Course Code	Course Title	Credits	Lectures /Week
USCS5051	**Project Managament**	**2**	**3**

About the Course: The Project Management course emphasizes on the importance of effective project management in the field. Students will gain a solid understanding of project management principles, processes, and knowledge areas while exploring their application in computer science projects. The course covers key topics such as project selection and initiation, scope management, time management, cost management, quality management, human resource management, risk management, procurement management, integration management, and advanced topics relevant to the digital age. Through a combination of theory and practical exercises, students will develop the skills necessary to successfully plan, execute, and control projects in the dynamic and rapidly evolving field of Computer Science.

Course Objectives:
- Understand the fundamental concepts and characteristics of project management, including project selection, initiation, and project governance.
- Develop skills in scope management, time management, cost management, quality management, and risk management to effectively plan and control projects.
- Acquire knowledge of human resource management techniques, including team development, conflict resolution, and communication management.
- Gain insight into agile project management methodologies and tools, enabling the successful management of iterative and incremental development.
- Explore advanced topics such as stakeholder management, project leadership, project governance, and the role of technology in project management.

Learning Outcomes:

After successful completion of this course, students would be able to
- Apply project management principles, processes, and best practices to plan, execute, and control projects effectively.
- Develop project charters, define project scopes, and create work breakdown structures (WBS) to establish project objectives and deliverables.
- Create project schedules, estimate resource requirements, and monitor project progress using appropriate project management techniques.
- Employ quality assurance and control measures to ensure project deliverables meet stakeholder expectations and industry standards.
- Demonstrate effective leadership and teamwork skills, as well as the ability to manage stakeholders, resolve conflicts, and make ethical decisions in project management settings.

Unit	Topics	No of Lectures
I	**Introduction to Project Management** **Introduction to Project Management:** Definition and characteristics of a project, Importance of project management, Project management processes and knowledge areas **Project Selection, Initiation and scope Management:** Project selection criteria and methods, Project initiation and charter development, Stakeholder	15

	identification and analysis, Scope planning and definition, Work Breakdown Structure (WBS) development, Scope verification and change control		
	Project Time & Cost Management: Activity definition and sequencing, Estimating activity durations and resources, Developing the project schedule, Schedule control and monitoring, Cost estimation techniques, Budget development and monitoring, Earned Value Management (EVM), Cost control and analysis		
II	**Project Execution and Control** **Project Quality & Risk Management:** Quality planning and standards, Quality assurance and control, Process improvement and Six Sigma concept, Risk Management-Risk identification and assessment, Risk response planning, Risk monitoring and control **Project Resource & Procurement Management:** Team development and roles, Staffing, training, and motivation, Conflict resolution and communication management, Procurement planning and contract types, Solicitation, source selection, and contract administration, Vendor management and relationship building **Project Integration Management:** Project integration processes and activities, Change management and project closure, Lessons learned and knowledge transfer	**15**	
III	**Advanced Topics in Project Management** **Agile Project & Management in the Digital Age:** Agile principles and methodologies, Agile project planning and execution, Managing iterative and incremental development, Role of technology in project management, Virtual teams and distributed project management,Tools and software for project planning and collaboration **Effective People Management in Projects:** Leadership styles and characteristics, Team building and motivation techniques, Emotional intelligence in project management, Stakeholder identification and analysis, Stakeholder engagement and communication strategies, Conflict resolution and negotiation skills **Project Governance and Ethics:** Project governance structures and accountability, Ethical considerations in project management, Professional responsibility and codes of conduct	**15**	

Textbook(s):
1. Project Management for Business and Technology, 3rd edition, Pearson Education. John M. Nicholas, 2000
2. Information Technology Project Management, by Jack T. Marchewka, 4th Wiley India 2013.
3. A Guide to the Project Management Body of Knowledge (PMBOK® Guide)–Sixth Edition 6th Edition, Project Management Institute, 2017

Additional Reference(s):
1. Introduction to Software Project Management by Adolfo Villafiorita · 2016, CRC press, e book format.
2. Project Management Professional Workbook, Claudia M. Baca, Patti M. Jansen, Sybex Publication, 2013
3. Project Management, by S. J. Mantel, J. R. Meredith and etal.,1st edition, Wiley India, 2009.