GPE
engineering project management

Project Management in an Engineering Context
The website
FENIX GPE Webpage is the place where all information is stored and organized. Class PDFs will be available, papers for the presentations and discussions, project material, different support material, announcements and important information will be posted. You have different sections to visit:

DEFAULT
Announcements – important information, news and changes; Summaries; Bibliography; Evaluation Method;

GPE CUSTOMIZED (Folders)
Class PDFs
Partial and Final marks (Pauta) – results of Exams, Presentations, and Projects
Papers to present, papers to be presented and discussed during practical classes, presentations schedule
Fundamental support material – how to make your presentation, write your report, …
Projects, support material for projects

Email
My email is jdf@tecnico.ulisboa.pt
How does GPE course work?

**Theoretical classes**
we mainly (but not only) explore the [PMBOK](https://www.pmi.org) (Project Management Body of Knowledge, a Project Management Institute (PMI) guide to Project Management, fifth Edition, 2013). This is perhaps the most well known Guide on Project Management in the world. This is a project management standard. To create some distance along with a critical view on PMBOK we will visit two different approaches to Project Management, namely [Critical Chain](https://en.wikipedia.org/wiki/Critical_Chain_Method) and [Agile](https://en.wikipedia.org/wiki/Agile_project_management).

**Practical classes**
all the groups will perform PPT presentations of International Journal papers on Project Management. The idea is to explore a sense of diversity, analyzing different aspects of Project Management. It is a kind of literature review. Papers are on Project Management but on different subjects, different technical areas. In these classes a group presents a paper and two other groups “contest” their presentation. By “contest” I mean an educated critic, with illustrated questions. As well as every element of the presenting group should participate in the group presentation, also all the elements of the “contesting” groups should pose their questions. Evaluations for the presenting group and four the contestant groups can differ from element to element.

The idea is to study the subject of the paper and questions should indicate a reasonable knowledge of the paper subject.
By the end of **March** you should begin reading the novel on **Project Management – Critical Chain**. This novel explores project management in an alternative approach, not the same as PMI (PMBOK).

In the examination you will have at least two or three questions on Critical Chain. Exams normally have more or less 18 questions. And they generally take 1h20. If you read Critical Chain through April and May it is perfect, but don’t start reading it before the end of MARCH.
Groups

Please arrange yourself in groups till **February 23**

Groups will have 5 people and you should register your group on FENIX. **Groups are the same for class presentations and for projects.** Choose the day of the week for your group presentation and discussions when you register your group.

In GPE you don’t use shifts, just the day of the week for presentation and discussions.
Evaluation

Final mark will be the result of

\[(\text{EXAM} \times 0.45 + \text{PROJ} \times 0.35 + \text{PRESEN} \times 0.20 + \text{ClassNotes is a BONUS that can vary from 0 to 1})\]

On second semesters there is also another bonus of 0.5 to participate and a bonus of 1 for the group winner of IST Accenture Technology Challenge 2017

A student with less then 9.5 in the exam or the project cannot pass
Exams

In the Exam, the multiple-choice questions have a discount of - 0,25 if you fail. You need to register to exams using FENIX

Exams are not available because there is no exam training in the sense of resolving many times different exams to learn how to respond to it

Exams are in English. Of course Portuguese people should answer in Portuguese to all the questions
Presentations

Evaluation’s criterion is:
• **content** quality (have you been exploring outside the paper? do you situate the paper in perspective? are you rigorous?),
• **structure** (is the presentation sequencing well designed?),
• **critical** positioning (did the group contribute to the topic with new elements and is able to criticize details of the paper?), and
• **synthesis** capacity (the group address the most important things?)
Each criterion is evaluated from 1 to 5, so the presentation is evaluated from 1 to 20

Contesting

Questions should be supported in the reading (and de facto knowledge) of the paper, and should NOT be casual questions of someone that just heard the presentation
Project

Project description (statement) and working rules are in Project Section. Developing the Project you will have to work by yourselves (learn by doing). We will introduce the project objectives and concerns in a theoretical class and, starting from there, you should learn how to organize your project, use MS Project by yourself and choose your own decisions in the “simulated management” of the project. I can and should assume what you think is appropriate. Autonomy of the group is the central topic here. In this topic we will have the contribution of Prof. Luís Correia (MEEC)

On **May 22** you should **deliver the project in a pen**. This is the Project DEADline, no excuses accepted.

The pen must include the report file (1 file only), the Microsoft Project file (1 file only), and the ppt version of your project presentation. The pen should have **your group number and all elements identification**

Project report should be in Portuguese or English, at your choice. If you have Erasmus students in the group you should use English
**Project discussions** will begin on that same day **May 22** using the slots of the theoretical and practical classes. Project discussion sessions begin with a **15 minutes** **PowerPoint presentation** (slides numbered) of the work developed by the group and are followed by a **15 minutes** discussion (these durations are averages and just exemplificative). All the elements of the group should participate actively in the short presentation and discussion. If an element fails this presentation/discussion he or she will be rated ZERO on the Project component. The files you have delivered with the project report, i.e., the MS Project and the presentation will be made available to you in a computer for the discussion.

In your PowerPoint presentation you can speak Portuguese (only if in your group there are Erasmus students you need to speech English). PowerPoint slides should always be in **English. And they should always be numbered**
Some specific dates this semester:

Beginning of theoretical classes – **February 20**
IST Accenture Challenge – **March 6**
Beginning of practical classes – **March 6**
Project presentation (Prof. Luís Correia) – **March 13**
Project Delivering – **May 22**

**Special theoretical classes**
ETHICS (Prof. Ana Roque) – **April 3**
AGILE (Prof. Rui Abrantes) – **April 24**
Project doubts (Prof. Luís Correia) – **April 27**

Project final Discussions **probably** from May 22 – to May 31
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BASIC COURSE CONTENTS

- Introduction and Contextualization (T1-T3)
- Integration, 10 Areas – PMBOK spirit (T4-T5)
- Tools (T6-T7) WBS, PERT
- Methods (T8, T9, T10) - Time Management, Levelling, EVM,
- Decision (T11, T12, T13) – Decision Ban, Decision, Risk
- Communication, knowledge, ethics (T14, T15, T16) – Nonaka, Communication, Ethics
- AGILE
- CCPM
- PMP Test simulation
Project Management Schools

Project management is something that you will carry with you all the time. Projects are everywhere, in personal commitments, organizational endeavours, in industry, in services, in research, in innovation …

We can even locate project management in different schools, like in schools of thought:

• Behavioural
• Decision
• Optimization
• Tools

Whatever!

Our approach is behavioural, not tools, and our main goal is to explore, develop and analyse soft skills in project management
GPE Rules

1. At the theoretical classes students should seat in the **front lines**. You cannot seat in a row if there is another row with places before the one you are trying to seat on.

2. During theoretical classes student **computers should be shut down**. As well as smartphones, PADs, …

3. **No entries after 10 minutes** and **avoid going out in the middle of the session or before session ends**.
Rules …

4. In the Discussion classes/Practical classes one group presents a PPT concerning an international journal paper and two different groups discuss the paper and the presentation. The presenting group competes for the best presentation, and the two discussion groups compete for the best discussion.

Overall along the semester each group presents ONE paper and discuss TWO, so each group should at least study three different papers.

5. In presentations PRESENTATION SLIDES should be in English, but only presentations involving Erasmus students need to be spoken in English. All slides should be numbered.
Rules …

6. GPE has an individual evaluation (Exam) and two group evaluations (Presentations/discussions and Projects) and one bonus situation: class attendance and respective questions and answers given.

7. To be successful in GPE each students need to have a minimum final result of 10, with at least 9.5 in each of the two evaluation components: examination, and project.
What project management is all about

A well defined purpose (commonly understood and agreed), a sense of goal (the same for all involved), an ability to plan, a way to handle with people, respect, a sense of time, respect to budget, a specific culture
With the constant increase of complexity we have been obliged to explore and develop new paradigms:

Descartes Error → Systems thinking

Systems integration

Engineering always has been, but it becomes more and more sociotechnical:

The same with project management:

ANT lens and others
Engineering has to adapt to *ambiguity*

*problem formulation [problem-setting (Schön)]*

*problem solving*

*(question, answer)*

*negotiation*

Engineering is about projects, we have some non-engineering projects, but engineering practice is always about projects