

### Curricular Unit Form (FUC)

Course:	<b>INDUSTRIAL ENGINEERING MANAGEMENT</b>					
Curricular Unit (UC)	<b>Project Evaluation Management</b>				Mandatory	<b>X</b>
					Optional	
Scientific Area:	Engineering and industrial management					
Year: <b>2º</b>	Semester: <b>1º</b>	ECTS: <b>5,0</b>		Total Hours: <b>3,0</b>		
Contact Hours:	T:	TP: <b>45,0</b>	PL:	S:	OT:	TT:
Professor in charge		Academic Degree /Title		Position		
<b>António João Pina da Costa</b>		<b>PhD</b>		<b>Associate Professor</b>		

T- Theoretical ; TP – Theory and practice ; PL – Laboratory ; S – Seminar ; OT –Tutorial ; TT – Total of contact hours

Entry into Force	Semester: <b>Winter</b>	Academic Year: <b>2016/2017</b>
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#### Objectives of the curricular unit and competences (max. 1000 characters)

Objectives • Understand and frame the project management in the organizations; • Understand how to manage critical variables, such as time and cost, and its impact on the scope and quality of projects; • Develop and establish project management plan; • Know and understand project management standards:

Competences • Ability to learn, analyze and synthesize; • Skills in tools management • Project management • Autonomous acquisition and interpretation of data from several sources. • Quantitative Methods and Statistical Techniques;

#### Syllabus (max. 1000 characters)

1. Project Management frameworks
  - Key definitions and concepts;
  - Success and failure main factors; • Projects Life Cycle
  - Project Manager Profile
  - Structural Organizations and Stakeholder influences
  - Project Management Processes
  - Main project management standards;
2. Project Evaluation
  - Investment Economical/Financial Evaluation
  - Investment Performance Indicators (Net Present Value-NPV, Internal Rate of Return-IRR, Pay Back, Break Even, and Profitability Index-PI)
  - Evaluation strategic
  - Project Selection Criteria
3. Project Planning
  - Scope and project requirements definition
  - Work Breakdown Structure (WBS) construction.

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- Resource, time and cost estimation
- Project scheduling – PERT/CPM
- 4. Project Implementation and Control:
  - Deviation Analysis and Corrections
  - Earned Value Management (EVM)
- 5 Project Closure

### Demonstration of the syllabus coherence with curricular unit's objectives (max. 1000 characters)

Objective: Understand and frame the project management in the organizations. Chapters - 1. Project Management frameworks Objective: Understand how to manage critical variables, such as time and cost, and its impact on the scope and quality of projects; Chapters – All chapters. Objective: Develop and establish project management plan; Chapters – All chapters. Objective: Know and understand project management standards: Chapters – All chapters

### Teaching methodologies (including evaluation) (max. 1000 characters)

Evaluation The evaluation process is composed by a group project and an individual test, as follows: • One group project with individual evaluation (50%). The results analysis is presented in a report and discussed in a public session.

- examination test (50 %)

Teaching Methodology Lectures are carried out combining theoretical classes and applied classes. In theoretical classes, the lecture initiates with a short reference of the main subjects treated in the previous lecture and the summary of the subjects that will be discussed in that day. After that, concepts and models are explained, discussed and applied, stimulating the student participation. In the end of the lecture, the most relevant aspects presented and discussed are highlighted as well as the subjects for the following lecture, encouraging students to study the subjects before there discussion. In practical classes, exercises and case studies are analyzed and discussed.

### Demonstration of the teaching methodologies coherence with the curricular unit's objectives (max. 3000 characters)

Objective: Understand and frame the project management in the organizations. Methodology: Case-study, Solving practical cases

Objective: Understand how to manage critical variables, such as time and cost, and its impact on the scope and quality of projects; Methodology: Case-study, Solving practical cases and calculations

Objective: Develop and establish project management plan; Methodology: Case-study, Solving practical cases and calculations.

Objective: Know and understand project management standards. Methodology: Case-study

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### Main Bibliography (max. 1000 characters)

Gestão de Projectos (2010). Uma Perspectiva Integrada”, Victor S. Roldão, ISBN: 972-9413-40-1  
Kerzner, H. (2013). Project Management: A systems approach to planning, scheduling, and controlling (11th ed.). John Wiley & Sons.  
Project Management Institute (2013). A Guide to the Project Management Body of Knowledge (5th ed.). PMI.  
Kerzner, H. (2011). Project Management Metrics, KPIs, and Dashboards: A Guide to Measuring and Monitoring Project Performance. John Wiley & Sons  
Jonasson, H (2007). Determining Project Requirements. Auerbach Publications- CRC Press.  
Haugan (2008). Work Breakdown Structures for Projects, Programs, and Enterprises. Management Concepts.  
Hulett, D. (2011). Integrated Cost-Schedule Risk Analysis. Gower publishing.