

# DEPARTMENT OF ECONOMICS

2018



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## APPLIED ECONOMICS 388

### SELECTED ASPECTS OF MANAGERIAL ECONOMICS

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## **1. OUTCOMES / UITKOMSTE**

Sometimes the theoretical models get so much attention in economics that the practical examples get neglected. This course will develop your quantitative skills and after the completion of this section of the course you must be able to

- \* know what the study field of managerial economics is all about
- \* use calculus in problem solving;
- \* use theoretical concepts that you learned in simulated problems;
- \* use optimizing techniques like the La Grange multipliers
- \* use linear algebra;
- \* know how market structures differ and to solve problems within different market structures
- \* solve problems about price discrimination, multiple-product and multiple-departmental firms
- \* include risks in making business decisions

## **2. METHOD OF PRESENTATION**

The classes are scheduled for Mondays 13:00-14:50, Tuesdays 11:00-11:50 and Thursdays 09:00-09:50 in the Van der Sreer Building 2118. The Monday period will be used for tutorials as well as for tutorial assignments. Tutorial assignments will be written on 1 and 15 October. Further information will be made available at a later stage in class

## **3. LANGUAGE OF INSTRUCTION**

The language of instruction is English. For this undergraduate modules where both Afrikaans and English are used in the same class group, the combination of facilitated learning opportunities is as follows

- During each lecture, all information is conveyed at least in English and summaries or emphasis on content are also given in Afrikaans. Questions in Afrikaans and English are, at the least, answered in the language of the question.
- Students are supported in Afrikaans and English during a combination of appropriate, facilitated learning opportunities (e.g. consultations during office hours, or scheduled tutorials and practicals).

- For first-year modules, SU makes simultaneous interpreting available during each lecture. During the second and subsequent years of study, simultaneous interpreting is made available by SU upon request by a faculty, if the needs of the students warrant the service and SU has the resources to provide it. If two weeks have passed with no students making use of the interpreting service, it may be discontinued.

#### **4. ASSESSMENT**

This module follows the flexible assessment policy. Managerial Economics will count 25% of your mark for Economics 388. It will be calculated as follows:

Summative tutorial assignments	30
Main assessment A2S2 on 30 October	<u>70</u>
<b>Total</b>	<b><u>100</u></b>

Main assessment A3S2, which covers the entire year's work, is scheduled for 21 November 2018.

#### **5. SOURCES:**

The following sources will be used in this module. Additional reading material may be made available in class from time to time. Experience shows that students attending lectures well prepared gain the most from it and also do the best in this module.

Baye, M.R. 2013. *Managerial Economics and Business Strategy*. New York: McGraw-Hill Irwin

Boyes, W. 2008. *Managerial Economics. Markets and the Firm. (International Edition)*. Mason: South –Western, Cengage-Learning

Hirschey, M. and Bentzen, E., 2014. *Managerial Economics (13<sup>th</sup> Edition)*, Hampshire: Cengage Learning.

Hirschey, M., Pappas, J.L. and Whigham, D., 1993. *Managerial Economics, European Edition*, London: The Dryden Press.

Jacques, I. 2009. *Mathematics for Economics and Business*. Edinburgh: Prentice-Hall

Mansfield, E., Allen, W. B., Doherty, N. A. and Weigelt, K. 2002. *Managerial Economics. Theory, Applications and Cases*, New York: W.W. Norton & Company.

- Png, I. and Lehman, D. 2007. *Managerial Economics*. Malden: Blackwell Publishers.
- Rosser, M. 2004. *Basic Mathematics for Economists*, London: Routledge Publishers
- Soper, J. 2004. *Mathematics for Economics and Business. An Interactive Approach*,  
Oxford: Blackwell Publishing
- Thomas, C.R. and Maurice, S.C. 2011. *Managerial Economics. Foundations of  
Business Analysis and Strategy*, New York: McGraw Hill.
- Truett, L.J. and Truett, D.B., 2004. *Managerial Economics. Analysis, Problems and  
Cases*, Cincinnati: South-Western Publishing Co.
- Wilkinson, N. 2005. *Managerial Economics. A Problem-Solving Approach*,  
Cambridge: Cambridge University Press

## **6. WORK PROGRAMME:**

### **6.1 WHAT IS MANAGERIAL ECONOMICS?**

Overview of this field of study  
 Management of resources  
 Organisation and markets  
 Successful firms and leadership  
 Role of the economy

*Png & Lehman pp. 1-20*

*Boyes pp. 1-18*

### **6.2 FUNCTIONS AND DERIVATIVES**

Summation of functions  
 Basic principles of derivatives  
 First and second order derivatives  
 Rules of derivatives  
 Marginal principles  
 Partial derivatives

*Jacques pp. 275-308; 370-383*

Klasnotas

### **6.3 THEORY OF PRODUCTION**

Production functions

Isoquants

Marginal rate of technical substitution (MRTS)

Isocost curves

Least cost combination of inputs

Product curves

Optimal input combination

*Baye pp. 155-175*

### **6.4 COST OF PRODUCTION**

Type of costs

Costs in the short run

Costs in the long run

Relationship of cost and product curves

Optimal plant size

*Baye pp. 175-201*

### **6.5 PROFIT ANALYSIS**

#### 6.5.1 Profit determination

Profit maximization

Break-even analysis

Incremental profit analysis

*Wilkinson pp.212 -253*

#### 6.5.2 Optimisation techniques

Marginal analysis

Derivatives

Maximization and minimization

Partial differentiation

Constrained optimisation

La Grange multipliers

*Mansfield et al: 37-80*

### 6.5.3 Linear programming

Constraints

Feasible region

Objective function

Maximization problems

Minimization problems

*Soper pp. 336-356*

## 6.6 MARKET STRUCTURES

Perfect competition and the monopoly

### 6.6.1 Perfect competition

Short run equilibrium

Long run equilibrium

Firm's supply curve

### 6.6.2 Monopoly

Short run equilibrium

Long run equilibrium

Natural monopoly

Monopoly-monopsony solution

*Hirschey, Pappas en Whigham pp 587-619*

Distinction between market structures

### 6.6.3 Monopolistic competition

### 6.6.4 Oligopoly

Duopoly

Kinked demand curve

### 6.6.5 Collusion

Efficient firm

Dominant firm

Perfect collusion: the cartel

*Truett en Truett pp. 375-418*

## **6.7 DYNAMICS AND DIFFERENCE EQUATIONS**

Dynamic economic analysis  
Cobweb iterative solutions  
Lagged Keynesian macroeconomic model  
Duopoly price adjustment

*Rosser, pp 402-443*

## **6.8 PRICING PRACTICES**

6.8.1 Markup pricing  
    Markup on cost  
    Markup on price  
    Optimal markup pricing

6.8.2 Price discrimination  
    Multiple markets

6.8.3 Multiple-product pricing

6.8.4 Transfer pricing between departments

*Hirschey and Bentzen, pp 585-627*

## **6.9 DECISIONMAKING UNDER RISKS**

Difference between risk and uncertainty  
Measuring risk and probability  
Decisionmaking under risk  
Expected utility functions  
Decisionmaking under uncertainty

*Thomas & Maurice pp.624-652*