

M774
Special Topics in Marketing Strategy
Analytical Study in Marketing
Winter 2022 Course Outline

Marketing
DeGroote School of Business
McMaster University

COURSE OBJECTIVE

This seminar-based course aims to prepare Ph.D. students to undertake independent scholarly research in analytical marketing study. To achieve this, the course will help students to build game theory knowledge background, develop modeling skills, and understand the value and academic contributions of analytical studies.

INSTRUCTOR AND CONTACT INFORMATION

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Associate Professor, Marketing

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Office Hours: By appointment

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COURSE DESCRIPTION

This seminar will cover game theory background, classical analytical marketing models, and contemporary marketing studies.

LEARNING OUTCOMES

The course will help students to develop the ability to independently conduct game-theoretical research in marketing topics

REQUIRED COURSE MATERIALS AND READINGS

The textbook: The Theory of Industrial Organization, by Jean Tirole, MIT Press, 1988
In addition, a list of required and suggested readings for each week will be provided.

EVALUATION

Class preparation, presentations and assignments	30 %
Final Exam (in the Final Exam week)	30 %
Research Idea Presentation (Feb. 23 rd)	10 %
Research Paper	30 %

Conversion

At the end of the course, your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme. (*SUGGESTED conversion scheme*)

LETTER GRADE	PERCENT
A+	90 - 100
A	85 - 89
A-	80 - 84
B+	75 - 79
B	70 - 74
B-	60 - 69
F	00 - 59

Class preparation, presentations and assignments (30%)

You are expected to read all required materials and be prepared to discuss them in each class. In some classes, I will pre-assign a few papers for you to present. For each paper to be presented or discussed, I expect you to read it carefully, understand its key model settings, and consider its merits and limitations. Besides, there will be assignments to help you master the models that are discussed in each class.

Final exam (30%)

The final exam is a comprehensive exam to test your understanding of classical game-theoretical models. The final exam will be held between April 14th to 29th.

Research idea presentation (10%)

You are required to present an original research idea on **February 23rd, 2022**, which should lead to a strong, potentially publishable paper. The presentation will be about 30 minutes to one hour. It should cover following content:

- Description of the problem and context, explaining why it is an interesting research question.
- Discussion of highly relevant paper(s).
- Fundamental model setup with key setting concerns.
- Expected findings and contributions.

Research Paper and Presentation (30%)

Following the research idea, you are required to complete a manuscript by the end of the semester. In the manuscript, you should complete most parts of the introduction section (as your findings may not be fully explored yet), a refined literature review section, a well-defined model set up and preliminary analyses and solution (solution to a simplified/benchmark model, or a numerical example).

ACADEMIC DISHONESTY

It is the student's responsibility to understand what constitutes academic dishonesty. Please refer to the University Senate Academic Integrity Policy at the following URL:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>

This policy describes the responsibilities, procedures, and guidelines for students and faculty should a case of academic dishonesty arise. Academic dishonesty is defined as to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. Please refer to the policy for a list of examples. The policy also provides faculty with procedures to follow in cases of academic dishonesty as well as general guidelines for penalties. For further information related to the policy, please refer to the Office of Academic Integrity at:

<http://www.mcmaster.ca/academicintegrity>

MISSED ACADEMIC WORK

Late assignments will not be accepted. No extensions are available except under extraordinary circumstances. Please discuss any extenuating situation with your instructor at the earliest possible opportunity.

POTENTIAL MODIFICATIONS TO THE COURSE

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

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http://www.copyright.mcmaster.ca/Access_Copyright_Agreement

STUDENT ACCESSIBILITY SERVICES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

<http://sas.mcmaster.ca>

COURSE CONTENT

1. Game Theory Fundamental
 - 1.1. Normal Form
 - 1.1.1. Dominant Strategy
 - 1.1.2. Mechanism Design
 - 1.1.3. Mixed Strategy Equilibrium
 - 1.2. Extensive Form
 - 1.2.1. Timing And Information Set
 - 1.2.2. Perfect Bayesian Equilibrium Vs. Sequential Equilibrium
 - 1.2.3. Stackelberg Vs. Nash
 - 1.2.4. Hold-Up Problem
 - 1.2.5. Multi-period game
 - 1.3. Role Of Information
 - 1.3.1. Incomplete Information
 - 1.3.2. Information Asymmetry: Lemon Market
 - 1.3.3. Information Asymmetry: Signaling Game
 - 1.3.4. Information Asymmetry: Mechanism Design
2. Classical Analytical Models
 - 2.1. Consumer Preference and Behaviors
 - 2.1.1. Horizontal Differentiation
 - 2.1.2. Vertical Differentiation
 - 2.1.3. Bundling
 - 2.1.4. Search
 - 2.1.5. Sequential Decisions
 - 2.1.6. Procrastination
 - 2.2. Pricing
 - 2.2.1. Monopoly Pricing and Price discrimination
 - 2.2.2. Price competition
 - 2.2.3. Auction
 - 2.2.4. Subscription
 - 2.3. Product
 - 2.3.1. Durable Goods
 - 2.3.2. Secondary Market and Recycling

- 2.3.3. R&D and New Product Adoption
- 2.4. Channel
 - 2.4.1. Vertical Channel Coordination
 - 2.4.1.1. Double Marginalization and Channel conflicts
 - 2.4.1.2. Vertical integration
 - 2.4.2. Multiple Channel Conflicts
 - 2.4.3. Contracts
- 2.5. Advertising and WOM
 - 2.5.1. Classical Advertising Model
 - 2.5.2. Targeted Advertising
 - 2.5.3. WOM
- 2.6. Market and Competition
 - 2.6.1. Oligopoly and Collusion
 - 2.6.2. Merge and Acquisition
 - 2.6.3. Market Entry Problem
 - 2.6.4. Two-sided Platform
- 3. Contemporary E-Commerce Business Models