspension or expulsion from the University. For the remainder of the code, see:
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 Rome Hall, 801 22nd St., NW, Suite 102, to establish eligibility and to coordinate reasonable accommodations. For additional information, please refer to https://disabilitysupport.gwu.edu/

Students must arrange with the DSS office well in advance of needing the service.

UNIVERSITY MENTAL HEALTH SERVICES 202-994-5300

The University’s Mental Health Services 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. For additional information see: https://healthcenter.gwu.edu/mental-health

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.

CLASS SCHEDULE

<table>
<thead>
<tr>
<th>Week Beginning</th>
<th>Reading</th>
<th>Handout</th>
<th>Assigned</th>
<th>Assignment Due</th>
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<tr>
<td>August 27</td>
<td>Ch. 2.1-2.5</td>
<td>Notes 1</td>
<td>PS. 1</td>
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<tr>
<td>September 3</td>
<td>Ch. 2.6; 3.1-3.3; 3.5; &amp; 4.1</td>
<td>Notes 2</td>
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<td>PS. 1</td>
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<td>September 10</td>
<td>Ch. 5.1-5.6</td>
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<td>September 17</td>
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<td>Notes 4</td>
<td>PS. 4</td>
<td>PS. 3</td>
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<td>September 24</td>
<td>A.4.1-4.3</td>
<td>Notes 5</td>
<td>PS. 5</td>
<td>PS. 4</td>
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<td>October 1</td>
<td>Ch. 7.1-7.3; 8.1-8.3; 9.1</td>
<td>Notes 6</td>
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<td>PS. 5</td>
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<tr>
<td>October 8</td>
<td>Ch. 9.2</td>
<td>Notes 7</td>
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<td>October 18-21</td>
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<td>MIDTERM</td>
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<td>October 22</td>
<td>Ch. 14.1-14.3</td>
<td>Notes 8</td>
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<td>October 29</td>
<td>Ch. 2.7, 14.4-14.8</td>
<td>Notes 9</td>
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<td>PS. 8</td>
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<td>November 5</td>
<td>Ch. 17.1-17.3 &amp; 17.5</td>
<td>Notes 10</td>
<td>PS. 10</td>
<td>PS. 9</td>
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<td>November 12</td>
<td>Ch. 18.1-18.2</td>
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<td>PS. 10</td>
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<td>November 19-25</td>
<td>THANKSGIVING BREAK</td>
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<td>November 26</td>
<td>Ch. 19.3 &amp; 22.1</td>
<td>Notes 12</td>
<td>PS. 12</td>
<td>PS. 11</td>
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<td>December 3</td>
<td>Ch. 18.3-18.6</td>
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<td>PS. 13</td>
<td>PS. 12</td>
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<tr>
<td>December 13-16</td>
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<td>FINAL</td>
<td>PS. 13</td>
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NOTE: In accordance with university policy, the final exam will be given during the final exam period and not the last week of the semester. For details and complete policy, see: provost.gwu.edu/administration-final-examinations-during-examination-period