

**ECON 305: INDUSTRIAL ORGANIZATION**  
**Fall 2020**

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**Course objective**

To study how markets and industries work and how firms compete. The focus is on the determinants of market structure; on how market structure affects firms' strategic decisions and their performance; and on how such strategic decisions, in turn, affect market structure. Examples of these decisions include pricing, product variety and positioning, advertising, R&D, entry into markets, as well as strategies that can lead to a reduction in competition (collusion, mergers, foreclosure).

**Course prerequisites**

ECON 208 and ECON 209.

Alternatively: MGCR 293 and ECON 295 or ECON 230D or ECON 250D

**Math requirements**

Working knowledge of arithmetic and algebra is needed. Some basic calculus, required for the course, will be covered in class.

**Schedule**

- Lectures: Wed-Fri 1.05-2.25 pm Montreal time (from September 2 to November 27) on Zoom
- Conferences: weekly, Monday 2-3 pm on Zoom
- Instructor Office Hours: Wednesday on appointment on Zoom, in slots of 20 minutes to be booked in advance (details will follow on MyCourses).
- TA Office Hours: Thursday 2-3 pm Montreal time on Zoom

Lectures will be held via Zoom and will include at most one hour of live lecture. Some of the lectures may be pre-recorded. The remaining time will be devoted to Q&A and discussions on MyCourses. All sessions will be recorded and made available on MyCourses.

The TA will hold weekly conferences to review the material covered during class, go over practical exercises and discussion questions, and address your questions on the lectures. Participation is not mandatory but highly recommended. Up to three conferences will be held during the usual lecture time (Wed-Fri 1.05-2.25 pm) to minimize conflict with other courses and allow a broader attendance.

Office hours and lectures may be cancelled and rescheduled in some cases; lectures will be pre-recorded if no other arrangement is possible. In such cases, it will be announced on MyCourses in advance (whenever possible).

## Textbook and course material

Lecture slides and notes will be uploaded for each class, either before or right after the lecture. These are crucial to prepare for assignments, midterms, and the final exam.

The adopted textbook for the course is:

Luis M. B. Cabral, Introduction to Industrial Organization, Second Edition, The MIT Press, 2017

The first edition is allowed, but does not include math derivations and has different exercises. You can use it instead of the second edition, but it is your responsibility to obtain the missing parts.

The book is available at the McGill bookstore or through online resellers (Amazon, Indigo, etc.). MIT Press offers also a renting option of the eTextbook for 4 or 12 months, which is cheaper (see [here](#)).

You can also refer to other major Industrial Organization textbooks, such as:

- Lynne Pepall, Dan Richards, George Norman, Industrial Organization: Contemporary Theory and Empirical Applications, 5th Edition (Wiley, 2014): great book, more detailed (hence longer) than Cabral.
- Dennis Carlton and Jeffrey Perloff, Modern Industrial Organization, 4<sup>th</sup> Edition, Pearson, 2005: very good, but it starts suffering from its age.
- Jeffrey Church and Roger Ware, Industrial Organization: A Strategic Approach, available online at: [http://works.bepress.com/jeffrey\\_church/23/](http://works.bepress.com/jeffrey_church/23/): more advanced and useful to deepen your knowledge once the basics are clear.

Extra material (articles, cases, chapters of other books) will be indicated and made available on MyCourses.

## Grading

- 2 take-home assignments (weeks 3 and 8): 20% of the final grade (10% each). You will have a week to complete them.
- 2 open-book midterm exams (week 6 and 10): 40% of the final grade (20% each), on topics covered during the preceding weeks (details will follow). The test will take place on myCourses and will be accessible for a period of 48 hours: once you access the exam, you will have 2 hours to complete and upload your answers to myCourses.
- Open-book final exam, scheduled by the Faculty of Arts in December: 40% of the final grade, covering the whole course, but with emphasis on the material not covered in the midterm exams.
- Active participation (during live lectures, in Q&A sessions, in discussion forums on MyCourses) will be rewarded with a maximum of 2 extra points on the total grade.

The specific format of the midterms, assignments and final exam will be discussed during the course: it will include a combination of closed-form questions, short essays, and exercises.

If you miss either or both midterms, you will have to take **a separate test** during the last week of classes on **ALL** the material covered in class since the beginning. Midterm exams cannot be rewritten.

Under no circumstances will you be allowed to present additional work to increase your grade.

## How to prepare for the exams

Following lectures, taking notes, actively participating (as appropriate in the virtual environment), reading the material and preparing exercises in advance are the best and easiest ways to learn and prepare for the exams.

Keep up with the readings and revise each lecture before the next one, so you can raise questions and have your doubts cleared as soon as possible, during the lecture or the conference. Do not wait for the exam to approach to read the textbook and do practice exercises: the material accumulates quickly.

I strongly recommend working on exercises, revising the lectures, discussing, and sharing notes with your classmates. They are a great resource and working together is more fun – even at distance.

Lecture notes and slides and any other material discussed in class will be posted on MyCourses, as well as exercises for conferences and most of their solutions.

## Communication

The main mode of communication is MyCourses. Check it every day for announcements, questions, assignments, flexible-format activities.

If you have a question about the material, follow these steps:

1. Raise your question in live lectures, in Q&A sessions, on discussion forums.
2. Ask your classmates (for example through MyCourses).
3. Ask the TA during conferences or office hours.
4. If nothing of the previous work, use my office hours.

For any other matter, contact the TA: if they cannot address it, they will communicate it to me.

Email communication with me should be kept limited to cases where any other option fails or for very short questions that can be answered quickly.

## Academic Policies

**Academic integrity:** McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see [www.mcgill.ca/integrity](http://www.mcgill.ca/integrity) for further information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site <http://www.mcgill.ca/integrity>).

**Exams:** According to Senate regulations, instructors are not permitted to make special arrangements for final exams.

**Language of submission:** In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

**Extraordinary Circumstances:** In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

**Copyright:** All slides, video recordings, lecture notes, etc. remain the instructor's intellectual property. As such, you may use these only for your own learning (and research, with proper referencing/citation) ends. You are not permitted to disseminate or share these materials; doing so may violate the instructor's intellectual property rights and could be cause for disciplinary action.

**Lecture/Conference Recording:** By enrolling in a remote course, you accept that fixed sessions will be recorded. You must consent to being recorded if you are attending a lecture or participating in a component of a course that is being recorded. You will be notified through a "pop-up" box in Zoom if a lecture or portion of a class is being recorded. If you are not comfortable being in a class that is recorded, you may decide to not take part by logging off Zoom. Students who log off will be able to later watch the video recording in MyCourses.

For pedagogical reasons and for the enrichment of the experience of all students, attendance may be monitored and/or active participation may be expected or required during fixed (synchronous) class time. As such, you may be asked to turn on your camera and audio. If you do not have the necessary resources (e.g., adequate Internet bandwidth or equipment) to do so, inform your instructor at the beginning of term so that appropriate accommodations can be made.

In addition to the recording of your image and voice, your name (or preferred name) may be displayed on screen, and your instructor may call your name during the lecture. As such, this personal information will be disclosed to classmates, whether during the lecture or in viewing the recording. By remaining in classes that are being recorded, you accept that personal information of this kind may be disclosed to others, whether during the lecture or in viewing the recording.

**Netiquette:** The University recognizes the importance of maintaining teaching spaces that are respectful and inclusive for all involved. To this end, offensive, violent, or harmful language arising in contexts such as the following may be cause for disciplinary action:

- Username (use only your legal or preferred name)
- Visual backgrounds
- "Chat" boxes

To maintain a clear and uninterrupted learning space for all, you should keep your microphone muted throughout your class, unless invited by the instructor to speak. You should follow instructors' directions about the use of the "chat" function on remote learning platforms.

Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights. Visit <http://www.mcgill.ca/students/srr> for more information.

### **Course outline and tentative schedule**

Required reading is marked with an asterisk \* in the course reading list below. Extra material will be indicated and made available during the course. Due to time constraints, it is possible that some topics will not be covered or some topics added. Any changes will be announced in class and/or on MyCourses.

**In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme of this course is subject to change.**

**PART 1: INTRODUCTION TO INDUSTRIAL ORGANIZATION (week 1-2)**

Industrial Organization and its approaches	*Cabral, ch. 1
Revision of basic microeconomics concepts	*Cabral, ch. 2 and 3
Basics of Calculus	*Notes

**PART 2: FROM COMPETITION TO MONOPOLY (week 2-3)**

Perfect competition and monopoly: welfare and regulation	*Cabral, ch. 4 and 5
Price discrimination	*Cabral, ch. 6

**PART 3: OLIGOPOLY AND STRATEGIC INTERACTION (week 3-5)**

Strategic interaction: basics of game theory	*Cabral, ch. 7
The Bertrand model and its extensions	*Cabral, ch. 8.1
The Cournot model and market power	*Cabral, ch. 8.2-8.4, ch. 10.3

**PART 4: FIRMS' NON-PRICE STRATEGIES TO INCREASE MARKET POWER (week 5-7)**

Product differentiation and the Hotelling model	*Cabral, ch. 14.1-14.2
Advertising	*Cabral, ch. 14.3-14.5
Innovation and R&D	*Cabral, ch. 15
Network externalities	*Cabral, ch.16

**PART 5: FIRM RELATIONS AND ANTICOMPETITIVE BEHAVIOR (week 8-13)**

Collusion and antitrust	*Cabral, ch. 9 *R.H. Porter (1983), A Study of Cartel Stability: The Joint Executive Committee, 1880-1886, The Bell Journal of Economics, Volume 14, Issue 2 * <a href="https://www.youtube.com/watch?v=wDH0Rv8R0SQ">https://www.youtube.com/watch?v=wDH0Rv8R0SQ</a> * <a href="https://www.youtube.com/watch?v=Z07EhM8cC-g">https://www.youtube.com/watch?v=Z07EhM8cC-g</a>
Entry and entry deterrence	*Cabral, ch. 10
Horizontal mergers	*Cabral, ch. 11
Vertical relations	*Cabral, ch.13