

Course Title	Project Management for Engineers			
Course Code	ME417			
Course Type	Technical Elective			
Level	BSc (Level 1)			
Year / Semester	3 rd or 4 th year			
Teacher's Name	Professor Eleni Hadjiconstantinou			
ECTS	6	Lectures / week	3	Laboratories / week
Course Purpose and Objectives	<p>Project Management offers a structured approach to managing projects. It is defined as "... the application of knowledge, skills, tools and techniques to project activities in order to meet stakeholders' needs and expectations from a project". This definition clearly identifies that the purpose of this course is to identify and describe the best practices that are applicable to most projects most of the time and to outline the latest planning and control techniques used by industry and commerce. The course aims to provide students with a sound understanding and knowledge of the basic concepts, comprehensive toolkit and analytical skills underpinning the effective planning, scheduling and management of engineering projects using the technique of Network Analysis.</p>			
Learning Outcomes	<p>Upon the successful completion of this course, students will be able to:</p> <ol style="list-style-type: none"> 1. Explain the meaning and scope of projects and project management 2. Acquire knowledge of the basic concepts, principles and essential tools of the project management process according to international standards 3. Explain the differences between operations and projects and discuss project characteristics 4. Identify the main phases of a project life cycle and discuss its benefits 5. Differentiate the key project roles and discuss their associated responsibilities 6. Describe the project definition process 7. Apply the basic project planning methodology using Network Analysis based on AOA and AON project networks 8. Demonstrate the application of the Critical Path Method (CPM) for both types of project networks using practical examples 9. Evaluate a project plan subject to time, cost and resource constraints. 10. Perform project planning under uncertain activity times 			
Prerequisites	None	Required	None	

Course Content	<ul style="list-style-type: none"> • Introduction to projects and project management • Project types and project characteristics • Project life-cycle • Key roles & responsibilities: The Project Manager, the Sponsor & the User • Early project definition and Work Breakdown Structures (WBS) • Gantt charts and project networks AOA and AON • Project time-scale analysis using the Critical Path Method (CPM) • Multiple dependency networks • Project time-cost trade-offs • Project planning under uncertainty • Resource allocation and scheduling
Teaching Methodology	<ul style="list-style-type: none"> • The course is delivered through 3-hour lectures per week. • Class discussions and the use of real-life examples reinforce the theoretical component of the course. Practice problems and other teaching notes are handed out to consolidate knowledge in the analytic skills developed. • The course material is available on the university's e-learning platform. Further readings from the recommended textbooks provide a good source of additional examples for practice.
Bibliography	<p><u>RECOMMENDED TEXTBOOKS</u></p> <ol style="list-style-type: none"> 1. Gray C.E. and Larson E.W., Project management: the managerial process, McGraw- Hill, edition 7e, 2018, ISBN 978-1-259-66609-4 2. Kerzner H., Project management: A systems approach to planning, scheduling and controlling, John Wiley & Sons, 10th edition, 2017, ISBN 978-1-119-16535-4. <p><u>SUPPLEMENTARY READINGS</u></p> <ol style="list-style-type: none"> 3. Burke R., Project management: planning and control techniques, John Wiley & Sons, 5th edition, 2013, ISBN 978-1-118-56125-6. 4. Meredith J.R., Jr. Mantel S.J. and Shafer, S.M., Project management: a managerial approach, John Wiley & Sons, 9th edition, 2016, ISBN 978-1-118-94583-4. 5. Lockyer K. and Gordon J., Project management and project network techniques, Financial Times Prentice Hall, 7th edition, 2005, ISBN 0-273-69378-6.
Assessment	<ul style="list-style-type: none"> • In-class Test (20%) • Group Project Assignment (20%) • Final Exam (60%)
Language	English