Knowledge Management

1. GENERAL

SCHOOL	ENGINEERING		
DEPARTMENT	INFORMATICS AND COMPUTER ENGINEERING		
LEVEL OF EDUCATION	UNDERGRADUATE		
COURSE CODE		**SEMESTER OF STUDIES**	**9ο**
COURSE TITLE	Knowledge Management		
INDEPENDENT TEACHING ACTIVITIES *in case the credits are awarded in separate parts of the course e.g. Lectures, Laboratory Exercises, etc. If the credits are awarded uniformly for the whole course, indicate the weekly teaching hours and the total number of credits.*		**WEEKLY HOURS OF TEACHING**	**ECTS CREDITS**
	Lectures	3	
	Practice -Exercises	2	
Add rows if needed. The teaching organization and teaching - methods used are described in detail in 4.		**4**	**5**
COURSE TYPE *Background, General Knowledge, Scientific Area, Skills Development*	Scientific Area, Skill Development		
PREREQUISITE COURSES:			
LANGUAGE OF TEACHING AND EXAMS :	Greek		
ERASMUS STUDENTS	No		
ONLINE COURSE (URL) (if available)			

2. LEARNING OUTCOMES

Learning outcomes

The learning outcomes of the course are described, the specific knowledge, skills and abilities of an appropriate level that students will acquire after the successful completion of the course.

Refer to Appendix A.

- *Description of the Level of Learning Outcomes for each course according to the Qualifications Framework of the European Higher Education Area*
- *Descriptive Indicators Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Annex B*
- *Summary Guide for writing Learning Outcomes*

Purpose of the Course

Knowledge Management aims to understand knowledge as a key asset of an organization and in the management of this capital. It includes methods and business change analysis theories, methodologies and development tools of Knowledge Management Systems, Knowledge Management models, analysis of Learning Organizations, learning strategies etc. Knowledge Management systems increase the value of the organization's information and knowledge and make it easier to find and disseminate them.

Upon successful completion of the course the student will be able to:

- To have theoretical and methodological knowledge of knowledge management in organizations
- To have a theoretical background in matters of thematic organization and its access information and knowledge
- Be able to work on knowledge management projects, using terms knowledge management concepts, techniques and tools that ensure that the change projects are organized and managed properly.
- To acquire the ability to apply administration and management techniques organizational transformation.
- To apply the technologies of the semantic web and web 2.0 in projects knowledge management

General Abilities

Taking into account the general skills that the graduate must have acquired (as they are listed in the Diploma Supplement and are listed below), which of them is intended for the course ?.

Search, analysis and synthesis of data and information, using the necessary technologies *Adaptation to new situations* *Decision making* *Autonomous work* *Teamwork* *Working in an international environment* *Work in an interdisciplinary environment* *Production of new research ideas*	*Project design and management* *Respect for diversity and multiculturalism* *Respect for the natural environment* *Demonstration of social, professional and moral responsibility and sensitivity in gender issues* *Exercise criticism and self-criticism* *Promoting free, creative and inductive thinking*

- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making
- Autonomous work
- Team work
- Work in an interdisciplinary environment
- Production of new research ideas
- Promoting free, creative and inductive thinking

3. COURSE CONTENT

- Historical overview and basic concepts of knowledge management.
- Explicit knowledge and tacit knowledge.
- Ways of knowledge transformation.
- Knowledge management in organizations.
- Knowledge as the organization's intellectual capital (intellectual capital).
- The role of organizational culture.
- Organizational maturity models.
- Business environment, strategy and business (Strategic management perspectives).
- Metadata and Knowledge Organization Systems.
- Semantic web and Knowledge Organization Systems.
- Capturing knowledge and codification. Evaluating knowledge.
- Sharing knowledge.
- Communities of Practice.
- Storing and presenting knowledge. Managing knowledge for innovation.

4. TEACHING AND LEARNING METHODS - EVALUATION

METHOD OF DELIVERY *Face to face, Distance education etc.*	In class face to face
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Post course material (notes, lecture slides, exercises, topics tasks, etc.) on the platform electronic learning (e-class). Use of e-mail and announcements on the electronic platform learning, to communicate with students
TEACHING ORGANIZATION *The way and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliography study & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive teaching , Study visits, Study work, artwork, creation. λπ.* *The student study hours for each learning activity are indicated as well as the non-*	

Activity	***Semester Workload***
Lectures	39
Seminars (Study and presentation of articles bibliography)	13
Case Study	25

guided study hours so that the total workload at the semester level corresponds to the ECTS standards .	Independent Study: 48 **Total Course Load** (25 hours per credit): **125**
STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Report / Report, Oral Examination, Public Presentation, Public Presentation, Others* *Explicitly defined assessment criteria are stated and if and where they are accessible to students.*	Assessment includes group work, oral presentations and active participation in seminars, as well as presentation and defending group work.

5. RECOMMENDED-BIBLIOGRAPHY

- Suggested Bibliography:

1. Dalkir, K. (2011), "Knowledge Management in Theory and Practice", The MIT Press, 2nd edition, ISBN: 978-0-262-01508-0
2. Jashapara, A. (2011), "Knowledge Management: an integrated approach", Prentice Hall, 2nd edition, ISBN: 978-0-273-72685-2
3. Newell, S., Robertson, M., Scarbrough, H., Swan, J. (2009), "Managing knowledge work and Innovation", Palgrave Macmillan, 2nd edition, ISBN:978-0-230-52201-5
4. Kotter, J. (1996), "Leading Change", Harvard Business Review Press, ISBN: 978-0-87584-747-4
5. Kruk, S. R., McDaniel, B. (eds.) (2009) Semantic Digital Libraries, Springer
6. Liyang Yu (2011), "A Developer's Guide to the Semantic Web", Springer, ISBN: 978-3-642-15969-5, http://www.springerlink.com/content978-3-642-15969-5
7. Mika, P. (2007), "Social Networks and the Semantic Web", Semantic Web and beyond book series vol. 5, Springer, ISBN: 978-0-387-71000-6, http://www.springerlink.com/content978-0-387-71000-6
8. Gail Hodge (2000), "Systems of Knowledge Organization for Digital Libraries: Beyond Traditional Authority Files", April 2000, Published by: The Digital Library Federation Council on Library and Information Resources, ISBN 1-887334-76-9
9. Matthew Horridge, Holger Knublauch, Alan Rector, Robert Stevens, Chris Wroe (2004), "A Practical Guide To Building OWL Ontologies Using The Protege-OWL Plugin and CO-ODE Tools Edition 1.0", The University Of Manchester, August 27, 2004
10. Yoshimura and Cyndi Shein-for OCLC Research, (2011) "Social Metadata for Libraries, Archives and Museums Part 1: Site Reviews", OCLC Research Dublin, ISBN: 1-55653-392-6 (978-1-55653-392-1)

- Related scientific journals:

1. John Girard, JoAnn Girard (2015), "Defining knowledge management: Toward an applied compendium", Online Journal of Applied Knowledge Management, A Publication of the International Institute for Applied Knowledge Management, Volume 3, Issue 1
2. Alan Foote, Leila A. Halawi (2018), "Knowledge Management Models within Information Technology Projects", Journal of Computer Information Systems, Volume 58, Issue 1

3. Henri Inkinen, (2016) "Review of empirical research on knowledge management practices and firm performance", Journal of Knowledge Management, Vol. 20, Issue 2, pp.230-257
4. GP Huber, “Transfer of Knowledge in Knowledge Management Systems: Unexplored Issues and Suggested Studies”. In: Edwards J.S. (eds) The Essentials of Knowledge Management, pp. 199-212
5. Rony Dayan, Peter Heisig, Florinda Matos, (2017) "Knowledge management as a factor for the formulation and implementation of organization strategy", Journal of Knowledge Management, Vol. 21 Issue 2, pp. 308-329
6. Peter Haase, Jeen Broekstra, Andreas Eberhart, Raphael Volz (2004), “A Comparison of RDF Query Languages”, International Semantic Web Conference - ISWC 2004: The Semantic Web, pp 502-517, Part of the Lecture Notes in Computer Science book series (LNCS, volume 3298)
7. Jorge Perez, Marcelo Arenas and Claudio Gutierrez (2009), “Semantics and Complexity of SPARQL”, ACM Transactions on Database Systems, Vol. 34, No. 3, Article 16
8. Mizoguchi, R. (2003). “Tutorial on ontological engineering – Part 1: Introduction to ontological engineering”. New Generation Computing, OhmSha & Springer, 21(4), 365–384.
9. Mizoguchi, R. (2004). “Tutorial on ontological engineering. Part 2: Ontology development, tools and languages”. New Generation Computing, 22(1), 61–96.
10. Eugenijus Kurilovas, Anita Juskeviciene (2015), “Creation of Web 2.0 tools ontology to improve learning”, Computers in Human Behavior, 51 pp. 1380–1386
11. Rubén Prieto-Díaz (2003), “A Faceted Approach to Building Ontologies”, Fifth IEEE Workshop on Mobile Computing Systems and Applications
12. Tom Gruber (2007), “Collective Knowledge Systems: Where the Social Web meets the Semantic Web”, Web Semantics: Science, Services and Agents on the World Wide Web, doi:10.1016/j.websem.2007.11.011
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14. PwC (2009) “Spinning a data Web. Making Semantic Web connections”, PwC Technologyforecast (Technologyforecast, A quarterly journal, Spring 2009)
15. Hele-Mai Haav (2014), “Linked Data Connections with Emerging Information Technologies: A Survey”, International Journal of Computer Science and Applications, Vol. 11, No. 3, pp. 21 – 44
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18. Hjørland, Birger (2008), “What is knowledge organization (KO)?” Knowledge Organization, 35, pp. 86-101.
19. Hjørland, Birger (2009), “Concept theory.” Journal of the American Society for Information Science and Technology, 60(8), pp.1519-1536.
20. Hjørland, Birger (2015), “Theories are Knowledge Organizing Systems (KOS)”, Knowledge Organization, 42, No.2
21. Antoniou, G., Franconi, E. & Van Harmelen, F. (2005) “Introduction to Semantic Web Ontology Languages”, In Reasoning Web, Springer, pp. 1-21.

22. Sabri, M., Odeh, M. ed and Saad, M. ed (2017), "A semantic representation of the knowledge management enablers domain: The aKMEOnt ontology". In: Marimon, F., Mas-Machuca, M., Berbegal Mirabent, J. and Bastida, R., eds. (2017) Proceedings of the 18th European Conference on Knowledge Management ECKM 2017. ISBN 9781911218487 Available from: http://eprints.uwe.ac.uk/32934
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26. Paula Carina de Araújo, Edberto Ferneda, José Augusto Chaves Guimarães (2016), "The Relation between the Domains of Information Retrieval and Knowledge Organization in International Journals", Brazilian Journal of Information Studies: Research Trends. 10:2, pp. 82-88
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