I. INFORMATION ON INSTRUCTOR

Instructor: Dr. Steven XU, 1113 K. K. Leung Building
Office Hours: 4-5pm @ Thursdays.
Email: paixu@hku.hk

II. COURSE DESCRIPTION AND OBJECTIVES

Course description:

This course is a topical one on the field of Industrial Organization at master level. Students are expected to be proficient already in fundamentals on microeconomics and applied econometrics. We will read and discuss leading papers in empirical IO field – topics include, but not limited to, detection of anti-competitive firm behavior; demand estimation for differentiated products; market structure and firm entry; auction and mechanism design in various markets; consumer search and matching efficiencies; estimation of dynamic models. Beyond academic concerns, there will be policy-oriented issues such as competition regulations, and commercial implications such as pricing and competitive analysis.

We shall not aim to cover all topics in one semester at all, though all of them are interesting for their own reasons. We will select the ones that majority of class hold enthusiasm and therefore exact reading list for the course will be class dependent. The intended audience for this course is all Master of economics students. It is preferred if you have already successfully taken ECON6001 and 6021. Students are assumed to have some exposure of game theory. At minimum, it is assumed that one knows how to describe a game, and notions of equilibrium. PHD/MBA/Undergrad students who are research-oriented may also find this course useful. A good way to gauge the difficulty level of the course is to flip through the academic papers on the reading list in appendix.

Course objectives:

1. To prepare graduate students to be a specialist in empirical Industrial Organization
2. To give solid training in understanding the structure of markets, and the strategic behavior of firms and their consumers
3. To understand and appreciate the connections between academic research and real-world applications
4. To review and strengthen the understanding of game theory
5. To provide a unified treatment of different models of strategic interactions among firms, both theoretically and empirically
6. To establish and differentiate equilibrium strategies for firms in various market structures

III. LEARNING OUTCOMES

By the end of this course, students should be able to:

1. Have solid and critical understanding of the major literature
2. Be capable to understand methodology in empirical research on IO topics
3. Distinguish the nature of strategic competition
4. Understand how to use models to analyze different strategic interactions among firms
5. Have perspectives in connecting academic research with real-world applications
6. Comprehend the key principles of communicating to academic community
IV. ALIGNMENT OF PROGRAM AND COURSE OUTCOMES

The following matrix indicates the alignment between the course learning outcomes and the program learning outcomes.

<table>
<thead>
<tr>
<th>Program Learning Outcome</th>
<th>Associated Course Learning Outcomes (CLO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Understanding of fundamental theories and new development in economics</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>• Mastering of skills in analyzing economic data</td>
<td>1, 2, 5, 6</td>
</tr>
<tr>
<td>• Demonstration of ability to apply economic knowledge and analytical skills to address policy and business problems</td>
<td>1, 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td>• Awareness of ethical concerns in economic issues</td>
<td>1, 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td>• Mastering of communication skills</td>
<td>2, 3, 5, 6</td>
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</tbody>
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V. TEACHING AND LEARNING ACTIVITIES

Teaching and learning takes place through weekly lectures.

Teaching and Learning Activities (TLA)

<table>
<thead>
<tr>
<th>TLA1</th>
<th>Lecture</th>
<th>Instructor will give lectures on major concepts and issues.</th>
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</thead>
<tbody>
<tr>
<td>TLA2</td>
<td>Participation &amp; Presentation</td>
<td>Students are expected to present papers and engage in discussion during lecture meetings. Most in-depth learning takes place when students actively engage themselves in discussions through presenting and sharing their ideas.</td>
</tr>
<tr>
<td>TLA3</td>
<td>Consultation</td>
<td>Instructor holds weekly consultation hours to answer students’ questions. Students are encouraged to discuss questions with the instructor by email or a forum in the class website.</td>
</tr>
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</table>

Textbook:

We will study academic papers throughout the semester. However, you may find the following texts useful from time to time.


VI. METHOD OF ASSESSMENT

Your grade in this class is determined by your performance on the following.

First of all, you are strongly encouraged to actively participate in class discussion. Second, you will make class presentations. Depending on the class size, you may be asked to present more than once. Moreover, you will have to submit a referee report on the paper you presented. Third, you will write a literature review, which covers a different topic than the referee report. Lastly, there will be two exams
on this course. One is the midterm test in the class meeting on March 16, and the other is the final exam scheduled by the School.

**Alignment Among Course Intended Learning Outcomes, Teaching and Learning Activities and Assessment Tasks:**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Teaching and learning activity (TLA)</th>
<th>Assessment task</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLO1 to CLO5</td>
<td>TLA1, TLA2, TLA3</td>
<td>Presentation, Report, Review, Midterm Exam, Final Exam</td>
</tr>
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</table>

**VII. STANDARDS FOR ASSESSMENT**

The basis for assessment is a weighted numerical average of students’ performance on each of tasks for class.

- Presentation 10%
- Referee Reports 10%
- Literature Review 15%
- Midterm Exam 20%
- Final Exam 45%

For a “pass” mark students are expected to be able to provide evidence of basic familiarity with the subject. For an “outstanding” mark, students need strong evidence of superb ability to fulfill the intended learning outcomes of the course at all levels of learning.

**VIII. COURSE OUTLINE**

- Introduction, Basics, Review  Week 1, 2
- Imperfect Competition, Product Differentiation, Competition Policy  Week 3, 4, 5
- Auction Design  Week 7, 8
- Search, Price Discrimination, Non-linear Pricing  Week 9, 10
- R&D and Patents  Week 11, 12
- Market Dynamics and Entry  Time Permitting

Once we determine the exact topics to cover in class, we will make efforts to invite guest speakers from industry. The guests will outline the frontier of current practice and research on certain topics.

This is not a definitive outline. We may change it a little bit out of necessity as the class proceeds.

_I hope you will enjoy the class._