COURSE AND CONTACT INFORMATION

Course:   ECON 6295 Applied Industrial Organization
          Section 11 (CRN 57976)
Semester: Spring 2017
Time:   Tuesday 6:10 pm – 8:40 pm
Location:  GELM 608

INSTRUCTOR
Name:    Dr. Elena S. Patel
Campus Address:  Department of Economics
                Monroe 340
                2115 G St., NW, Washington, DC 20052
Phone:   (202) 994-6150
E-mail:  espatel@gwu.edu
Office hours:   Tuesday 4:30 – 6:00 pm, by appointment

COURSE DESCRIPTION
This course will analyze the behavior of firms and consider the implications of market structure and resource allocation. We will focus on several key factors including the number of market participants, the role of transaction costs, product differentiation, imperfect knowledge, and market contestability. Special attention will be given to public policy issues of monopoly regulation and antitrust law in the United States. We will explore these issues using standard microeconomic empirical and theoretical tools including an introduction to game theory.

COURSE PREREQUISITE(S)
All students should have taken intermediate microeconomics and at least one semester of calculus at the undergraduate level. Please email me directly if you are interested in taking this course but do not otherwise meet the prerequisites.

TEXTS

Carl P. Simon and Lawrence E. Blume, *Mathematics for Economists*, W.W. Norton & Company (For those students in need of a mathematics refresher)

In addition, we will work from various outside readings from the academic literature. Students are expected to complete all assigned readings before each class.
LEARNING OUTCOMES
As a result of completing this course, students will:
1. be familiar with the rigorous treatment of Industrial Organization, as it is used in both academia as well as in economic consulting firms and government regulatory bodies
2. develop intuition for pricing and other strategic behavior of firms
3. use microeconomic analysis tools to evaluate regulatory policy, including antitrust
4. learn how to identify a research project, conduct a literature review, and present their research to the class

AVERAGE MINIMUM AMOUNT OF INDEPENDENT, OUT-OF-CLASS, LEARNING EXPECTED PER WEEK
In a 15-week semester, including exam week, you should expect to spend a minimum of 4 hours a week for each hour of instruction. For a 2 ½ hour course, this means that you should expect to study a minimum of 10 hours outside of class each week. In addition, you should plan to spend at least two hours working on each reading assignment.

GRADING
• Short Research Paper 20%
• Midterm Examination 25%
• Final Examination 25%
• In-Class Quizzes 10%
• Class Participation 20%

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.

CLASS POLICIES

Before The First Class
Please write a few paragraphs telling me: (1) why you are enrolled in the MA Applied Economics program, (2) what was your undergraduate major and why you chose it, (3) your career goals, (4) what you hope to get out of this IO Economics course, and (5) anything else you’d like to tell me about yourself. Please bring a copy to the first class.

Research Paper Assignment
Students will prepare one short research paper (see course schedule for due date). This paper will be modeled on academic style economic research and will be on an IO economics topic. The paper should motivate a particular economic question, describe the related literature, and motivate and undertake an empirical analysis. A critical component of the evaluation of this paper will include its feasibility. Students will present their research paper to the class on the last meeting for the term. The paper and presentation will contribute 20% of the total course grade.

Quiz and Exam Policy
There will be 6 short quizzes administered throughout the semester (see course schedule). Quizzes will be administered during the first twenty minutes of class time. These quizzes will relate to previously discussed course material. They are intended to provide ample opportunity to practice problem solving in preparation for the midterm and final exam.
The midterm exam will be administered in-class and will include all relevant cumulative course material. Because economics is a progressive subject, all course material builds upon previous work. For this reason the
final exam will also be cumulative in nature, although questions will be more heavily focused on the second half of the course.

**Problem Sets**
Each topic will include an *ungraded* problem set, to be completed in the week after a topic is discussed. We will solve a limited number of these problems together as a class at the start of each course meeting. Students should be prepared to discuss their solutions and any difficulties they may have encountered. Official problem set solutions will be circulated following our in-class discussion.

**Attendance**
Each class will be centered on a discussion of the week’s assigned readings and problem sets. Students are expected to complete the readings and problem sets before coming to class and should plan to participate actively in class discussion. Participation in class discussions and problem set solutions will contribute 20% of the total course grade.

**Make Up Exam Policy**
The lowest two quiz scores will be automatically dropped in calculating your final grade. For this reason, no make-up quizzes will be offered. If you are unable to attend class on the midterm examination date, your final exam will contribute 50% to your total course grade. There will be no make-up final exam offered.

**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](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, submitting the work of others in whole or part 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.

- 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 [http://www.gwu.edu/~ntegrity/code.html](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 Rome Hall, Suite 102, 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.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Relevant Deadlines</th>
<th>Topics Covered</th>
<th>Assigned Readings</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>1/17/2017</td>
<td></td>
<td>Welfare Economics</td>
<td>CW Ch1, 2, 3.1</td>
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<td>Theory of the Firm</td>
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<td>Introduction to IO Empirics</td>
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<td>Week 2</td>
<td>1/24/2017</td>
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<td>Price Discrimination</td>
<td>CW Ch 5</td>
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<td>Week 3</td>
<td>1/31/2017</td>
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<td>Game Theory Part I</td>
<td>CW Ch 7</td>
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<td>Discussion: Commonly Used IO Data Sets</td>
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<td>Week 4</td>
<td>2/7/2017</td>
<td>Quiz #1 (Topics Include: Weeks 1-2)</td>
<td>Static Oligopoly Model: Cournot and Bertrand</td>
<td>CW Ch 8</td>
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<td>Week 5</td>
<td>2/14/2017</td>
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<td>Game Theory Part II</td>
<td>CW Ch 9</td>
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<td>Week 6</td>
<td>2/21/2017</td>
<td>Quiz #2 (Topics Include: Weeks 3-4)</td>
<td>Dynamic Oligopoly Models: Stackelberg Games</td>
<td>CW Ch 10, 13.2</td>
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<td>Week 7</td>
<td>2/28/2017</td>
<td>Quiz #3 (Topics Include: Week 5)</td>
<td>Product Differentiation</td>
<td>CW Ch 11</td>
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<td>Week 8</td>
<td>3/7/2017</td>
<td>In Class Midterm (Topics Included: Weeks 1 – 6)</td>
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<td>Week 9</td>
<td>NO CLASS</td>
<td>Research Topic Due</td>
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<td>Week 10</td>
<td>3/21/2017</td>
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<td>Strategic Behavior Part II: Entry Deterrence</td>
<td>CW Ch 13, 14</td>
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<td>Week 11</td>
<td>3/28/2017</td>
<td>Quiz #4 (Topics Include: Weeks 7)</td>
<td>Vertical Integration and Vertical Restraints</td>
<td>CW Ch 22</td>
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<td>Week 12</td>
<td>4/4/2017</td>
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<td>Horizontal Mergers</td>
<td>CW Ch 23</td>
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<td>Week 13</td>
<td>4/11/2017</td>
<td>Quiz #5 (Topics Include: Weeks 10-11)</td>
<td>Regulatory Economics: Natural Monopoly</td>
<td>CW Ch 24, 25</td>
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<td>Week 14</td>
<td>4/18/2017</td>
<td>Quiz #6 (Topics Include: Week 12)</td>
<td>Antitrust in the United States</td>
<td>CW Appendix A</td>
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<td>Week 15</td>
<td>4/25/2017</td>
<td>Research Paper Due</td>
<td>Research Presentations</td>
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