



Birla Institute of Technology & Science, Pilani
Hyderabad Campus

FIRST SEMESTER 2019-2020

COURSE HANDOUT

01.08.2019

In addition to Part-I (General Handout for all courses appended to the timetable), this portion gives further specific details regarding the course.

Course No. : **ECON F314**
Course Title : **Industrial Economics**
Instructor-in-charge : **Dushyant Kumar**

1. Scope and Objective:

Industrial Economics studies the application of economic theory to the management of the modern business. Primarily we are going to cover the functioning of imperfectly competitive markets, optimal behavior of firms in these markets, and it's (social) welfare implications. It entails a wide-ranging economic analysis of the firm, it's organizational structure, and market/industry outcomes. It primarily uses theoretic concepts from microeconomics and game theory.

Industrial Economics is a one-semester course which applies microeconomic, econometric and game theoretic techniques to the study of firms as organizations, market structures, strategic interaction between firms (and regulators), market efficiency and industrial policy. Our focus is also on the impact that these firms' behavior and industry outcomes, have on social welfare. Often these analytical and abstract modeling captures non-trivial and seemingly counter-intuitive welfare implications.

Objective:

1. Give a simple yet rigorous introduction of economic theories of firms behavior and industry structure.
2. Students should be able to use basic microeconomic and game theoretic tools to model firms as well as industry behavior under different conditions on production technology, competitive structure, and institutional factors.
3. The students should be able to understand and appreciate the (social) welfare implications of different competition rules, institutional factors, government policies, etc.
4. Enhance students' skills and abilities to use theoretical and empirical tools to formulate and solve economic (in general, analytical) problems.

2. Text Book:



- i. **(T1) J. Church and R. Ware, “Industrial Organization: A Strategic Approach”, First edition, McGraw-Hill, 2000.**

A pdf file version of this book is available free of charge on the Internet at the following address https://edisciplinas.usp.br/pluginfile.php/544042/mod_resource/content/1/ChurchWare.pdf. You must respect the terms and conditions of usage.

3. Reference Books:

- i. **(R1)** Waldman, Don E. and Elizabeth J. Jensen (2005): *Industrial Organization: Theory and Practice*, Second Edition, Pearson Education.
- ii. **(R2)** Belleflamme, Paul and Martin Peitz (2010): *Industrial Organization: Markets and Strategies*, Cambridge University Press.
- iii. **(R3)** Tirole, Jean (2007): *The Theory of Industrial Organization*, Prentice Hall India Learning Private Limited.
- iv. **(R4)** Carlton, Dennis W and Jefferey M Perloff (2015): *Modern Industrial Organization*, Fourth Edition, Pearson.
- v. **(R5)** Pepall, Richards and Norman (2008): *Industrial Organization: Contemporary Theory and Empirical Applications*, Fourth edition, Blackwell Publishing.
- vi. **(R6)** Roger Clarke: *Industrial Economics*, First Published in 1985 (and transferred to digital print 2003) by Blackwell Oxford, UK and Cambridge, USA.
- vii. **(R7)** Oz Shy (1996): *Industrial Organization - Theory and Applications*, MIT Press.
- viii. **(R8)** Stephen Martin, *Industrial Organization in Context*, Oxford University Press, 2010.

4. Course Plan:

Topics	Lecture No.	Learning Objectives	Topics to be Covered	Chapter in the Text Book
1.	1	To introduce students to the basic market structures and firm behavior	Introduction and theoretical framework of industrial analysis	T1. Chapter 1 R7. Chapter 1
	2-6		Perfect competition, monopolistic competition and monopoly	T1. Chapter 2 & 3 R7. Chapter 4,5,7



			The firm and its costs	
			Welfare economics of market power	
2.	7-9	To introduce students to different monopoly setups and its pricing and welfare implications	Market power and dominant firms	T1. Chapter 4 R1. Chapter 5 R7. Chapter 5
	10-12		Price discrimination	T1. Chapter 5 R7. Chapter 3
	13-15		Identifying and Measuring Market Power	T1. Chapter 12
3.	15-19	To introduce students to the basic game theoretic concepts, and its usage and implications on firms behavior and market outcomes	Introduction to basic Game Theoretic Concepts	T1. Chapter 7 & 9 R7. Chapter 2 Notes
	20-24		Various Models of Oligopoly	T1. Chapter 8 & 10 R7. Chapter 6 Notes
	25-27		Entry deterrence	T1. Chapter 13 & 14 R7. Chapter 8
4.	28-31	To introduce students to non-pricing instruments of a firm	Advertising and Oligopoly	T1. Chapter 11
	32-35		Research and Development	T1. Chapter 18 R7. Chapter 9
5.	36-37	To introduce students to the economics of compatibility and standards: basics of Network Economics	The network externalities approach	R7. Chapter 10 Notes
	38-39		The supporting services approach	
	40-42		The components approach	

5. Learning Outcomes:

Topic 1: Basic firm behavior, market structures and welfare implications

1. The students should be able to analyze basic firms behavior using economic theory.
2. The students should be able to do comparative analysis of welfare implications of monopoly and perfect competition setups.



Topic 2: Monopoly (pricing) practices and welfare implications

1. In standard monopoly frameworks, the students should be able to calculate optimal pricing.
2. The students should be able to identify and index market powers of firms in different industries.

Topic 3: Applications of basic game theoretic tools in oligopolistic market setups

1. The students should be able to apply basic game theoretic solution concepts (particularly NE and SPNE) to different games.
2. The students should be able to apply basic game theoretic equilibrium concepts to strategic interactions between two or more firms.

Topic 4: Non-pricing instruments of a firm

1. The students should be able to analytically model advertisement by firms.
2. The students should be able to analytically model research and development activities by firms.

Topic 5: Economics of compatibility and standards

The students will learn how does firm optimal behavior changes if it's products and services have network effects. The students should be able to derive the effects of such network effects on market power.

6. Evaluation scheme:

Component	Duration	Weightage (%)	Date and Time	Nature of Component
Mid-sem	90 mts	30	5/10, 11.00 -- 12.30 PM	OB
Quizzes- (02)	-	15		CB
Assignments- (02)		15		OB
Comprehensive Examination	3 hrs	40	13/12 AN	CB

7. Chamber Consolation Hour: To be announced in the class

8. Notices: Notices, if any, would be put on CMS.

9. Make-up Policy: Make-up will be granted only on genuine grounds and if prior permission is taken. No application will be accepted in the Exam Hall. Make-up will be given only on Doctor's/Warden's recommendation and with prior (at least 01 day before the test/exam) permission of the Instructor-in-Charge/Instructor. Make-up application via sms/messages is not acceptable.

10. Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Instructor-in-Charge
BITS F314**

