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Course Profile - Department of Information Technologies

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| Course Number : **IT 421** | Course Title : Current Issues in Information Systems Analysis and Design |
| Required / Elective : Required | Pre / Co-requisites : IT 322 |
| Catalog Description: Object-oriented systems analysis and design methodology, agile methods with special consideration to extreme programming, advanced database concepts, XML, data warehousing and data mining, designing user interfaces. | Textbook / Required Material : no single book is used, rather chhapters from the book of<br>Systems Analysis and Design<br>Kendall & Kendall, Prentice Hall, 7th Ed. ISBN-13: 978013 157986-6<br>and selected articles. |
| Course Structure / Schedule : **(3+0+0) 3 / 7 ECTS** | |
| Extended Description : This course is a continuation of IT 321 with special empahsis on contemporary issues with ISAD. It will help students to extend and apply concepts, methods, and alike to a practical case. Thus, the course is organized to provide students with an action-oriented learning techniques. | |
| Design content: General IT literacy, Information Systems Analysis and Design knowledge, modeling, database and programming knowledge | Computer usage: computer-supported modeling envrionment and office tools |

**Course Outcomes:**

1. Understand basic knowledge about ISAD (methodologies, lifecycles, analysis and design process) [3]
2. Key notions underlying development and modeling methods, tools and techniques, approaches) [3,4]
3. Approaches and modeling aspects of an information systems [3, 4]
4. Conceptual analysis and logical design [3, 4]
5. Model mapping and transformation (e.g. UML model dependency and XML matching) [4]
6. Relate theoretical underpinnings to practical issues (analyst problems and project characteristics) related to ISAD or vice versa [2, 4, 7, 8]
7. Ability to deal with in-depth analysis of a contemporary issues (agile modeling, open-source development, JAD, advanced database issues, XML) [5]
8. Exercise and augment how to use effective methods and techniques for modeling (UML and ER) [4, 7]
9. Understant semantic issues for database schema matching [3, 4]
10. Contemporary issues with user interface design for especially emerging applications [7, 8]

**Program Outcomes for Management Information Systems Program:**

1. A foundation in mathematics and basic sciences and ability to apply acquired knowledge as they relate to the study and practice of information systems management.
2. An ability to align information technology, organizational and strategic matters.
3. An ability to propose, analyze, design, develop, test and maintain an information technology system including software solutions, security model, computer and network infrastructure, etc. to solve information systems problems.
4. An ability to analyze local and global impact of computing on individuals, organizations and society; and the ability to apply information systems techniques, skills, and tools for regular computing practices as well as to improve effectiveness of current methodologies.
5. An ability to effectively communicate in oral and written media with all kinds of related audiences; and prepare documentation for this purpose as required.
6. An understanding of professional, ethical, legal, and social issues and responsibilities of information systems management profession.
7. A taste and breadth of knowledge across several social topics outside the immediate requirements of the information systems management profession, and the ability to work within heterogeneous teams to accomplish a common goal including people from the information systems area as well as other disciplines.
8. An ability to engage in life-long learning and professional development for personal improvement to follow contemporary information systems issues.

Teaching methods

Pre-readings, lecture and working papers, individual assignments, small project

Assessment methods

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| 1 Midterm exam | 25% |
| 2 Assignments | 20 % (10 each) |
| 1 Small project | 20 % |
| 1 Final | 35%. |

Student workload:

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| Preparatory reading | 40 hrs |
| Lectures, workshop, discussions | 40 hrs |
| Assignments | 35 hrs |
| Project | 40 hrs |
| Final Exam | 10 hrs |
| **TOTAL ……** | **175 hrs** |

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| Prepared by : Dr. Mehmet N. Aydin | Revision Date : Feb 9, 2009 |