Project Management

Prerequisites:	software engineering basis
Learning outcomes:	As a result of discipline studying students should know: • project management standards (for example P • techniques for project management (WBS, PB and PERT) be able: • to define, plan and manage of IT project • to estimate the time and costs of software proje • to work as team member and project manager • to use project management software have an idea: • of team working, negotiation process • of change and risk management

№	Lecture	Hours	Labaratory works Content
1.	**Project Management Concepts**		
	Project and project management definition. Characteristics of a project, the need for project management. Roles of project managers in organizational environments. Systems development cycle. Roles of systems analysis and systems management in the life cycle of a project.	2 h	Understanding the user's problem. Requirements document. Project charter.
2.	**Project Organizational Structures and Project Organizational Behaviors**		
	Ways of groups organization into projects. Project management organisational chart and role of its entities.Roles and responsibilities of project team members. Relationship between project managers and line managers, division of responsibility and authority. Leadership styles of project managers. Techniques used to manage groups and individuals to increase the effectiveness of working on a project	2 h	Relations between project management and organizations.
3.	**Planning the project**		
	Statement of work (SOW) and overall project goals decomposition. Work Breakdown Structure (WBS) and Product Breakdown Structure (PBS). Task-flow network. Network models (CPM, PERT, GAN). Contingencies, interrelationships, and critical path(s) of the work elements analysis. Scheduling the completion of all work elements.	4 h	Produce a statement of work (SOW) and develop a work breakdown structure (WBS) - project definition seminar (brainstorm). Preparing the schedule using the project planning software.
4.	**Resource Allocation, Cost Estimating and Budgeting**		
	Optimal labor utilization for cost effectiveness and schedule efficiency analysis. Cost estimates, budgets cost summaries, cost forecasts.	2 h	Resource definition and assignment. Resource-loading chart. Cost estimation.
5.	**Project Performance Measurement and Control**		

	Earned value performance measurement. Project management information systems (PMIS) for monitoring, evaluating and controlling planned cost and schedule performance. Change and risk management.	2 h	ISO standards for Quality assurance and evaluation.Reporting and EV method in project planning software.
6.	**Project Evaluation and Termination**		
	Procedure for periodic project performance evaluation audits. Audit results communicating to customers. Trade-off analysis of project performances versus cost and schedule constraints based on results of project audits. Identification of causes associated with project success and failure. Ways of project terminating upon completion.	2 h	Change and risk management session. Acceptance test plan
7.	**Methodologies, tools and standarts for project management and work planning**		
	PRINCE2 methodology	1 h	PRINCE2 methodology documents.
	TOTAL	**15 h**	

References

[1] Pankaj Jalote. **Software Project Management in practice**. 288 pages, Addison Wesley, 2002.

[2] John M. Nicholas. **Project Management or Business, Engineering and Technology. Principles and** edition. 707 pages, Elsevier Inc., 2008, ISBN: 978-0-7506-8399-9

'RINCE2 and PMI)
C, Gantt charts, CPM

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Hours	Ref
2 h	[1],[2]
1 h	[1],[2]
3 h	[1],[2]
2 h	[1],[2]

2 h	[1],[2]
2 h	[1],[2]
3 h	[1],[2]
15 h	

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