

**MEDITERRANEAN AGRONOMIC INSTITUTE OF CHANIA  
(MAICH)**

*Business Economics and Management*

**POSTGRADUATE ACADEMIC GUIDE**

**&**

**ECTS GUIDE**

**2006 - 2007**

# *Business Economics and Management*

Postgraduate Specialisation and M.Sc. Programme

SCIENTIFIC COORDINATOR: **Dr. George Baourakis**

## **EDUCATIONAL AND PROFESSIONAL GOALS**

The Master's program in Business Economics and Management provides a two-year curriculum for graduates holding a university Bachelors degree in Economics, Business, Agriculture, Engineering and Social or other related sciences.

In the first year participants pursue the Postgraduate Specialization Certificate. The objectives of this course of study are to: i) support management through merging the necessary knowledge of economic theory regarding resource allocation and evaluation in their social context; ii) facilitate decision making through the application of modern operational management methodologies and techniques to achieve efficiency; iii) provide advanced knowledge on the application of econometric theory to business market situations within the framework of the Common Agricultural Policy; iv) specify the requirements of business strategic management, i.e. business requirements relative to financial and marketing strategies and the tools of market research. The first year students receive a solid theoretical and practical training in the following areas: management, marketing, e-commerce, regional management, financial management and business economics. Field and computer laboratory exercises combined with these courses provide a more practical and tangible perspective. The qualified first year graduates are entitled to carry out their research in an environment fully equipped with the most updated facilities.

In the second year, students who have successfully completed the first year and who have met all the pre-requisites set by the Institute, develop a thesis based on research work and economic development leading to a Master's of Science degree.

The scientific results derived from the graduate studies are usually announced in International Conferences and/or published in World Renowned Journals.

## **ACCESS TO FURTHER STUDIES**

Statistics show that 28% of M.Sc. graduate students are accepted in Ph.D. programmes with full scholarship in European and North American Universities.

## **POST GRADUATE SPECIALISATION PROGRAMME**

The programme is organized in 7 sections

### **Section I - Introductory (english, computers)**

Knowledge updating in the English language, introductory computing.

### **Section II - Advanced Statistics**

This section is comprised of courses related to basic concepts of statistics and computer applications using SPSS or SAS statistical software packages in order to strengthen the background of the students in statistics.

### **Section III - Economics of Resource Allocation**

It covers the basic principles of economics, mathematics, production theory and functions, supply and demand elasticities, resource and welfare economics.

### **Section IV - Investment Decisions**

It focuses on cost benefit analysis, financial, economic and environmental appraisal of investment projects, and impact assessment.

### **Section V - Operational Management Methods**

It is dedicated to the principles of management, operations research/management science methodologies and advanced optimization techniques.

### **Section VI - Business Economics**

The Business Economics provides an overview of the market models such as perfect competition, monopoly, oligopoly and the behaviour of food product prices. This module also covers macroeconomic concepts, econometrics and time series analysis, as well as market performance and public policy in the food industries, and financial management. Finally, a course on Common Agricultural Policy provides knowledge on historical, institutional and comparative aspects of the European Community and European agriculture.

### **Section VII - Management - Marketing**

It includes courses on strategic management and the management of business firms. The second part is dedicated to marketing strategies, advertising, promotion, product differentiation and marketing regulations. Finally, one week will be devoted to market research which will provide students with tools and applications of marketing research techniques such as questionnaire design, data collection and data analysis.

## **TRAINING SEQUENCE**

### **Section I - Introductory (english, computers) [4 ECTS]**

October

BEM.501 - Scientific English (3 ECTS)

BEM.502 - Introduction to Computers (1 ECTS)

### **Section II - Advanced Statistics [6 ECTS]**

from October to November

BEM.510 - Database and Data Mining (3 ECTS)

BEM.511 - Parametric and Non-Parametric Statistics (3 ECTS)

### **Section III - Economics of Resource Allocation [9 ECTS]**

from November to December

BEM.520 - Mathematics for Decision Making (3 ECTS)

BEM.521 - Supply and Demand Theory – Market Models (3 ECTS)

BEM.522 - Resource and Welfare Economics (3 ECTS)

### **Section IV - Investment Decisions [6 ECTS]**

January

BEM.530 - Theory and Applications of Cost-Benefit Analysis (3 ECTS)

BEM.531 - Project Appraisal (3 ECTS)

**Section V - Operational Management Methods** [6 ECTS]

February

BEM.540 - Principles of Management (3 ECTS)

BEM.541 - Operations Research (3 ECTS)

**Section VI - Business Economics** [21 ECTS]

from March to April

BEM.550 - Market Structure – Price Analysis (6 ECTS)

BEM.551 - Macroeconomics (3 ECTS)

BEM.552 - Econometrics and Time Series Analysis (3 ECTS)

BEM.553 - Food Economics (3 ECTS)

BEM.554 - Agricultural Marketing and Policy (3 ECTS)

BEM.555 - Financial Management (3 ECTS)

**Section VII - Management - Marketing** [12 ECTS]

from May to June

BEM.560 - Management of Business Cooperatives (3 ECTS)

BEM.561 - Strategic Management (3 ECTS)

BEM.562 - Marketing (3 ECTS)

BEM.563 - Market Research (3 ECTS)

**COMPREHENSIVE ORAL OR WRITTEN EXAMINATION** (MODALITIES AND DATES)

During Section I, participants attend classes on English TOEFL and Introduction to Computers. They are also obliged to attend a 45-hour course in Scientific English which is equally distributed during Sections I – V, and then take a written examination.

Participants take three written examinations during Section II and Section III respectively, equally distributed over time, each unit being independently graded.

Participants take three written examinations during Section IV, and present 2 written assignments in groups for the evaluation of units 2 and 3, each unit being independently graded.

Participants take two written examinations for Section V and present a written individual exercise for the evaluation of unit 3. Each unit is independently graded.

To evaluate Section VI participants sit in on five written examinations and present a written personal assignment for the evaluation of unit 4. Each unit is independently graded.

Participants take one written examination during Section VII and present three written assignments in groups for the evaluation of units 1, 3 and 4. Each unit is independently graded.

A comprehensive oral examination conducted by an Examination Board takes place at the end of the academic year, representing 15% of the total grade.

Written exams consist of a set of questions that require a concise answer. Some of the questions are multiple choice. Lengthy questions are avoided.

Participants may retake their exams if they have failed in any one of sections II, III, IV and V.

## ANALYTICAL SYLLABUS

### BEM.501 - **Scientific English** (3 ECTS) \_\_\_\_\_

LECTURER: Mrs. Irene Maravelaki

TYPE OF COURSE AND TEACHING METHODS: Lectures

OBJECTIVE OF THE COURSE: Development of academic writing skills, study of scientific texts and papers.

PREREQUISITES: Fluency of English language (TOEFL level)

#### COURSE CONTENTS

Study of scientific texts. Terminology and grammar. Development of academic writing, public speaking and communication skills.

#### RECOMMENDED READING

Vince M., First Certificate Language Practice, Read Educational & Professional Publishing Ltd., Halley Court, Jordan Hill, 1996.

Economics, Cassell Publishers Ltd., Villiers House, London, 1989.

Marketing, Maggie Jo St. John, Prentice Hall, 1992.

Thomson A. Jr. & Strickland A., Strategic Management, Concepts and Cases, McGraw-Hill Irwin, Thirteenth Edition, 2003.

ASSESSMENT METHODS: Written exam, Oral exam, Cluster presentation

### BEM.502 - **Introduction to Computers** (1 ECTS) \_\_\_\_\_

LECTURER: Dr. George Baourakis

TYPE OF COURSE AND TEACHING METHODS: Computer-assisted teaching

OBJECTIVE OF THE COURSE: Experience with computer networks, communication protocols, and database management.

PREREQUISITES: Basic knowledge of computer hardware and software

#### COURSE CONTENTS

Computer hardware components, peripherals and controllers, architecture, operating systems. Interaction with computers. Data communications and computer networks. The Internet: brief history, protocols, addressing and domain name service (DNS). E-mail, News-Groups, Telnet, Ftp, WWW (World Wide Web). Computer applications: word processing, spread-sheets, data-bases, graphics, scientific software, schedulers. Computer Security.

#### RECOMMENDED READING

Training material in accordance with ECDL (European Computing Driving Licence)

ASSESSMENT METHODS: Computer-Assisted Exam

### BEM.510 - **Database and Data Mining** (3 ECTS) \_\_\_\_\_

LECTURER: Prof. Panos Pardalos

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Databases - types, knowledge and programming.

PREREQUISITES: Good knowledge of Statistics is required.

#### COURSE CONTENTS

Type of data, information, scale of measurements, records and files, electronic data sheets, hierarchical databases, relational databases object oriented databases, knowledge databases, programming with MSAccess database, quizzes, homeworks, find project, examination.

#### RECOMMENDED READING

From Data Mining to Knowledge Discovery in Databases, Usama Fayyad, Gregory Piatetsky-Shapiro, and Padhraic Smyth, AI Magazine 17(3): Fall 1996, 37-54, <http://www.kdnuggets.com/gpspubs/aimag-kdd-overview-1996-Fayyad.pdf>

A Survey of Data Mining software Tools by Michael Goebel and Le Gruenwald, <http://www.acm.org/sigs/sigkdd/explorations/issue1-1/hand.pdf>

Survey of Clustering Data Mining Techniques, <https://umdrive.memphis.edu/vphan/public/berkhin-survey.pdf>

Survey of Microarray Data Mining, <http://www.nr.no/files/samba/smbi/microarraysurvey.pdf>

Survey of Evolutionary Algorithms for Data mining, <http://citeseer.ist.psu.edu/cache/papers/cs/23050/http:zSzzSzwww.ppgia.pucpr.brzSz~alexzSzpub,papers.dirzSzAdvEC-bk.pdf/freitas01survey.pdf>

Data Mining: An Overview from Database Perspective, <http://ir.iit.edu/~dagr/cs522/files/handouts/ExcellentSurvey.pdf>

From Data Mining to Knowledge Discovery in Databases, <http://www.kdnuggets.com/gpspubs/aimag-kdd-overview-1996-Fayyad.pdf>

Knowledge discovery from soil maps using inductive learning, <http://www.ucgis.org/summer03/studentpapers/fengqi.pdf>

Data mining applications in agriculture, <http://www.cs.waikato.ac.nz/~ml/publications/1999/99SJC-GH-Innovative-apps.pdf>

A Knowledge-based Geo-Spatial Decision Support System for Drought Assesment, <http://dgrc.org/dgo2004/disc/demos/mondemos/kozal.pdf>

ASSESSMENT METHODS: Project Presentation

#### BEM.511 - **Parametric and Non-Parametric Statistics** (3 ECTS) \_\_\_\_\_

LECTURER: Prof Andronikos Mauromoustakos

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Basic concepts of statistics along with statistical software packages.

PREREQUISITES: Good knowledge of Statistics is required

#### COURSE CONTENTS

Distributions (Binomial, Poison, Normal,  $\chi^2$ , t and F) Populations and samples, Estimation of the mean and of the variance, Confidence interval estimation, Comparison of the means (t-test, one and two-way ANOVA), Linear Regression and Correlations, Multiple Regression,  $\chi^2$  tests of independence (Contingency tables).

#### RECOMMENDED READING

Foster D.F., Stine R.A. and Waterman R.P., Basic Business Statistics, Springer, New York, 1998

ASSESSMENT METHODS: Computer-Assisted Exam

#### BEM.520 - **Mathematics for Decision Making** (3 ECTS) \_\_\_\_\_

LECTURER: Prof Emmanuel Petrakis

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Fundamental concepts and models of Mathematical Economics.

**PREREQUISITES:** Knowledge on Mathematics is required

**COURSE CONTENTS**

Economic models, Elements of set theory, Functions, The Euclidean space. Linear algebra: Vectors - Operations, Linear Dependence, Bases; Matrices - Definitions and fundamental concepts, Algebra of matrices, Transposition, Trace, Determinants, Rank, Inversion, Solution of linear systems, Eigenvalues, Quadratic forms. Univariate calculus: The concept of derivative, Rules of differentiation, Second derivative and curvature, Integrals, Economic applications. Multivariate calculus: Partial derivatives, Total differentials, Chain rule, Higher order derivatives-Hessians, Implicit functions, Level curves, Homogeneous functions, Concave-convex functions, Economic applications. Static optimisation: Unconstrained optimisation, Optimisation with equality constraints, Optimisation with inequality constraints - nonlinear programming, linear programming, comparative statics, economic applications. Elements of ordinary differential equations: Definitions, First-order differential equations, Systems of first-order differential equations. Dynamic optimization: basic concepts, Hamiltonian and the maximum principle, Infinite horizon problems.

**RECOMMENDED READING**

Chiang A., *Fundamental Methods of Mathematical Economics*, MacGraw Hill, 3rd Ed, 1990, Chapters 1, 4, 5, 6, 7, 11, 12  
Glaister S., *Mathematical Methods for Economists*, Balckwell, 1984, Chapters 1-10  
Lambert P., *Advanced Mathematics for Economists*, Blackwell, 1985, Chapters 1,3  
Sydsaeter K. and Hammond P., *Mathematics for Economic Analysis*, Prentice Hall, 1995, Chapters 16, 17, 18

**ASSESSMENT METHODS:** Written exam

**BEM.521 - Supply and Demand Theory – Market Models (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. Kostas Karantininis

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Specialisation in consumer theory and market models.

**PREREQUISITES:** Students must have completed the course on “Mathematics for Decision Making”

**COURSE CONTENTS**

Production Theory. Production and Cost functions. Long-run theory of the firm. Dynamic theory of the firm. Consumption set. The budget set. Preference relations: basic properties. Preference and utility. The utility maximisation problem. The expenditure minimisation problem. Demand, indirect utility and expenditure function: properties and duality. Supply and demand elasticities and applications.

**RECOMMENDED READING**

Varian H.R., *Intermediate Microeconomics: instructor’s manual and test item file*, 2nd ed., New York, W.W. Norton, 1990  
Gravelle H. and Rees R., *Microeconomics*, London, Longman, 1981  
Koutsoyiannis A., *Modern Microeconomics*, 2nd ed., Hong Kong, MacMillan, 1979  
Blair R.D., *Microeconomics for managerial decision making*, Auckland, McGraw Hill, 1982

**ASSESSMENT METHODS:** Written exam

**BEM.522 - Resource and Welfare Economics (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. Spiro Stefanou

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Knowledge development on production economics

**PREREQUISITES:** Students must have completed the course on “Mathematics for Decision Making”

**COURSE CONTENTS**

Optimum resource allocation in single and multi-product firms, derived input demand and product supply functions. Pareto Optimality: The Pareto criterion, Exchange efficiency, Production efficiency. The Compensation principle: Compensation principle, Potential welfare criterion, Social welfare function. The Concept of Surplus: Producer surplus, Consumer surplus, Uniqueness and path dependence of consumer surplus, Social surplus.

**RECOMMENDED READING**

Just, R.E., D.L. Hueth and A. Schmitz, Applied Welfare Economics and Public Policy, Prentice Hall, 1982.  
Silberberg, E., The Structure of Economics: A Mathematical Analysis, McGraw-Hill (more advanced), 1990.  
Gravelle, H. and R.Rees, Microeconomics, Longman, 1981.

**ASSESSMENT METHODS:** Written exam

**BEM.530 - Theory and Applications of Cost-Benefit Analysis (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. Anastasios Xepapadeas

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Concepts on cost-benefit analysis.

**PREREQUISITES:** Students must have completed the course on “Resource and Welfare Economics”

**COURSE CONTENTS**

Capital Budgeting: Estimating cash flow, NPV, IRR, Payback period, The effects of inflation and uncertainty, NPV vs. IRR, The choice of the private discount rate. Cost-Benefit Analysis: Background - Definition of a project, Stages in project planning, The need for CBA, Efficiency Pricing, The choice of the numeraire (UNIDO, OECD approaches), Estimation of accounting prices (Traded and non-traded goods, Factors of production, Non-traded outputs and external effects); Social Pricing - Social time preference rate, CRI, SARI, Value of public investment, SOC of capital, Distributional weights, Social wage rate, Case studies.

Choice of Policy Instruments for Controlling Pollution, Taxation and Optimal Pollution, Environmental Standards, Taxes and Subsidies, marketable Permits. Benefit-Cost Analysis, Measuring Environmental Damage, Total Economic Value, Valuation Methodologies, discounting the Future. Exhaustible Resources, Measuring and Mitigating Natural Resource Scarcity. Renewable Resources and Species Extinction, Renewable Resources, the Extinction of Species.

**RECOMMENDED READING**

Irvin, G., Modern Cost-Benefits Methods, Chapters I, IV - VIII, 1997  
Brent, R., Project Appraisal for Developing Countries, Part One, 1998  
Saerbeck, R., Different Approaches to the Estimation of Economic Conversion Factors, European Investment Bank, 1999

**ASSESSMENT METHODS:** Written exam

**BEM.531 - Project Appraisal (3 ECTS)** \_\_\_\_\_

**LECTURER:** Dr. Ioannis Karmokolias

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Specialisation in financial, economic and social appraisal of investment projects.

**PREREQUISITES:** Students must have completed the course on “Mathematics for Decision Making”

**COURSE CONTENTS**

Financial, economic and environmental appraisal of investment projects. Identification, preparation, appraisal, financing and implementation agreements, supervision, monitoring and evaluation phases in appraising agricultural investment projects

**RECOMMENDED READING**

Karmokolias Y., Appraisal of Investment Projects Manual, A Series of lectures covering the basic methodology of how to appraise investment opportunities, 1997  
Karmokolias Y., Cost Benefit Analysis of Private Sector Environmental Investments: A Case Study of the Kunda Cement Factory, IFC Economics Department Discussion Paper 30, September 1996. Available on the web at <http://www.ifc.org/economics/>

**ASSESSMENT METHODS:** Written exam, Project Presentation

**BEM.540 - Principles of Management (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. Marios Katsioloudes

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Concepts and applications on principles of management.

**PREREQUISITES:**

**COURSE CONTENTS**

The scope of management. The process of management, planning, organisation, directing, controlling. The functional areas of management: production management, financial management, personnel management. Information systems: Electronic Data Processing (EDP), Management Information Systems (MIS), Decision Support System (DSS).

**RECOMMENDED READING**

Griffin R.W., Management, Houghton Mifflin, 7th Edition, 2002

**ASSESSMENT METHODS:** Written exam

**BEM.541 - Operations Research (3 ECTS)** \_\_\_\_\_

**LECTURER:** Dr. Michael Doumpos

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Developments on operations research.

**PREREQUISITES:** Students must have completed the course on “Mathematics for Decision Making”

**COURSE CONTENTS**

The scope of Operation Research/Management Science. The operations Research/Management Science Methodology. Linear Programming, Networks, Dynamic Programming, The Monte Carlo method. Multiple criteria decision-making methods. Information systems in Operations Research. Management Information System, Decision Support Systems, Expert Systems. Link between Management problems and Operations Research.

**RECOMMENDED READING**

Hillier, F.S. and Lieberman, G.J., Introduction to Operations Research, 8th Edition. McGraw-Hill, New York, 2004.  
Jensen, P.A. and Bard, J.F., Operations Research Models and Methods. John Wiley, New York, 2003  
H.A. Taha. Operations Research: An Introduction, 7th Edition. Pearson Education, Saddle River, New Jersey, 2003

Whiston, W.L., Operations Research: Applications and Algorithms, 3rd Edition, Duxbury Press, Belmont, CA, 1994

ASSESSMENT METHODS: Written exam

### BEM.550 - **Market Structure - Price Analysis** (6 ECTS) \_\_\_\_\_

LECTURER: Prof. Yannis Katsoulacos and Prof. John Kitromilides

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Specialisation on market structure and behaviour of product prices.

PREREQUISITES: Students must have completed the courses on "Resource and Welfare Economics", and "Supply and Demand Theory/Market Models"

#### COURSE CONTENTS

Markets: Perfect competition, monopoly. Game theory and oligopoly models: Cournot, Bertrand, Stackelberg, Monopolistic competition. Economics of information: Moral Hazard, Adverse Selection, Contract theory. Vertical integration and vertical restraints

The supply and demand characteristics of food products. Behaviour of food product prices. Temporal and spatial price relationships. Analysis of marketing margins. Supply response models. Single and multi-equation demand models

#### RECOMMENDED READING

Varian, H., Intermediate Microeconomics, 1996, Chapters 1, 22, 23, 25, 26

Varian, H., Microeconomic Analysis, 2nd edition, 1990, Chapter 2

ASSESSMENT METHODS: Written exam

### BEM.551 - **Macroeconomics** (3 ECTS) \_\_\_\_\_

LECTURER: Prof. Konstadinos Mattas

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Fundamental concepts on macroeconomics

#### COURSE CONTENTS

National income and product accounts. National income determination model, consumption and investment. Monetary, fiscal, income policy and agriculture nexus. Demand for money supply, interest and exchange rate, inflation and links with agriculture. Input/output prices and farm/nonfarm price ratio and the cost-price squeeze in agriculture. Interdependency between agricultural and non-agricultural sectors. Aggregated and sector multipliers. Applying macro and interindustry concepts to agriculture (trade, investment, finance, food processing, etc.).

#### RECOMMENDED READING

William Branson, Macroeconomic Policy. HarperCollins Collage Div., 1989

Rudiger Dornbush, Stanley Fisher, Richard Startz, Macroeconomics. Mc Graw Hill, 1998

Gregory Mankiw, Macroeconomics, Harvard University, 1997

Huw David Dixon, Controversies in Macroeconomics: Growth, Trade and Policy. Blackwell Publishers, 2000

Agenor P.R. and Montiel P. J., Development of Macroeconomics. Second Edition, Princeton University Press, 1999

Romer D., Advanced Macroeconomics. McGraw Hill, 1996

Blanchard J. O. and Fisher S., Lectures in Macroeconomics. MIT Press, 1996

ASSESSMENT METHODS: Written exam

**BEM.552 - Econometrics and Time Series Analysis (3 ECTS)** \_\_\_\_\_

LECTURER: Prof. Yannis Biliadis

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Theoretical concepts and applications on econometrics and time series analysis.

PREREQUISITES: Students must have completed the courses on "Parametric and Non-Parametric Statistics" and "Research Techniques"

**COURSE CONTENTS**

Simple and multiple linear regression models. Estimation subject to linear constraints. Specification error. Heteroscedasticity, autocorrelation, multicollinearity and errors in variables. Pooling time-series and cross-section data. Simultaneous equation models, identification and estimation.

Distributed lag models, finite and infinite lag models and estimation. Single equation forecasting. Dummy variables. Agricultural supply response models.

Time series decomposition (trend, cyclical and seasonal variation). Box-Jenkins methodology. Partial autocorrelations. Vector Autoregressions (VAR models). The case of stationary and non-stationary series. Applications to forecasting.

**RECOMMENDED READING**

Stock and Watson, Introduction to Econometrics, 2003, chapters 4, 5, 6, 12

ASSESSMENT METHODS: Written exam

**BEM.553 - Food Economics (3 ECTS)** \_\_\_\_\_

LECTURER: Prof. Murray Fulton

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Concepts and developments on food economics

PREREQUISITES: Students must have completed the courses on "Market Structure" and "Price Analysis"

**COURSE CONTENTS**

Basic supply and demand conditions, Concentration, Classification of the Industries, Market channels, Economies of Scale and Mergers. Product differentiation and advertising, Diversification, Barriers to entry and limit price, Market performance and Public policy in the Food Industries.

**RECOMMENDED READING**

Fulton M. and Gibbings J., Food Economics, Response and Adaptation. Canadian Agricultural Co-operatives in the 21st Century, Centre for the Study of Co-operatives, University of Saskatchewan, 2000.

Fulton M., Economics of Co-operatives. Class Notes, Economics 231.3, Centre for the Study of Co-operatives, University of Saskatchewan, 1998.

Fulton M. and Giannakas K., Organizational Commitment in a Mixed Oligopoly: Agricultural Co-ops and IOFs, 2001.

Boehlje M., US Agriculture in an Increasingly Competitive Global Market, Staff Paper #02-06, Purdue University, 2002.

ASSESSMENT METHODS: Written exam

**BEM.554 - Agricultural Marketing and Policy (3 ECTS)** \_\_\_\_\_

LECTURER: Prof. Christopher Ritson

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Analysis of agricultural policies

**PREREQUISITES:** Students must have completed the courses on “Market Structure” and “Price Analysis”

**COURSE CONTENTS**

Background to agricultural policy: agricultural product market, agricultural policy analysis, objectives, mechanisms and market effects as a method for analysing agricultural policies. The objectives of the Common Agricultural Policy. Marketing and agriculture. Agricultural policy mechanisms and the measurement of policy effects. Policy reform: price support, direct payments and decoupling, CAP case study. Food policy.

**RECOMMENDED READING**

Ritson, C., Seminar on Agricultural Marketing and Policy - Food Marketing and Agricultural Marketing: The Scope of the Subject of Agro-Food Marketing in Padberg, Ritson and Albisu (Eds), Agro-Food Marketing, CAB International, 1997.

Refer also to selected parts of chapters 3, 4 and 7 of Agro-Food Marketing.

Ritson, C., Marketing, Agriculture and Economics, Journal of Agricultural Economics, Vol 48 No 3, 1997.

Ritson, C., and Mai, L.W., The Economics of Food Safety, Nutrition and Food Science 4/5, 1998.

Ritson, C., A Coherent Food and Nutrition Policy in Burns, J., McInerney, J. and Swinbank, A. (Eds) The Food Industry: Economics and Policies, Heinemann, 1983.

Ritson, C., Consumer Attitudes to Food Safety as a Quality Attribute: Implications for Food Risk Communication. Paper presented to the 83rd EAAE Seminar, MAICh September 2003.

**ASSESSMENT METHODS:** Written exam

**BEM.555 - Financial Management (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. Constantinos Zopounidis

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Developments and knowledge on financial analysis

**PREREQUISITES:** Students must have completed the course on “Principles of Management”

**COURSE CONTENTS**

The role of finance. Financial analysis of the farm business: the balance sheet, income statement, cash flow statement, ratio analysis, spread sheet analysis. Financing the growth of the farm: use of debt, business risk and financial risk. Time value of money and capital budgeting, capital requirements of the farm, capital sources of the farm business, loans, cost of capital and optimal structure, risk analysis.

**RECOMMENDED READING**

Brealey, R.A. and Myers, S.C., Principles of Corporate Finance, 6th Edition, McGraw Hill, 1999.

Ross, S.A., Westerfield, R.W. and Jaffe, J., Corporate Finance, 4th Edition, Irwin, 1996.

Diacogiannis G., Financial Management: A Modelling Approach using spreadsheets, McGraw-Hill, 1994.

**ASSESSMENT METHODS:** Written exam

**BEM.560 - Management of Business Cooperatives (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. dr. ir. Gert van Dijk

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Fundamental concepts and applications of co-operative organisation.

**PREREQUISITES:** Good knowledge on Microeconomics and Macroeconomics is required

#### COURSE CONTENTS

Definition and objectives of co-operatives. Introduction to the fundamental concepts of co-operative organisation. Application of firm theory in agribusiness co-ops. Co-operatives vs. private enterprise(s). Economic behaviour of marketing sales and producer's co-operatives under different market structures. Co-operatives and economic efficiency. Internal structure and management of co-operative units. Special issues, taxation, membership policy and relations with the State. Merger policy in agribusiness co-ops.

#### RECOMMENDED READING

- Egerstrom L., Bos P. and van Dijk G., *Seizing Control, The International Market Power of Cooperatives*, Lone Oak Press, Ltd., 1996.
- Henk de Haan & Norman Long (eds), *Images and Realities of Rural Life, Wageningen Perspectives on Rural Transformations*, Van Gorcum & Comp. B.V., 1997.
- Jan Douwe van der Ploeg & Gert van Dijk (eds), *Beyond Modernization, The Impact of Endogenous Rural Development*, Van Gorcum & Comp. B.V., 1995.
- Onno-Frank van Bekkum & Gert van Dijk (eds), *Agricultural Co-operatives in the European Union, Trends and Issues on the Eve of the 21st Century*, Van Gorcum & Comp. B.V., 1997.
- Jerker Nilsson & Gert van Dijk (eds.), *Strategies and Structures in the Agro-food Industries*, Van Gorcum & Comp. B.V., 1997.

ASSESSMENT METHODS: Written exam

#### BEM.561 - **Strategic Management** (3 ECTS) \_\_\_\_\_

LECTURER: Prof. Costas Markides

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Basic principles and applications on industry and competitive analysis.

PREREQUISITES: Good knowledge of Macroeconomics is required

#### COURSE CONTENTS

Basic principles of good management – how to start a new company, how to develop and implement its strategy, how to expand the company, and how to be a leader in this company. The course will also introduce the functional specialties of a company, in particular Marketing and Finance.

#### RECOMMENDED READING

- Robert Grant: *Contemporary Strategy Analysis*, 4th edition, 2002, chapters 2, 3.
- Costas Markides: *All the Right Moves*, 1999, chapters 1, 3, 6.

ASSESSMENT METHODS: Written exam

#### BEM.562 - **Marketing** (3 ECTS) \_\_\_\_\_

LECTURER: Prof. George Baltas

TYPE OF COURSE AND TEACHING METHODS: Lectures, Computer-assisted teaching

OBJECTIVE OF THE COURSE: Basic concepts on marketing system

PREREQUISITES: Good knowledge on Statistics, Econometrics, Microeconomics and Macroeconomics is required

#### COURSE CONTENTS

Marketing system and process, functional, institutional, behavioural, commodity and structure - conduct - performance approach. Consumer theory and marketing system. Food industry and major trends and issues: specialisation, diversification, decentralisation, wholesaling and retailing industries; dynamics of competitive advantages. Pricing efficiency: factors and dynamics of

marketing margins, transfer costs. Marketing strategies, advertising, promotion, product differentiation, market segmentation and vertical co-ordination. Market information. Standardisation and grading. Transportation. Storage. Food marketing regulations. International food market and marketing.

**RECOMMENDED READING**

Kotler, P., Marketing Management, Prentice-Hall, 2000

Dalrymple, D.J. and Parsons, L/J., Marketing Management: Text and Cases, J. Wiley, 1995

Evans, J.R. and Berman, B., Marketing, Prentice-Hall, 1997

**ASSESSMENT METHODS:** Written exam

**BEM.563 - Market Research (3 ECTS)** \_\_\_\_\_

**LECTURER:** Prof. Athanasios Kouremenos

**TYPE OF COURSE AND TEACHING METHODS:** Lectures, Computer-assisted teaching

**OBJECTIVE OF THE COURSE:** Specialisation and applications on marketing research.

**PREREQUISITES:** Students must have completed the course on "Marketing"

**COURSE CONTENTS**

Marketing research and questionnaire design. Sampling procedure. Measurement and causality.

Data collection instruments. Data analysis. Applications of marketing research.

**RECOMMENDED READING**

**ASSESSMENT METHODS:** Written exam

## ACADEMIC SUPPORT FACILITIES

### **Computer Laboratory**

The Computer Laboratory possesses nine workstations, two network connected heavy-duty laser and one colour inkjet printers. All workstations are secured connected to internet through static IP and intranet through Novell and netBEUI protocols. They are using the latest version of Operating system (Windows XPsp1) and running the appropriate Office suite.

For the statistical, mathematical and economical analysis of the educational and research needs the department employs various specialized software, such as JMP 4.0 and SPSS 10.0 for general statistical analysis, Eviews and TSP for Econometric computations and SuperLINDO and SuperLINGO for operational research. As overall statistical software covering a wide range of analysis the department has a license of SAS 8.02.

## MASTERS OF SCIENCE PROGRAM

### Research Project (9 month duration)

**Research Subject Areas** (topics generally available for Master of Science thesis):

- Economic Analysis
- Quantitative Analysis
- Cost Benefit Analysis
- Management Studies
- Financial Management
- Market Research
- E-Commerce
- Web Based Surveys

### Indicative master thesis realized within the area

**TITLE:** The Competitiveness of the Portuguese Wine Sector and a Case Study of Exports and Activity Diversification in the Vinhos Verdes Region (2005)

**AUTHOR:** Sandra Paula Fortunas, Economics, Portugal

**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece

**THESIS SUPERVISOR:** Prof. Marios Katsioloudes and Prof. Francisco Diniz

**TITLE:** A Multicriteria Approach in Detecting Falsified Financial Statements: Evidence from Small and Medium UK Companies (2005)

**AUTHOR:** Maria Afrokh, Management, Morocco

**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece

**THESIS SUPERVISOR:** Prof. Constantinos Zopounidis

**TITLE:** Consumer attitudes towards nutrition labelling (2005)

**AUTHOR:** Dimitra Bikou, Marketing, Greece

**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece

**THESIS SUPERVISOR:** Prof. George Baltas

**TITLE:** Bargaining between unequals: Romania's power in negotiation on the accession terms in agriculture (2005)

**AUTHOR:** Nicoleta Florentina Girbea, Agricultural Economics, Romania

**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece

**THESIS SUPERVISOR:** Prof. Murray Fulton

**TITLE:** Econometric Analysis of the Turkish Olive Oil Sector with Special Reference to E.U. Membership (2004)

**AUTHOR:** Dilsen Oktay, Food Engineering, Turkey

**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece

**THESIS SUPERVISOR:** Prof. Gert van Dijk

**TITLE:** Online survey: The case of fresh vegetables in Germany (2004)

**AUTHOR:** Delina Hoxha, Agricultural Economics, Albania

**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece

**THESIS SUPERVISOR:** Prof. Andronikos Mauromoustakos

**TITLE:** The role of quality in industry concentration: The case of the Greek dairy industry (2003)  
**AUTHOR:** Lampros Lamprinakos, Agricultural Economics, Greece  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Murray Fulton

**TITLE:** Portfolio Optimization with Mean Variance and Mean Absolute Deviation Models. The Case of S&P 500 (2003)  
**AUTHOR:** Paul Kazarian, Business Administration, Lebanon  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISORS:** Prof. Panos Pardalos and Prof. Athanasios Migdalas

**TITLE:** Assessing country risk using multicriteria classification approaches (2002)  
**AUTHOR:** Etleva Gjonca, Finance, ALbania  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Constantinos Zopounidis

**TITLE:** Measuring consumer satisfaction, consumption patterns and consumer attitudes towards organic greenhouse products compared with conventional ones (2002)  
**AUTHOR:** Ahmed El Kharboutly, Comerse, Egypt  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Ioannis Siskos

**TITLE:** The role of commercial banks in development: The case study of Armenia (2001)  
**AUTHOR:** Hakob Mnatsakanyan, Economics, Armenia  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Angelos Kanas

**TITLE:** Traditional products on the Internet (2001)  
**AUTHOR:** Marisa Roriz Ferreira, Management, Portugal  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Francisco Diniz

**TITLE:** Decision making under uncertainty: The application of target MOTAD and QP models to determine the efficient use of resources on the island of Crete (2000)  
**AUTHOR:** Brahim Bouras, Agricultural Economics, Morocco  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Panos Pardalos

**TITLE:** 1992 Common Agricultural Policy Reform and its Impact on Greek Olive Oil Market (2000)  
**AUTHOR:** Houcine Dadi, Agricultural Economics, Tunisia  
**PLACE OF REALIZATION:** Department of Business Economics and Management, MAICh, Chania, Greece  
**THESIS SUPERVISOR:** Prof. Yannis Kitromilides

## **References of the main academic staff teaching within the M.Sc.**

### **CANADA**

#### **Higher Education Institutions**

- Murray FULTON, Univ. of Saskatchewan, Saskatoon
- Timothy Beatty, Univ. of Brithish Columbia

### **CYPRUS**

#### **Higher Education Institutions**

- Yannis BILIAS, Univ. of Cyprus, Nicosia

### **DENMARK**

#### **Higher Education Institutions**

- Kostas KARANTININIS, The Royal Veterinary and Agricultural Univ., Copenhagen

### **GREECE**

#### **Higher Education Institutions**

- Konstadinos MATTAS, Aristotle Univ. of Thessaloniki
- Yannis KATSOULACOS, George BALTAS, Athens Univ. of Economics and Business
- Emmanouil PETRAKIS, Anastasios XEPAPADEAS, Angelos KANAS, Univ. of Crete, Rethimno
- Constantinos ZOPOUNIDIS, Athanasios MIGDALAS, Michael DOUMPOS, Technical University of Crete, Chania
- George CHRYSOCHOIDIS, Agricultural Univ. of Athens
- Athanasios KOUREMENOS, Univ. of Pireaus

### **THE NETHERLANDS**

#### **Higher Education Institutions**

- Gert VAN DIJK, Wageningen Univ. and Nyenrode Univ.

### **UNITED KINGDOM**

#### **Higher Education Institutions**

- Christopher RITSON, Newcastle Univ.
- Costas MARKIDES, London Business School
- Yannis KITROMILIDES, Greenwich Univ.

### **UNITED STATES**

#### **Higher Education Institutions**

- Panos PARDALOS, Univ. of Florida
- Marios KATSILOUDES, Saint Joseph's Univ., Philadelphia
- Spiro STEFANOOU, Pennsylvania State Univ.
- Andronikos MAUROMOUSTAKOS, Arkansas Univ.
- Joost, M.E. Pennings, University of Illinois at Urbana-Champaign

#### **International Institutions**

- Ioannis KARMOKOLIAS, International Finance Corporation, World Bank, Washington

The Institute reserves the right to replace its visiting faculty according to its evaluation process.