

Course No.	NRG 103
Course title:	Project management
Number of credits:	4 (2-2-0)
No. of lectures-tutorial-practical:	28-28-0
Course coordinator(s):	

Course outline

The course is designed for the students to prepare them for the working in various projects right from conceptualization to delivery of products. It will be applicable regardless of the size and scope of the project one is handling with and will ensure the appropriate processes and tools for the job.

Evaluation procedure

- Minor test: 20%
- Class participation: 10%
- Term paper: 15%
- Case presentation: 20%
- Major exam: 40%

Details of course contents and allotted time

No.	Topic	Allotted time (hours)		
		Lecture	Tutorial	Practical
1.	Introduction, Definition and Attributes of projects and project performance (Definition, its difference from process and programme, achieve business objective, project Life Cycle, Integrative approach)	2		
2.	Strategy in project management (Establishing objectives, scoping the boundaries, priority setting, strategic development)	2		
3.	Modeling the project system (WBS/PBS, responsibility, communication plan)	2		
4.	Estimation in Project Proposal (Basic, Time, Cost, Resource, Techniques, Guidelines)	2		

No.	Topic	Allotted time (hours)		
		Lecture	Tutorial	Practical
5.	Developing Project Plan (Gantt Charts, Evaluating and Constructing network - AOA and AON, Critical Path)	2	2	
6.	Uncertainties in Project plan (PERT)	2	2	
7.	Time cost trade off		2	
8.	CPM Cost and PERT Cost	2	2	
9.	Project Monitoring and Controlling (Variance analysis; Earned value analysis and Earned schedule analysis)	2		
10.	Project Resource Management - Resource Allocation and leveling; Theory of constraint (Overview and types of resource, Resource constraints & scheduling, Allocation methods, resource vis-à-vis other activities of project planning)	2	2	
11.	Preparation for presentation (Designing small write-ups – introduction, literature review, materials, methods, results, discussion, summary, conclusions)		2	
12.	Risk Management (Concept, process, PERT, Contingency planning, funds, time, unexpected changes in control and management)	2		
13.	Analysis of Model; feasibility study and economic analysis (Various methods for comparison of alternatives - NPV, Profitability Ratio, Break even analysis and Cost-Benefit analysis)	2	4	
14.	Contracts and specification; Negotiation	2	4	
15.	Conflict and dispute resolution	2		
16.	Project Closure (Auditing (resources, time, cost), submission, auditing, closure)	2		
17.	Case Presentation		8	

No.	Topic	Allotted time (hours)		
		Lecture	Tutorial	Practical
	Total	28	28	

The course is reviewed and commented by the following experts.

Dr. P.K. Garg, Professor, IIT-R, Roorkee

Dr. R.D. Garg, Associate Professor, IIT-R, Roorkee

Dr. T.P. Singh, Assistant Professor, Symbiosis Institute of Geoinformatics, Pune

Dr. Milap Punia, Associate Professor, Jawaharlal Nehru University, New Delhi

Dr. K.C. Iyer, Associate Professor, Dept of Management Studies, IIT Delhi

Suggested readings

Books

1. Berkun, Scott (2005). Art of Project Management. Cambridge, MA: O'Reilly Media. ISBN 0-596-00786-8.
2. Comminos D &, Frigenti E (2002). The Practice of Project Management - a guide to the business-focused approach. Kogan Page. ISBN 0-7494-3694-8
3. Heerkens, Gary (2001). Project Management (The Briefcase Book Series). McGraw-Hill. ISBN 0-07-137952-5.
4. Kerzner, Harold (2003). Project Management: A Systems Approach to Planning, Scheduling, and Controlling, 8th Ed., Wiley. ISBN 0-471-22577-0.
5. Lewis, James (2002). Fundamentals of Project Management, 2nd ed., American Management Association. ISBN 0-8144-7132-3.
6. Meredith, Jack R. and Mantel, Samuel J. (2002). Project Management: A Managerial Approach, 5th ed., Wiley. ISBN 0-471-07323-7.
7. Project Management Institute (2003). A Guide to the Project Management Body of Knowledge (PMBOK), 3rd ed., Project Management Institute. ISBN 1-930699-45-X.
8. Stellman, Andrew and Greene, Jennifer (2005). Applied Software Project Management. Cambridge, MA: O'Reilly Media. ISBN 0-596-00948-8.
9. Thayer, Richard H. and Yourdon, Edward (2000). Software Engineering Project Management, 2nd Ed., Wiley-IEEE Computer Society Press. ISBN 0-8186-8000-8.
10. Pettee, Stephen R. (2005). As-built – Problems & Proposed Solutions. Construction Management Association of America.
11. Verzuh, Eric (2005). The Fast Forward MBA in Project Management, 2nd, Wiley. ISBN 0-471-69284-0 (pbk.).

Magazines

1. Coordinates
2. GIM International
3. GIS World
4. GIS@development
5. Goespatial today
6. GPS World

Journals

1. Project Management Journal
2. International Journal of Project Management

Other readings

1. Flyvbjerg, Bent, (2006). From Nobel Prize to Project Management: Getting Risks Right. *Project Management Journal*, vol. 37, no. 3, pp. 5-15.