

**ATILIM UNIVERSITY**  
**GRADUATE SCHOOL OF NATURAL & APPLIED SCIENCES**  
**DEPARTMENT OF SOFTWARE ENGINEERING**  
**COURSE DESCRIPTION AND PRACTICE**

Course Name	Code	Term	L+P Hour	Credits	ECTS
Advanced Software Project Management	SE552	1	3+0	3	7.5

Pre-requisite Courses	
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Language of the Course	English
Course Type	Compulsory
Course Coordinator	
Instructors	
Assistants	
Course Objective	The objective of this course is to teach planning, monitoring and controlling software projects. It provides a knowledge base and practical skills for anyone interested in implementing or improving software project management techniques and practices in their organization.
Learning Outcomes of the Course	Review the roles, responsibilities, and management methods of the software project manager
	Discuss problems and concerns of software project manager
	Explain scope, initiation, boundaries and stakeholders of a project
	Define project organization, work breakdown structure and estimate project parameters
	Use strategies and tactics involved in software project execution, people leadership and management
	Review static V&V techniques
Content of the Course	Introduction to project management. Algorithmic cost estimation models. Advanced cost estimation models. Function points estimation. Risk assessment. Life cycle models. Prototyping. Management of software reuse. Software maintenance. Software maturity framework. Project Cost Management. Project Human Resource Management. Project Communications Management. Project Procurement Management. Real life Industrial Case studies.

**WEEKLY SCHEDULE AND PRE-STUDY PAGES**

Week	Topics	Pre-study Pages
1	An Overview of Project Planning	Chapter 2 (Main text)
2	Program Management and Project Evaluation	Chapter 3
3	Software Effort Estimation	Chapter 5
4	Activity Planning	Chapter 6,
5	Risk Analysis and Management	Chapter 7
6	Resource Allocation	Chapter 8
7	Project tracking and Control	Chapter 9

8	Contract Management	Chapter 10
9	Software Quality Assurance	Chapter 12
10	Configuration Management	Chapter 27 (other sources 5)
11	Various tools of Software Project Management	Other sources (6)
12	Project Cost Management	Chapter 7 (other sources 6-7)
13	Project Human Resource Management	Chapter 9 (other sources 6-7)
14	Project Communications Management	Chapter 10 (other sources 6-7)
15	Project Procurement Management	Chapter 12 (other sources 6-7)

<b>SOURCES</b>	
Course Book	Software Project Management, Bob Hughes & Mike Cotterell, 3 <sup>rd</sup> Ed., 2003, ISBN: 0707709834X McGraw-Hill Publication
Other sources	<ol style="list-style-type: none"> <li>1. Software Project Management in Practice, Pankaj Jalote, ISBN 0-201-73721-3 (Addison-Wesley) 2002</li> <li>2. Effective Project Management, 2nd ed., R.Wysocki, R. Beck. Crane, ISBN: 9971-51-402-8, Wiley 2000</li> <li>3. Project Management, Best Practices for IT Professionals, Richard Murch, ISBN 0-13-021914-2, Prentice-Hall 2000.</li> <li>4. Quality Software Project Management, R.T.Futrell, D.F. Shafer, and L.Shafer, Prentice-Hall, 2002, ISBN: 0-13-0912972</li> <li>5. Software Engineering: A practitioner's approach, R.S.Pressman, Sixth edition, ISBN: 007-123840-9, McGraw Hill 2005.</li> <li>6. <a href="http://www.spmn.com/products_software.html">www.spmn.com/products_software.html</a>; <a href="http://www.ganttthead.com">www.ganttthead.com</a>; <a href="http://www.ittoolkit.com">www.ittoolkit.com</a></li> <li>7. Information Technology Project Management, Kathy Schwalbe, ISBN: 13: 978-0-619-21528-3</li> </ol>

<b>EVALUATION SYSTEM</b>		
IN-TERM STUDIES	QUANTITY	PERCENTAGE
Mid-term	2	40
Project	1	20
Assignment	5	5
Final Exam	1	40
TOTAL		105
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		65
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
TOTAL		105
<b>Course Category</b>		
Supplementary Courses		
Basic Occupational Courses		
Expertise/Field Courses		
Courses on Communication and Management Skills		X
Transferable Skills Courses		

<b>CORRELATION BETWEEN COURSE LEARNING OUTCOMES AND PROGRAM COMPETENCIES</b>						
No	Program Competencies	Percentage				
		1	2	3	4	5

1	An ability to apply knowledge of mathematics, science, and engineering.		X		
2	An ability to design and conduct experiments, as well as to analyze and interpret data.			X	
3	An ability to design a system, component, or process to meet desired needs.				X
4	An ability to function on multi-disciplinary domains.				
5	An ability to identify, formulates, and solves engineering problems.				X
6	An understanding of professional and ethical responsibility.				X
7	An ability to communicate effectively.				X
8	Recognition of the need for, and an ability to engage in life-long learning.			X	
9	A knowledge of contemporary issues.				X
10	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.				X
11	Skills in project management and recognition of international standards and methodologies				X
12	An ability to produce engineering products or prototypes that solve real-life problems.				
13	Skills that contribute to professional knowledge.				X
14	An ability to make methodological scientific research.				
15	An ability to produce, report and present an original or known scientific body of knowledge.			X	
16	An ability to defend an originally produced idea.				

<b>TABLE OF ECTS / WORKLOAD</b>			
Activities	QUANTITY	Duration (Hour)	Total Workload
Course Duration (Including the exam week: 16x Total course hours)	16	3	48
Hours for off-the-classroom study (Pre-study, practice)	16	5	80
Assignment	5	4	20
Project	1	10	10
Mid-term	2	20	40
Final examination	1	30	30
<b>Total Work Load</b>			228
<b>Total Work Load / 30</b>			7.6

<b>ECTS Credit of the Course</b>			7.5
<b>Prepared by</b>	Sanjay Misra		
<b>Date</b>	29 April, 2009		