NCG67/8: Modificación del plan de estudios de Máster universitario en economía/economics

- Aprobado en la sesión ordinaria del Consejo de Gobierno de 18 de diciembre de 2012

Modificación del Master en Economía/ Economics - Facultad de Ciencias Económicas y Empresariales (Universidad de Granada)

Modificación 1: Se solicita la inclusión de las palabras 'Business Management' en el nombre del Master quedando como *Master in Economics and Business Management (MEBM),* utilizando únicamente la denominación en inglés, dado que en el Master participan los departamentos de Teoría e Historia Económica, Organización de Empresas y Métodos Cuantitativos para la Economía y la Empresa existiendo en el seno del Master itinerarios recomendados para la especialización en *Economics* y en *Business Management*.

Modificación 2: El Master in Economics pasa a ser impartido íntegramente en inglés incluida la denominación de las asignaturas y el TFM.

Modificación 3: Propuesta de las siguientes asignaturas nuevas (todas optativas como el resto de asignaturas del Master, véanse guías docentes en Anexo I):

- Strategic Management of Information Systems
- Leadership with Emotional Intelligence
- Technology and Innovation Management

Modificación 4: Cambio en los nombres de las siguientes asignaturas (Véanse guías docentes en Anexo II):

TOPICS IN MACROECONOMICS I (4 ECTS): (antes Topics in Macroeconomics)
Professor: Julián Diaz Saavedra (antes Nikolaos Georgantzis, Agnani Betty y Julián Diaz)

This course analyzes the different models in the growth theory. Introduction to numerical methods for the study of Dynamic economies. Social Security: Accounting and Dynamic General Equilibrium methods.

TOPICS IN MACROECONOMICS II (4 ECTS): (antes Public Economics)
Professor: Betty Agnani (antes Agnani Betty y Julián Diaz)

This course is based on theoretical and empirical studies performed with rigorous quantitative techniques in order to help students to understand the particularities of market forces with Natural Resources. The course deals with the optimal utilization of renewable resources (e.g. forests and fisheries) and non-renewable resources (e.g. mineral deposits).

TOPICS IN MACROECONOMICS III (4 ECTS): (antes Economics of Technological Change)
Professor: Henry Aray

This is a course on Real Option Theory which is a powerful tool to analyze decision making under uncertainty. Applications cover any field of Economics. However, preference will be given to the fields of International Economics, Natural Resource Economics, Industrial Economics and Macroeconomics.

ANEXO I: GUÍAS DOCENTES DE LAS NUEVAS ASIGNATURAS PROPUESTAS

GUIA DOCENTE DE LA ASIGNATURA

Strategic Management of Information Systems

MÓDULO	MATERIA	CURSO	SEMESTRE	CRÉDITOS	TIPO
Postgraduate	Information Technology	1º	2º	4	Elective

PROFESOR(ES)	DIRECCIÓN COMPLETA DE CONTACTO PARA TUTORÍAS (Dirección postal, teléfono, correo electrónico, etc.)
• María Nieves Pérez Aróstegui	Department of Management Science School of Economics and Business University of Granada Campus Universitario de la Cartuja s/n 18071, Granada, Spain Correo electrónico: mnperez@ugr.es
	HORARIO DE TUTORÍAS
	Check http://www.ugr.es/local/mnperez

POSGRADO EN EL QUE SE IMPARTE	OTROS POSGRADOS A LOS QUE SE PODRÍA OFERTAR
Master in Economics	

PRERREQUISITOS Y/O RECOMENDACIONES (si procede)

Prerequisites and advises:
Students with English and Spanish languages certificates will increase their possibilities for acceptation. The equivalent to a university 4 yrs degree ('Licenciatura' or 'Grado') is required in order to apply. Applicants with a Master's degree need also to prove the university 4 yrs. degree. This rule does not apply for EU applicants with 3 yrs. university degree under the Bolonia agreement. A Board of admissions will evaluate every document for certification of the university degree prior to admission.

BREVE DESCRIPCIÓN DE CONTENIDOS (SEGÚN MEMORIA DE VERIFICACIÓN DEL POSGRADO)

Course contents/descriptors/key words:

1. Information Technology and Information Systems: main concepts and types.
2. Information Technology under a resource-based view perspective.
3. IT-enabled organizational resources.
4. Key e-commerce issues.
5. Structural Equation Modeling.

COMPETENCIAS GENERALES Y ESPECÍFICAS

Competences
Students will be able to:

- Combine business and IT strategies in order to lead IT and IS strategies in process design, integration, and implementation.
- Elaborate research papers in IT/IS field.
- Develop management skills related to IT/IS.
- Understand and manage different types of IS.
- Develop consulting reports related to IT/IS implementation.
- Acquire critical skills to assume a level position, such as Chief Information Officer, IS manager, IT strategist, and technology risk manager.
- Understand and manage SEM methodology.

OBJETIVOS (EXPRESADOS COMO RESULTADOS ESPERABLES DE LA ENSEÑANZA)

- Learning outcomes and skills:

Students will be able to:

- Acquire bibliographic information about the current state of the art.
- Understand the relevant theories and debates related to the IT field.
- Propose and develop news research questions related to IT research.
- Understand IT business value concept.
- Recognize the importance of IT complementarity to improve firm competitive position.
- Recognize the major research journals and top conferences in this topic.
- Understand the major survey data methods and structural equation modeling (SEM) techniques.

TEMARIO DETALLADO DE LA ASIGNATURA

1. Information Technology and Information Systems: main concepts and types.
    a. Information Technology concepts.
    b. Information Technology resources.
    c. Types of Information Systems.
2. Information Technology under a resource-based view perspective.
    a. The resource-based view.
    b. IT complementarity.

3. IT-enabled organizational resources.
    a. IT-enabled quality management.
    b. IT-enabled lean production
    c. IT-enabled innovation and learning.
    d. IT-enabled flexibility.
    e. IT strategy and governance.
4. Key e-commerce issues.
5. Structural Equation Modeling.
    a. Data survey methods.
    b. Structural Equation Modeling (EQS) Software.

BIBLIOGRAFÍA

Recommended reading:

Albadvi, A., Keramati, A. and Razmi, J. (2007), "Assessing the impact of information technology on firm performance considering the role of intervening variables: organizational infrastructures and business processes reengineering", *International Journal of Production Research*, Vol. 45, No. 12, pp. 2697-2734.

Ang, C. L., Davies, M. and Finlay, P. N. (2001), "An empirical study of the use of information technology to support total quality management", *Total Quality Management*, Vol. 12, No. 2, pp. 145-157.

Barney, J.B. (2001), "Is the Resource-Based "View" a Useful Perspective for Strategic Management Research? Yes", *Academy of Management Review*, Vol. 26. No. 1, pp. 41-59.

Benitez-Amado, J., Llorens-Montes, J. and Perez-Arostegui, M.N. (2010a), "Information Technology-enabled entrepreneurship culture and firm performance", *Industrial Management & Data Systems*, Vol. 110, No. 4, pp. 550-566.

Benitez-Amado, J., Perez-Arostegui, M.N. and Tamayo-Torres, J. (2010b), "Information technology-enabled innovativeness and green capabilities", *Journal of Computer Information Systems*, Vol. 51, No. 2, pp. 87-96.

Bharadwaj, A. S. (2000), "A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation", *MIS Quarterly*, Vol. 24, No. 1, pp. 169-196.

Ke, W. and Wei, K.K. (2008), "Organizational culture and leadership in ERP implementation", *Decision Support Systems*, Vol. 45, No. 1, pp. 208-218.

Lee, S.M., Kim, k., Paulson, P. and Park, H. (2008), "Developing a socio-technical framework for business-IT alignment", *Industrial Management & Data Systems*, Vol. 108, No. 9, pp. 1167-1181.

Li, L., Su, Q. and Chen, X. (2011), "Ensuring supply chain quality performance through applying the SCOR model", *International Journal of Production Research*, Vol. 49, No. 1, pp. 33-57.

Mata, F. J., Fuerst, W. L. and Barney, J. B. (1995), "Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis", *MIS Quarterly*, Vol. 19, No. 4, pp. 487-505.

Melville, N., Kraemer, K. and Gurbaxani, V. (2004), "Review: Information technology and organizational performance: an integrative model of IT business value", *MIS Quarterly*, Vol. 28, No. 2, pp. 283-322.

Perez-Arostegui, M.N., Benitez-Amado, J. and Tamayo, J. (2012), "Information technology-enabled quality performance: an exploratory study", Industrial Management & Data Systems, Vol. 112, No. 3.

Pavlou, P. A. and El Sawy, O. A. (2006), "From IT leveraging competence to competitive advantage in turbulent environments: The case of new product development", *Information Systems Research*, Vol. 17, No. 3, pp. 198-227.

Powell, T. C. and Dent-Micallef, A. (1997), "Information Technology as Competitive Advantage: The Role of Human, Business, and Technology Resources", *Strategic Management Journal*, Vol. 18, No. 5, pp. 375-405.

Ray, G., Muhanna, W. and Barney, J.B. (2005), "Information Technology and the performance of the customer service process: A resource-based analysis", *MIS Quarterly*, Vol. 29, No. 4, pp. 625-652.

Wade, M. and Hulland, J. (2004), "The Resource-based view and Information Systems Research: Review,

Extension, and Suggestions for Future Research", *MIS Quarterly*, Vol. 23, No. 1, pp. 107-142.

ENLACES RECOMENDADOS

METODOLOGÍA DOCENTE

Teaching methods:

The teaching methodology is similar for each thematic session (as a module closed), articulated on the basis of selection, reading and general discussion of a selected number of book chapters and research papers considered by teachers. These materials are relevant on each of the topics covered by the program.
First, all students must pass a final written exam on the core materials discussed in the required sessions and seminars. Second, students will expose the main conclusions derived from the researchers analyzed. In fact, the last sessions of the course is devoted to oral presentation in class of a series of thematic work previously selected by students for discussions with the rest of participants (who also act as commentators).

PROGRAMA DE ACTIVIDADES

Primer cuatrimestre	Temas del temario	Actividades presenciales (NOTA: Modificar según la metodología docente propuesta para la asignatura)						Actividades no presenciales (NOTA: Modificar según la metodología docente propuesta para la asignatura)			
		Sesiones teóricas (horas)	Sesiones prácticas (horas)	Exposiciones y seminarios (horas)	Tutorías colectivas (horas)	Exámenes (horas)	Etc.	Tutorías individuales (horas)	Estudio y trabajo individual del alumno (horas)	Trabajo en grupo (horas)	Etc.
Semana 1	T1	2	2	-	-	-	-	-	5	-	-
Semana 2	T2	2	1	-	-	-	-	-	5	1	-
Semana 3	T3	2	1	-	-	-	-	-	4	1	-
Semana 4	T3	2	1	-	-	-	-	-	4	1	-
Semana 5	T3	-	1	1	-	-	-	-	5	2	-
Semana 6	T4	-	1	1	-	-	-	-	5	2	-
Semana 7	T1-4	-	2	-	-	-	-	-	5	2	-
Semana 8	T1-4	-	2	-	-	-	-	-	5	2	-
Semana 9	T5	2	-	-	-	-	-	-	5	-	-

Semana 10	Pre-Test	2	-	-	-	2	-	-	-	-	-
Total horas		12	10	2	-	2	-	-	53	11	-

EVALUACIÓN (INSTRUMENTOS DE EVALUACIÓN, CRITERIOS DE EVALUACIÓN Y PORCENTAJE SOBRE LA CALIFICACIÓN FINAL, ETC.)

Assessment methods:

It will be conducted an ongoing evaluation of student training in order to assess (shown in parenthesis the weight of each item in the final assessment): - The acquisition of skills, aptitudes and knowledge derived from the course through a final exam (50%). - Active participation in discussion sessions and the degree of interest of the interventions. It will consider the level of student involvement in the subject matter and the degree of ongoing monitoring of the development of the course (10%). - The resolution of exercises and case studies raised (10%). - The precision and clarity in exhibitions, seminars and work. It will be necessary to made at least one exhibition per student (20%) - The positive attitude of students and their involvement in the practical sessions in these areas of work (10%).

INFORMACIÓN ADICIONAL

Language of instruction:
English.

Links to more information:
http://masteres.ugr.es/ugrme/

MASTER IN ECONOMICS

Business Management

MODULE	SUBJECT	YEAR	TERM	CREDITS	TYPE
Business Management	Leadership with Emotional Intelligence	1º	2º	4	Optative

LECTURE(S)	ADDRESS FOR TUTORING
• Francisco J. Martínez López. Despacho D-09; e-mail: fjmlopez@ugr.es (Coordinador)	Dpto. Organización de Empresas, 1ª planta, Facultad de Ciencias Económicas y Empresariales.
	OFFICE HOURS
	The office hours will be announced the first day of class, and will be also published at the department's board.

PREREQUISITES AND ADVICES

The equivalent to a university 4 years degree ('Licenciatura' or 'Grado') is required in order to apply. Applicants with a Master's degree need also to prove the university 4 yrs. degree. This rule does not apply for EU applicants with 3 yrs. University degree under the Bolonia agreement. A Board of admissions will evaluate every document for certification of the university degree prior to admission.

COURSE CONTENTS/DESCRIPTORS7KEYWORDS

- Emotional intelligence in working contexts/organizations.
- Leadership
- Emotional competences

COMPETENCIAS GENERALES Y ESPECÍFICAS

GENERAL COMPETENCES

• Apply the acquired knowledge and ability to solve problems in new or unfamiliar contexts within broader (or multidisciplinary) contexts related to business management.
• The ability to communicate, orally and in writing, their conclusions, and the knowledge and rationale underpinning these, to public-skilled and unskilled in a clear and unambiguous.
• Have the learning skills that enable them to continue studying in a way that will be largely self-employment.

• Acquire the ability to work in international environments.
• Find and collect information on a topic of interest from various sources, especially from new technologies.
• Know how to analyze, synthesize and manage information and documents available effectively, including the ability to interpret, evaluate and issue a reasoned opinion on it.
• Ability to work as a team, encouraging the exchange of ideas, sharing knowledge and generating new goals and models of collaborative work.

SPECIFIC COMPETENCES

• Ability to assimilate and critically interpret the specific literature on emotional intelligence in working environments, their methods and results.
• Knowledge of English, to handle the vast majority of scientific literature. Also, the student will acquire the ability to write and present simple scientific reports in English.
• Ability to synthesize and analyze scientific sources (e.g. journals' and conferences' papers) in order to develop effective research and/or clearly present, orally and in writing, relevant conclusions from such sources.
• Know how to implement emotional intelligence-based policies for a company.
• To acquire highly specialized knowledge to manage the organization with emotional intelligence.
• Knowledge and ability to apply emotional competencies in the context of business management.
• Ability to innovate to make changes that satisfies the new demands on companies.

OBJECTIVES OF THE COURSE (EXPRESSED IN TERMS OF LEARNING OUTCOMES)

- Introducing and understanding the concept of emotional intelligence and its interestingness to be applied in working contexts.
- Introducing and understanding the classic models proposed to articulate emotional intelligence.
- Understanding the neurological side of emotional intelligence.
- Knowing to approach the human's intelligence from a holistic perspective, altogether considering the cognitive and emotional intelligences.
- Differentiating between IQ and EQ and weighting their influence in people's success at work.
- Introducing the leadership styles in relation with emotional intelligence.
- Introducing and understanding of the self-awareness-related emotional competences for star performers at work.
- Introducing and understanding of the self-management-related emotional competences for star performers at work.
- Introducing and understanding of the social awareness-related emotional competences for star performers at work.
- Introducing and understanding of the relationship management-related emotional competences for star performers at work.
- Practicing critical analyses of scientific papers.
- Developing and presenting a (simple) research project on emotional intelligence applied to any issue of the management of the organization.

SYLLABUS

THEORETICAL SYLLABUS

1. Emotional Intelligence: An introductory overview

1. Introduction to Emotional Intelligence

2. The view of Daniel Goleman
3. The view of Reuven Bar-On
4. The Mayer-Salovey-Caruso conceptualization

2. The value of Emotional Intelligence in the workplace

1. IQ vs. EI
2. Why leadership should be developed with emotional intelligence?
3. Emotional intelligence and leadership styles

3. Self-awareness-related emotional competencies for "star" leaders and workers

1. Emotional self-awareness
2. Self-assessment
3. Self-confidence

4. Self-management-related emotional competencies for "star" leaders and workers

1. Emotional self-control
2. Trustworthiness
3. Conscientiousness
4. Adaptability
5. Achievement drive
6. Initiative

5. Social awareness-related emotional competencies for "star" leaders and workers

1. Empathy
2. Service orientation
3. Organizational awareness

6. Relationship Management-related emotional competencies for "star" leaders and workers

1. Developing others
2. Influence
3. Communication
4. Conflict management
5. Visionary leadership
6. Catalyzing change
7. Building bonds
8. Teamwork and collaboration

PRACTICAL SYLLABUS:

- Discussion of papers.
- Presentation of papers and simple research projects on EI applied to organizations.
- Practical applications for chapters 3 to 6.

REFERENCES

BASIC REFERENCES:

Cherniss, C.; Goleman, D. (2001). The Emotionally Intelligent Workplace: How to Select For, Measure, and Improve Emotional Intelligence in Individuals, Groups, and Organizations, Jossey-Bass.

De José Belzunce, M.; Danvila del Valle, I.; Martínez-López, F.J. (2011). Guía de competencias

emocionales para directivos, Esic Editorial.
Goleman, D. (1995). Emotional intelligence. New York, Bantam Books, New York, NY.
Goleman, D. (1998). Working with Emotional Intelligence, Bantam Books, New York, NY.
Hughes, M.; Patterson, L.B.; Terrel, J.B. (2005). Emotional Intelligence In Action: Training and Coaching Activities for Leaders and Managers, Pfeiffer.
Hughes, M.; Thompson, H.L.; Terrel, J.B. (2009). Handbook for Developing Emotional and Social Intelligence: Best Practices, Case Studies, and Strategies, Pfeiffer.

COMPLEMENTARY REFERENCES (FURTHER READING):

Abraham, R. (2000). The role of job control as a moderator of emotional dissonance and emotional intelligence outcome relationships. *Journal of Psychology*, Vol. 134, pp. 169-84.
Ashkanasy, N.M.; Hartel, C.E.J.; Daus, C.S. (2002). Diversity and emotion: the new frontiers in organizational behavior research. *Journal of Management*, Vol. 28, pp. 307-38.
Boyatzis, R.E.; Goleman, D.; Rhee, K.S. (2000). Clustering competence in emotional intelligence. In Bar-On, R. and Parker, J.D.A. (Eds). The Handbook of Emotional Intelligence, Jossey-Bass, San Francisco, CA, pp. 343-62.
Carmeli, A. (2003). The relationship between emotional intelligence and work, attitudes, behavior and outcomes. *Journal of Managerial Psychology*, Vol. 18, pp. 788-813.
Caruso, D.R.; Salovey, P. (2004). The Emotionally Intelligent Manager: How to Develop and Use the Four Key Emotional Skills of Leadership, Jossey-Bass.
Cooper, R. K. & Sawaf, A. (1997). Executive EQ: Emotional intelligence in leadership and organizations. New York: Grosset/Putnam.
Druskat, V.U.; Mount, G.; Sala, F. (2005). Linking Emotional Intelligence And Performance At Work: Current Research Evidence With Individuals and Groups, Lawrence Erlbaum Associates.
Freshman, B & Rubino, L. (2004). Emotional Intelligence Skills for Maintaining Social Networks in Healthcare Organizations, *Hospital Topics*, 82:3, 2-9.
Higgs, M.; Aitken, P. (2003). An exploration of the relationship between emotional intelligence and leadership potential. *Journal of Managerial Psychology*, Vol. 18, pp. 814-23.
Higgs, M.J.; Dulewicz, S.V.D. (1999). Making Sense of Emotional Intelligence, NFER-Nelson, Windsor.
Matthews, G.; Zeidner,M.; Roberts, R.D. (2003. Emotional intelligence: science or myth, The MIT Press.
Mok, W. (2008) A Measurement of Emotional Intelligence in Service Encounters. *Australasian Marketing Journal*; AMJ - Vol. 16 (1).
Rozell, E. J; Pettijohn, C. E & Parker, R. S. (2004). Customer-Oriented Selling: Exploring the Roles of Emotional Intelligence and Organizational Commitment. *Psychology & Marketing*, Vol. 21(6): 405–424.
Salovey, P.; Mayer, J. (1990). Emotional intelligence. Imagination, Cognition, and Personality, 9, 185–211.
Schutte, N.; Malouff, J.; Hall, L.; Haggerty, D.; Cooper, J.; Golden, C. & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167–177.

TEACHING METHODS

1. Theoretical lectures in which the different contents will be presented using different materials.

2. Practical applications/classes to illustrate the theoretical issues forming this subject, as well as their use in a real business situation. Here, the participation of students will be encouraged. We hope that students, with this activity, improve their competences

3. Readings related to the topics related with this subject; the students will be requested to do critical essays about them.

4. Work in group to tackle particular issues treated in the subject's program.

5. Reading and interpreting the literature, including news articles, proposed in the program.

PROGRAM ACTIVITIES

	H. Lectures	H. Study	Total
Unit 1	2	6	8
Unit 2	2	6	8
Unit 3	2	6	8
Unit 4	3	9	12
Unit 5	2	6	8
Unit 6	3	9	12
Presentation of papers and research projects	4	28	32
Final Exam	2	0	2
TOTAL	**20**	**70**	**90**

ASSESSMENT METHODS

The student's assessment will be based on several methods, also with different weights in the final qualification. These are the following:

- Final (written) examination (50%).
- Research project on any issue on Emotional Intelligent applied to management/leadership selected by the student (presentation and contents) (40%)
- Resolution, attendance and participation in practical exercises proposed during the course (10%)

GUIA DOCENTE DE LA ASIGNATURA

Technology and Innovation Management

MÓDULO	MATERIA	CURSO	SEMESTRE	CRÉDITOS	TIPO
Postgraduate	Information Technology	1º	2º	4	Elective

PROFESOR(ES)	DIRECCIÓN COMPLETA DE CONTACTO PARA TUTORÍAS (Dirección postal, teléfono, correo electrónico, etc.)
• Daniel Arias Aranda	Department of Management Science School of Economics and Business University of Granada Campus Universitario de la Cartuja s/n 18071, Granada, Spain Correo electrónico: mnperez@ugr.es
	HORARIO DE TUTORÍAS
	Check http://www.ugr.es/local/darias

POSGRADO EN EL QUE SE IMPARTE	OTROS POSGRADOS A LOS QUE SE PODRÍA OFERTAR
Master in Economics	

PRERREQUISITOS Y/O RECOMENDACIONES (si procede)

Prerequisites and advises:
The equivalent to a university 4 yrs degree ('Licenciatura' or 'Grado') is required in order to apply. Applicants with a Master's degree need also to prove the university 4 yrs. degree. This rule does not apply for EU applicants with 3 yrs. university degree under the Bolonia agreement. A Board of admissions will evaluate every document for certification of the university degree prior to admission.

BREVE DESCRIPCIÓN DE CONTENIDOS (SEGÚN MEMORIA DE VERIFICACIÓN DEL GRADO)

Course contents/descriptors/key words:

1 Technological innovation for competitiveness.

2 Dynamics of Technological Innovation.
3 Innovation Patterns.
4 Startegic Management of Innovation.
5 Difussion and protection of innovation.

COMPETENCIAS GENERALES Y ESPECÍFICAS

Competences
Students will be able to:

- Understand the patterns and dynamics of the technological innovation process
- Elaborate research papers in the Technology and Innovation Management field.
- Develop management skills related to Technology and Innovation.
- Understand and manage different types of Innovation patterns and diffusion types.
- Develop consulting reports related to Innovation Management.
- Acquire critical skills to assume a level position for responsibilities for a R&D Department.

OBJETIVOS (EXPRESADOS COMO RESULTADOS ESPERABLES DE LA ENSEÑANZA)

- Learning outcomes and skills:

Students will be able to:

- Acquire bibliographic information about the current state of the art.
- Understand the relevant theories and debates related to the Innovation and Technology Management (ITM) field.
- Propose and develop news research questions related to ITM research.
- Understand ITM principles.
- Recognize the importance of ITM to improve firm competitive position.
- Recognize the major research journals and top conferences in this topic.
- Understand the major survey data methods and structural equation modeling (SEM) techniques for ITM research.

TEMARIO DETALLADO DE LA ASIGNATURA

1. Dynamics in Innovation and Technology Management: main concepts.
    a. Sources of Innovation.
    c. Patterns of Innovation.
    d. New Product and Service Design.
2. Innovation and Technology Management Strategy.
    a. Innovation projects.
    b. Protection of Innovation.
3. Structures for promoting innovation.
    a. Collaboration strategies.
    b. Innovation for production
    c. Innovation and Human resources.
    d. Strategies of deployment.

4. New advances in Innovation Management.
    a. Platforms
    b. Open innovation

BIBLIOGRAFÍA

Recommended reading:

Aldrich, H.E. and Zimmer, C. (1986), "Entrepreneurship through social networks", in Sexton, D. and Kasarda, J. (Eds), The Art and Science of Entrepreneurship, Ballinger, Cambridge, MA.

Balachandra, B. and Friar, J.H. (1997), "Factors for success in R&D projects and new product innovation: a contextual framework", IEEE Transactions on Engineering Management, Vol. 44 No. 3, pp. 276-87.

Balbontin, A., Yazdani, B., Cooper, R. and Souder, W.E. (1999), "New product development success factors in American and British firms", International Journal of Technology Management, Vol. 17 No. 3, pp. 259-80.

Barth, H. (2004), "Barriers to growth and development in small firms", PhD dissertation, Luleå University of Technology, Luleå.

Beise, M. and Rennings, K. (2003), Lead Markets of Environmental Innovations: A Framework for Innovation and Environmental Economics, Centre for European Economic Research (ZEW), Mannheim.

Benbasat, I., Goldstein, D. and Mead, M. (1987), "The case research strategy in studies of information systems", MIS Quarterly, Vol. 11 No. 3, pp. 369-86.

Berggren, B., Lindström, G. and Olofsson, C. (2001), "Tillväxt och finansiering i mindre företag", in Davidsson, P., Delmar, F. and Wiklund, J. (Eds), Tillväxtföretagen i Sverige, SNS Förlag, Stockholm.

Birley, S. (1985), "The role of networks in the entrepreneurial process", Journal of Business Venturing, Vol. 1 No. 1, pp. 107-17.

Brown, S.L. and Eisenhardt, K.M. (1995), "Product development: past research, present findings, and future directions", Academy of Management Review, Vol. 20 No. 2, pp. 343-78.

Caird, S. (1994), "How important is the innovator for the commercial success of innovative products in SMEs?", Technovation, Vol. 14 No. 2, pp. 71-83.

Cantono, S. and Silverberg, G. (2009), "A percolation model of eco-innovation diffusion: the relationship between diffusion, learning economies and subsidies", Technological Forecasting and Social Change, Vol. 76 No. 4, pp. 487-96.

Carpenter, M.A., Geletkanycz, M.A. and Sanders, W.G. (2004), "Upper echelons research revisited: antecedents, elements, and consequences of top management team composition", Journal of Management, Vol. 30 No. 6, pp. 749-78.

Eisenhardt, K. (1989), "Building theories from case study research", Academy of Management Review, Vol. 14

No. 4, pp. 532-50.

Eliashberg, J. and Chatterjee, R. (1986), "Stochastic issues in innovation diffusion models", in Mahajan, V. and Wind, Y. (Eds), Innovation Diffusion Models of New Product Acceptance, Ballinger, Cambridge, MA.

Green, K., McMeekin, A. and Irwin, A. (1994), "Technological trajectories and R&D for environmental innovation in UK firms", Futures, Vol. 26 No. 10, pp. 1047-59.

Hall, B. (2005), "Innovation and diffusion", in Fagerberg, J., Mowery, D. and Nelson, R. (Eds), The Oxford Handbook of Innovation, Oxford University Press, Oxford.

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Utterback, J.M. (1994), Mastering the Dynamics of Innovation, Harvard Business School Press, Boston, MA.

Van de Ven, A.H., Angle, H.L. and Poole, M.S. (Eds) (2000), Research on the Management of Innovation, The Minnesota Studies, Oxford University Press, New York, NY.

ENLACES RECOMENDADOS

METODOLOGÍA DOCENTE

Teaching methods:

The teaching methodology is similar for each thematic session (as a module closed), articulated on the basis of selection, reading and general discussion of a selected number of book chapters and research papers considered by teachers. These materials are relevant on each of the topics covered by the program.
First, all students must pass a final written exam on the core materials discussed in the required sessions and seminars. Second, students will expose the main conclusions derived from the researchers analyzed. In fact, the last sessions of the course is devoted to oral presentation in class of a series of thematic work previously selected by students for discussions with the rest of participants (who also act as commentators).

PROGRAMA DE ACTIVIDADES

Primer cuatrimestre	Temas del temario	Actividades presenciales (NOTA: Modificar según la metodología docente propuesta para la asignatura)						Actividades no presenciales (NOTA: Modificar según la metodología docente propuesta para la asignatura)			
		Sesiones teóricas	Sesiones prácticas	Exposiciones y seminarios	Tutorías colectivas	Exámenes (horas)	Etc.	Tutorías individuales	Estudio y trabajo	Trabajo en grupo	Etc.

		(horas)	(horas)	(horas)	(horas)			(horas)	individual del alumno (horas)	(horas)	
Semana 1	T1	2	2	-	-	-	-	-	5	-	-
Semana 2	T2	2	1	-	-	-	-	-	5	1	-
Semana 3	T3	2	1	-	-	-	-	-	4	1	-
Semana 4	T3	2	1	-	-	-	-	-	4	1	-
Semana 5	T3	-	1	1	-	-	-	-	5	2	-
Semana 6	T4	-	1	1	-	-	-	-	5	2	-
Semana 7	T1-4	-	2	-	-	-	-	-	5	2	-
Semana 8	T1-4	-	2	-	-	-	-	-	5	2	-
Semana 9	T4	2	-	-	-	-	-	-	5	-	-
Semana 10	Pre-Test	2	-	-	-	2	-	-	-	-	-
Total horas		12	10	2	-	2	-	-	53	11	-

EVALUACIÓN (INSTRUMENTOS DE EVALUACIÓN, CRITERIOS DE EVALUACIÓN Y PORCENTAJE SOBRE LA CALIFICACIÓN FINAL, ETC.)

Assessment methods:

It will be conducted an ongoing evaluation of student training in order to assess (shown in parenthesis the weight of each item in the final assessment): - The acquisition of skills, aptitudes and knowledge derived from the course through a final exam (50%). - Active participation in discussion sessions and the degree of interest of the interventions. It will consider the level of student involvement in the subject matter and the degree of ongoing monitoring of the development of the course (10%). - The resolution of exercises and case studies raised (10%). - The precision and clarity in exhibitions, seminars and work. It will be necessary to made at least one exhibition per student (20%) - The positive attitude of students and their involvement in the practical sessions in these areas of work (10%).

INFORMACIÓN ADICIONAL

Language of instruction: English.

Links to more information: http://masteres.ugr.es/ugrme/

ANEXO II: GUÍAS DE LA ASIGNATURAS QUE SE MODIFICA SU DENOMINACIÓN

<table>
<tr><th>MODULE</th><th>COURSE TITLE</th><th>YEAR</th><th>TERM</th><th>CREDITS</th><th>TIPO</th></tr>
<tr><td>Economic Analisis</td><td>Topics in Macroeconomics I</td><td>1º</td><td>2º</td><td>4 ECTS</td><td>Optative</td></tr>
<tr><td colspan="3">LECTURE(S)</td><td colspan="3">ADDRESS FOR TUTORING</td></tr>
<tr><td colspan="3" rowspan="3">Julián Díaz</td><td colspan="3">Dpto. Teoría e Historia Económica, Facultad de Económicas y Empresariales. Despacho B018

Correo electrónico: julianalbertodiaz@ugr.es</td></tr>
<tr><td colspan="3">SHEDULE</td></tr>
<tr><td colspan="3">To determine to start the classes</td></tr>
<tr><td colspan="6">PREREQUISITES and/or ADVISES</td></tr>
<tr><td colspan="6">It is compulsory to have attended “Macroeconomics”. It is also recommended to have attended “Economic Analysis Techniques”</td></tr>
<tr><td colspan="6">COURSE CONTENTS/DESCRIPTORS/KEY WORDS</td></tr>
<tr><td colspan="6">- Economic Growth, Dynamic General Equilibrium, Social Security</td></tr>
<tr><td colspan="6">GENERAL AND SPECIFIC COMPETENCES</td></tr>
<tr><td colspan="6">GENERAL COMPETENCES:
Capacity for analysis and synthesis
Ability to solve economic maximization problems
Critical thinking skills and self-critical thinking
Learning ability and independent work
Ability to apply knowledge in practice
Skill in finding information and research
Ability to design and project management
SPECIFIC COMPETENCES:
Know the fundamentals theories of Economic Growth.
Know the different sources of economic growth
Knowing the meaning of competitive equilibrium and social planner solution
Know the main computational methods
Knowing the main advantages and disadvantages of the main computational methods
Know the main programming languages that can be used in computational methods.</td></tr>
</table>

- Know the different types of Public Pension Systems
- Know the current debate about the sustainability of Public Pension Systems.
- Evaluate the main consequences of parametric reforms of Public Pension Systems.

OBJECTIVES OF THE COURSE (EXPRESSED IN TERMS OF LEARNING OUTCOMES)

GENERAL OBJECTIVE: This course is based on theoretical and empirical studies performed with rigorous quantitative techniques in order to help students to understand Quantitative Macroeconomics.

- MAIN OBJECTIVES: Is to give an introduction to dynamic models in macroeconomics. The course deals with the main economic models used in Economic Growth, and the main dynamic models used to perform quantitative analysis of public policies. In addition, the course presents the main computational techniques to solve dynamic general equilibrium models. Finally, it presents an application of these techniques, intended to evaluate the sustainability of social security programs.

Syllabus

Theoretical syllabus

1. **Economic Growth**
   Exogenous Growth
   Endogenous Growth

2. **Dynamic General Equilibrium**
   Dynamic Models
   Computational Methods

3. **Social Security**
   Types of Public Pension Programs
   The issue of the sustainability
   Parametric reforms and their consequences

Practical syllabus

- Practice each of the examples proposed in the theory program.
- Discussion of case studies and articles.
- Apply simulation techniques regarding DGE models.

REFERENCES

Recommended reading:

- Barro R., and X. Sala I Martin, Economic Growth, The MIT Press
- Weil D., Economic Growth, Pearson.
- Marimon R., and A. Scott, Computational Methods for the Study of Dynamic Economies, Oxford University Press.
- Orestein M., Pension Reform in Europe: Process and Progress, The World Bank.

TEACHING METHODS

The teaching methodology is similar for each thematic session (as a module closed), articulated on the basis of lectures given by subject professor´s with the necessary theoretical and methodological supplements and of participation of the students who exercised commentators of the different summaries. Together with the reading, summary and general discussion in class of a selection of examples, articles and research papers considered by professor as key or relevant on each of the topics covered by the program.

PROGRAM ACTIVITIES

	h. lectures	h. study	Total	
Lectures	12	12	24	
Debate of different cases	2	8	10	
Presentation of paper and/or research line	4	16	20	
Exam or discussion of work-end of the course	2	19	21	
Total	**20**	**55**	**75**	

ASSESMENTS METHODS

In order to assess the acquisition of content and skills to develop in this area, therefore, a diversified assessment system, selecting the most appropriate assessment techniques for the subject at all times, allowing to highlight the different knowledge and skills acquired by students to this course.

Class attendance is mandatory in at least 70% of the sessions, requiring an active participation in them. Furthermore, it is also necessary to overcome the requirements: written exam and/or Work-end of the course, to pass the course. Covered those two conditions, the final mark during the weighting is obtained from the following factors:
-Written examination or Work-end of the course (presentation and contents): 70%.
-Resolution and / or comments of exercises, discussions proposed along the course and quality interventions and discussions in class at the invitation of Professor: 20%
-Attendance and active participation in class: 10%

MODULE	COURSE TITLE	YEAR	TERM	CREDITS	TIPO
Economic Analisis	Topics in Macroeconomics II	1º	2º	4 ECTS	Optative

LECTURE(S)	ADDRESS FOR TUTORING
• Betty Agnani	Dpto. Teoría e Historia Económica, Facultad de Económicas y Empresariales. Despacho Ala B016 Correo electrónico: bagnani@ugr.es
	SHEDULE
	To determine to start the classes

PREREQUISITES and/or ADVISES

It is compulsory to have attended subject "Macroeconomics" and "Topics in Macroeconomics I"

COURSE CONTENTS/DESCRIPTORS/KEY WORDS

- NATURAL RESOURCES ECONOMICS (nonrenewable and renewable).

GENERAL AND SPECIFIC COMPETENCES

- GENERAL COMPETENCES:
- Capacity for analysis and synthesis
- Ability to solve economic maximization problems
- Ability to work in an international context
- Critical thinking skills and self-critical thinking
- Learning ability and independent work
- Ability to apply knowledge in practice
- Skill in finding information and research
- Ability to design and project management

- SPECIFIC COMPETENCES:
- Know Fundamentals concepts of natural resources economics.
- Know Values, value systems, and economics
- Knowing the meaning of perfect competitive markets and market failures
- Know the major macroeconomic models
- Knowing how imperfectly competitive markets work
- Know the resource growth models.
- Contribute to the governance of resource allocation in both the private and public.
- Identify and anticipate significant economic problems in relation to the allocation of resources in general, both in private and public
- Bringing rationality to the analysis and description of any aspect of economic reality.
- Evaluate consequences of alternative courses of action and select the best view of the objectives.

- Issue advisory reports on specific situations of optimal use of resources in any economy.
- Derive data impossible to recognize relevant information by non-professionals.
- Use commonly information technology and communications throughout his professional.
- Concern for quality.

OBJECTIVES OF THE COURSE (EXPRESSED IN TERMS OF LEARNING OUTCOMES)

NATURAL RESOURCES ECONOMICS: This course is based on theoretical and empirical studies performed with rigorous quantitative techniques in order to help students to understand the particularities of market forces with natural resources.

MAIN OBJECTIVE: Is to give a thorough introduction to and an overview of the economics on natural resources. The course deals with the optimal utilization of renewable resources (e.g. forests and fisheries) and non-renewable resources (e.g. mineral deposits). There are several features of natural resources that make them different from other economic goods. The analyses of natural resources necessitate the use dynamic methods in order to:

- Made efficient policies of these goods
- Decide their harvest, use and management

Syllabus

Theoretical syllabus

4. **Basic Introduction**
   Fundamentals of economics
   Values, value systems, and economics
   Perfect competition, equilibrium and efficiency

5. **The Economics of Natural Resource Systems**
   Evolution of thought and market failures
   Environmental functions, growth and sustainability

6. **Natural Resource Management**
   Types of Natural Resources (basic concepts)
   Discounting
   Simulation Techniques

7. **Non-renewable resources**
   Hotteling Rule´s
   The inverse Demand curve
   Types of extraction and price paths

8. **Renewable resources**
   Net Growth Function
   Production Function
   Types of bioeconomic equilibriums

Practical syllabus

- Practice each of the examples proposed in the theory program.
- Discussion of case studies and articles.

- Apply simulation and optimization techniques regard to harvest strategy.

REFERENCES

Recommended reading:

- Conrad, Jon 1999: Resource Economics, Cambridge University Press.
- Conrad, Jon and Colin W.Clark, 2002. Natural Resource Economics: Notes and Problems, Cambridge University Press.
- Perman, Roger et al. 2003: Natural resource and environmental economics, Addison Wesley

TEACHING METHODS

The teaching methodology is similar for each thematic session (as a module closed), articulated on the basis of lectures given by subject professor´s with the necessary theoretical and methodological supplements and of participation of the students who exercised commentators of the different summaries. Together with the reading, summary and general discussion in class of a selection of examples, articles and research papers considered by professor as key or relevant on each of the topics covered by the program.

PROGRAM ACTIVITIES

	h. lectures	h. study	Total	
Lectures	12	12	24	
Debate of different cases	2	8	10	
Presentation of paper and/or research line	4	16	20	
Exam or discussion of work-end of the course	2	19	21	
Total	**20**	**55**	**75**	

ASSESMENTS METHODS

In order to assess the acquisition of content and skills to develop in this area, therefore, a diversified assessment system, selecting the most appropriate assessment techniques for the subject at all times, allowing to highlight the different knowledge and skills acquired by students to this course.

Class attendance is mandatory in at least 70% of the sessions, requiring an active participation in them. Furthermore, it is also necessary to overcome the requirements: written exam and/or Work-end of the course, to pass the course. Covered those two conditions, the final mark during the weighting is obtained from the following factors:
-Written examination or Work-end of the course (presentation and contents): 70%.
-Resolution and / or comments of exercises, discussions proposed along the course and quality interventions and discussions in class at the invitation of Professor: 20%
-Attendance and active participation in class: 10%

MODULE	COURSE TITLE	Year	Term	CREDITS	TIPO
Economic Analisis	Topics in Macroeconomics III	1º	3º	4 ECTS	Optional

LECTURE(S)	ADDRESS FOR TUTORING
• Henry Aray	Dpto. Teoría e Historia Económica, Facultad de Económicas y Empresariales. Office B016 Email: haray@ugr.es
	Schedule
	To be determined at the beginning of the lessons.

PREREQUISITES and/or ADVISES

It is compulsory to have attended subject "Macroeconomics" and it is recommended to have attended "Topics in Macroeconomics I" and "Topics in Macroeconomics II" and being attending "International Economics".

COURSE CONTENTS/DESCRIPTORS/KEY WORDS

Investment, Real Option Theory, Uncertainty.

GENERAL AND SPECIFIC COMPETENCES

- GENERAL COMPETENCES:
- Capacity for analysis and synthesis
- Ability to solve economic maximization problems
- Ability to work in an international context
- Critical thinking skills and self-critical thinking
- Learning ability and independent work
- Ability to apply knowledge in practice
- Skill in finding information and research
- Ability to design and project management

- SPECIFIC COMPETENCES:
- Know Fundamentals concepts of investment under uncertainty
- Introduction to stochastic process
- Acquire skills on dynamic optimization under uncertainty
- Acquire skills on decision making under uncertainty
- Use the real option theory as a tool to analyze a wide range of economic problems

OBJECTIVES OF THE COURSE (EXPRESSED IN TERMS OF LEARNING OUTCOMES)

This is a course on Real Option Theory which is a powerful tool to analyze decision making under uncertainty. Applications cover any field of Economics. However, preference will be given to the fields of

International Economics, Natural Resource Economics, Industrial Economics and Macroeconomics.

MAIN OBJECTIVE: The main objective of the course is to provide a tool that allows students analyze many problems in different fields of economics under uncertainty.

Syllabus

9. **Section I:**
- **Introduction**

10. **Section II:**
- **Brownian Motion and Ito's Lemma**

11. **Section III:**
- **Dynamic Optimization under Uncertainty**

12. **Section IV:**
- **Investment Opportunities and Investment Timing**

13. **Section V:**
- **The Value of a Project and the Decision to Invest**

14. **Section VI:**
- **Market Entry and Exit under Uncertainty**

Practical syllabus (both parts):

- Discussion of case studies and articles
- Presentations of some articles and / or research lines
- Practice each of the items proposed in the theory program

REFERENCES

Recommended reading:

- Dixit, A.1989. Entry and Exit Decisions under Uncertainty. *Journal of Political Economy* Vol 97, (3), 620-638.
- Dixit, A. and R.S. Pindyck. 1994. Investment Under Uncertainty. Princeton University Press.
- McDonald, R. and D. Siegel 1986. The Value of Waiting to Invest. *Quarterly Journal of Economics* Vol 101,(Nov), 707-727.
- Trigeorgis, L. 1996. Real Options. The MIT Press, Cambridge, Massachusetts.

TEACHING METHODS

The teaching methodology is similar for each session, articulated on the basis of selection, reading, summary and general discussion in class. A number of articles and research papers considered by teachers as key or relevant on each of the topics covered by the program, together with the necessary theoretical and methodological supplements that provide, essentially, the subject teachers and students who exercised commentators the different summaries are made.

PROGRAM ACTIVITIES

	h. lectures	h. study	Total	
Lectures	14	30	44	
Debate on selected papers and cases	4	10	14	
Exam	2	15	17	
Total	**20**	**55**	**75**	

ASSESMENTS METHODS

In order to assess the acquisition of content and skills to develop in this area, therefore, a diversified assessment system, selecting the most appropriate assessment techniques for the subject at all times, allowing highlighting the different knowledge and skills acquired by students to this course.

Class attendance is mandatory in at least 70% of the sessions, requiring an active participation in them. Furthermore, it is also necessary to overcome the requirement written exam for each course to pass the course. Covered those two conditions, the final mark during the weighting is obtained from the following factors:
-Written examination or Work-end of the course (presentation and contents): 70%.
-Resolution and / or comments of exercises, discussions proposed along the course and quality interventions and discussions in class at the invitation of Professor: 20%
-Attendance and active participation in class: 10%