Software Project Management	Code & No:	CS 433
	Credits:	3 (3,0,1)
	Pre-requisite:	CS 360
	Co-requisite:	None
	Level:	9 or 10

Course Description:

This course addresses the main issues related to software project management such as project definition, scope management, planning, organization, resources, scheduling, control, quality, cost estimation, time estimation, and, risk management. Students are also introduced to project management tools such as Work Breakdown Structure, Gantt charts, PERT, and the critical path method. Topics covered also include project management ethics, and effective project manager skills such as people and leadership skills. Students should get exposed to a software package used for this purpose.

Course Aims:

1) Recognize importance of project management and how it applies to IT projects and how good management leads to project success.
2) Analyze project constraints: scope, time, and cost.
3) Recognize project management knowledge areas, processes, and project phases.
4) Learn about strategic planning and information technology project selection.
5) Ability to use tools, skills, and techniques of project management.

Student Outcomes (SOs):

☐(a) An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline

☐(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution

☐(c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs

☒(d) An ability to function effectively on teams to accomplish a common goal

☐(e) An understanding of professional, ethical, legal, security and social issues and responsibilities

☒(f) An ability to communicate effectively with a range of audiences

☐(g) An ability to analyze the local and global impact of computing on individuals, organizations, and society

☒(h) Recognition of the need for and an ability to engage in continuing professional development

☒(i) An ability to use current techniques, skills, and tools necessary for computing practice.

☐(j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices. [CS]

☐(k) An ability to apply design and development principles in the construction of software systems of varying complexity. [CS]

☐(j) An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies. [IT]

☐(k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems. [IT]

☐(l) An ability to effectively integrate IT-based solutions into the user environment. [IT]

☐(m) An understanding of best practices and standards and their application. [IT]

☐(n) An ability to assist in the creation of an effective project plan. [IT]

Course Learning Outcomes (CLOs):

1. An ability to function effectively on teams to accomplish a common goal
2. An ability to communicate effectively with a range of audiences
3. Recognition of the need for and an ability to engage in continuing professional development
4. An ability to use current techniques, skills, and tools necessary for computing practice.
5. An understanding of processes that support the delivery and management of information systems within a specific application environment

SOs and CLOs Mapping:

CLO/SO	a	b	c	d	e	f	g	h	i	j	k	l	m	n
CLO1				√										
CLO2						√								
CLO3								√						
CLO4									√					
CLO5									√					

No.	Topics	Weeks	Teaching hours
1	Introduction to Project Management-Information Technology Context	2	6
2	Project Scope Management-Work Breakdown Structure	2	6
3	Project Time Management-PERT-CPM-Gantt Chart	2	6
4	Project Cost Management	2	6
5	Project Quality Management	2	6
6	Project Human Resource Management	2	6
7	Project Risk Management	2	6
Total		**14**	**42**

Textbook:

- Kathy Schwalbe, Managing Information Technology Projects, Revised, International Edition, South-Western College Publishing, 2013.

Essential references:

- Murali Chemuturi, and Thomas Cagley, Mastering Software Project Management: Best Practices, Tools and Techniques, J. Ross Publishing, 2010 .