Syllabus

Course Desription

This course extends the basic concepts of Industrial Organization and presents advanced methods and topics. The focus is on business strategies such as price discrimination and product differentiation and on strategic interaction in oligopoly. Students will learn about the importance of the research and development activities of firms and how they are influenced by public policy in general and by the patent system in particular. The course models and evaluates business behavior from both a public policy and a managerial perspective.

Pre Requisites

Intermediate Microeconomics, as covered for instance in
McAfee, R. Preston: Introduction to Economic Analysis, http://www.introecon.com/IEA.pdf;
Pindyck, Robert S. / Rubinfeld, Daniel L.: Microeconomics, 5th Edition, Prentice Hall International, Inc., New Jersey, 2001.

Literature

The reference texts for this course are Pepall, Richard, and Norman (PRN): Industrial Organization: Contemporary theory and practice, Wiley, 4th edition. 2008; Pepall/Richards/Norman: Contemporary Industrial Organization: A Quantitative Approach, resp. We recommend that you buy the more advanced "Quantitative Approach" text book; Bellefamme and Peitz: Industrial Organization – Markets and Strategies, Cambridge University Press, 1st edition, 2010; Bester: Theorie der Industrieökonomik, Springer Gabler 6. Auflage 2012.

Class Time

Lecture: Tuesday, 16:15 -17:45 (room 031)
Exercise class: Monday, 18:00 – 19:30 (room 031)

Course Requirements / Contribution to Final Mark

Final exam: 85%
Participation in the exercise class: 15%

- Submission of assignments: 10%
  - Problem sets are downloadable at StudIP
  - Deadline: Monday 12:00
  - E-mail (scan, pdf, doc): tim.bruehn@wirtschaft.uni-giessen.de
    or
    Post (copy!) chair’s post box (opposite to lecture room 4)
  - Working groups of 3-5 students
- Participation and presentation: 5%

Problem Set 1 (due date: 21.10.2013)

1. A consumer has the utility function $U(x_0, x) = x_0 + \sqrt{x}$. Her income, which is used to buy $x \geq 0$ units of good x and $x_0 \geq 0$ units of the numeraire x_0, is given by M (in units of the numeraire good).

a) How many units of the numeraire is the consumer willing to pay for four units of good x if $M \geq 2$? Does the willingness to pay change if the income increases?

b) Assume that the consumer bought four units of good. How does her utility increase if she had no units of good before? How many units of the numeraire is she willing to pay for four additional units of good?

c) Assume that the price of the good is p=1. How many units of the good will the consumer buy if $M > 1/4$? How many units will she buy if $M < 1/4$? Which case is typical for questions in industrial organization?

2. Assume a sector with perfect competition and a large number of firms with identical cost functions $c(y) = y^2 + 4$ for $y > 0$ and $c(0) = 0$. The demand is given by $D(p) = 50 - p$.

a) Determine the short-run market equilibrium if we assume that 18 firms are in the market. Calculate the firms' profits.

b) Determine the long-run market equilibrium.

3. A monopolist with demand schedule $q = p^{-\varepsilon}$, with $\varepsilon > 1$, has constant marginal costs of c.

a) Calculate the monopoly price and quantity.

b) * Show that the social welfare function with perfect competition has the value $W^c = c^{1-\varepsilon} / \varepsilon - 1$.

c) Assume that unit costs c rise. Show that the monopolist will pass through the cost increase more than proportionally to consumers. Assume now that the demand schedule is given by $q = K - p$. Calculate the dead-weight-loss of the monopolist. Show now that the monopolist will pass through the cost increase less than proportionally to consumers.

4. Assume the following demand function:

$$q = \begin{cases} n \; if \; p \leq s \\ 0 \; if \; p > s \end{cases}$$

Interpret this function, calculate the monopoly price, and show, that no dead-weight-loss is involved.