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| Course unit title: | Data and Knowledge Management Systems |
| Course unit code: | INS611 |
| Type of course unit: (Compulsory/optional) | Optional |
| Level of course unit: (First, second or third cycle) | Master (2 nd Cycle) |
| Year of study: | 1 or 2 |
| Semester when the unit is delivered: | 2 or 3 |
| Number of ECTS credits allocated: | 8 |
| Name of lecturer(s): | TBA |
| Learning outcomes of the course unit: | |
| <p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> • Apply critical and holistic thinking on KM concepts and practices within various organizational contexts and business sectors. • Compare and contrast alternative approaches to gaining a competitive advantage from KM initiatives. • Apply a range of techniques to specifying and assessing KM solutions. • Create data warehouses within the student's own business working environment and extraction of knowledge using data mining techniques. • Evaluate the benefits of Data and KM implementations. | |
| Mode of delivery: | Face- to- face |
| Prerequisites and co-requisites: | None |
| Recommended optional program components: | None |
| <p>Course Contents:</p> <p>Objective: This course identifies issues within a business environment using data and knowledge management processes and techniques.</p> <p>Students enhance their knowledge of the theory and practice of relational database systems with an emphasis on Knowledge Management (KM) using data mining, data warehousing and other emerging database paradigms.</p> <p>Students are also provided with a detailed and critical understanding of KM processes and technologies through the generation, formulation, dissemination, retention and disposal of</p> | |

corporate knowledge.

This is related to specific objectives 1, 2, 3 and 8.

Description:

Principles of KM:

Describe what KM is and what the forces are that drive KM; explain Knowledge Management Systems (KMS) and their role in the organization; present the benefits and considerations about KM; including an overview of the nature of the KM projects currently in progress at public and private organizations.

Technologies for KM:

Introduce the early state space search techniques; use Data Warehouses to provide storage, functionality, and responsiveness to queries; employ data mining techniques to mine or discover new information; apply data management techniques in the student's business environment.

Knowledge management systems:

Systems that create knowledge; knowledge capture systems; systems that preserve and formalize knowledge; knowledge sharing systems; systems that organize and distribute knowledge; knowledge application systems; systems that utilize knowledge.

The future of data and KMS:

Present the ideas about the future of KM; explain the importance that corporate managers institute safeguards for insuring the security and adequate use of their corporate knowledge; introduce new and emerging database paradigms that can be used in knowledge discovery and dissemination.

**Recommended
or
required reading:**

Tiwana, A. (2003). Knowledge Management Toolkit, The: Orchestrating IT, Strategy, and Knowledge Platforms, 2nd Edition. New Jersey: Prentice Hall.

Elmasri, R., & Navathe, S.B. (2010). Fundamentals of Database Systems, 6th Edition. New Jersey: Pearson Education.

Dyché, J. (2000). e-Data : Turning Data Into Information With Data Warehousing. Boston, MA: Addison-Wesley.

Larose, D.T. (2004). Discovering Knowledge in Data : An Introduction to Data Mining. New York, NY: Wiley.

Borghoff, U., & Pareschi, R. (1997). Information Technology for Knowledge Management. Berlin: Springer-Verlag.

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| | <p>Ruggles, R.L. (Ed) (1996). Knowledge Management Tools. Oxford: Butterworth- Heinemann.</p> <p>Levene, M., & Loizou, G. (2003). Why is the Snowflake Schema a Good Data Warehouse Design? Information Systems 28 (3), pp 225-240.</p> <p>Journals: IEEE Transactions on Knowledge and Data Engineering ACM Special Interest Group in Knowledge Discovery and Data Mining Explorations</p> | | | | | | |
| Planned learning activities and teaching methods: | <table border="1"> <tr> <td>Class Instruction</td> <td>42 Hours</td> </tr> <tr> <td>Consultation</td> <td>30 Hours</td> </tr> </table> | Class Instruction | 42 Hours | Consultation | 30 Hours | | |
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| Consultation | 30 Hours | | | | | | |
| Assessment methods and criteria: | <table border="1"> <tr> <td>Examinations</td> <td>50%</td> </tr> <tr> <td>Project Work/ Class Participation</td> <td>50%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </table> | Examinations | 50% | Project Work/ Class Participation | 50% | | 100% |
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| Project Work/ Class Participation | 50% | | | | | | |
| | 100% | | | | | | |
| Language of instruction: | English | | | | | | |
| Work placement(s): | No | | | | | | |
| Place of Teaching: | Regular Classroom European University Cyprus, Nicosia Computer Laboratory European University Cyprus, Nicosia | | | | | | |