



centro adscrito a:



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

INNOVATION AND ENTREPRENEURSHIP

LEAN AND AGILE PROJECT MANAGEMENT. TEACHING GUIDE

[2022-23]

GENERAL DETAILS

Name of the module:	Lean and Agile Project Management
Academic Year:	2022-23 First quarter
Degree:	MASTER'S PROGRAM IN MANAGEMENT AND LEADERSHIP
Number of credits (ECTS):	
Date of latest revision:	October 2022
Lecturer:	Mr Eva Lopez Doval

1. GENERAL DESCRIPTION

We are seeing the word AGILE change from being used as a 'buzzword' to becoming a 'reality'. The culture of agile development is gradually becoming integrated into both large and small organisations. For the larger organisations, we are seeing a hybrid of Waterfall/Agile (or 'Wagile') being implemented, while in other contexts, we are seeing different work frameworks, such as Scrum, Kanban, etc. In this subject, the student will be introduced to current project management techniques used in high innovation and entrepreneurship environments.

The knowledge shared to address this subject is based on the foundations of the Best Practices set out by the Project Management Institute, which are similar to those in the Agile Manifesto, the Scrum guide, the Principles of Lean and the Lean Kanban University guides.

This subject is extremely important for each and every professional who develops projects in high innovation environments:

- Start-up founders
- Digital Project Managers
- Agents of disruptive change
- Agents of digital transformation in an organisation

2. OBJECTIVES

This subject aims to offer a highly detailed vision of the techniques and tools needed for managing and directing agile projects. For this, participating students will be equipped with the following skills:

- The ability to select and implement the appropriate method according to the specific environment of the project or activity.
- Monitoring and facilitating an agile, lean, predictive or hybrid project.

- Learning techniques for managing change and facilitating agile cultural transformation in complex environments.
- To have a general overview with different focal points for managing projects in a way that is specific to different sectors and industries.

To sum up, students will also be given a detailed overview of the following methodologies:

Agile methodologies

- Understanding agile philosophy and culture
- Implementing and monitoring a Scrum project
- Making decisions in complex environments
- Implementing and monitoring a Kanban system

Hybrid methodologies

- How classic and agile methodologies can work together

3. CONTENT

UNIT 1. Introduction to Project Management

UNIT 2. Predictive vs. Agile Project Management

UNIT 3. Agile Manifesto

UNIT 4. Kanban methodology

UNIT 5. Scrum work framework

UNIT 6. Agile Project Management tools

UNIT 1. Introduction to Project Management

Learning outcome

After studying this chapter and completing the exercises, the student will be able to describe the applications and benefits of Project Management in an organisational environment, as well as how to manage initiatives at a project portfolio level.

Contents

1. What project management is. Expected benefits.
2. Current situation. Why do projects fail?
3. Projects from a strategic point of view: connection with the organisation. Project Portfolio.
4. Introduction to predictive methodologies. Differences between them and agile methodologies.

UNIT 2. Predictive vs. Agile Project Management

Learning outcome

After studying the chapter and completing the exercises, the student will know when to apply an agile Project Management focus and when to apply a predictive one.

Contents

1. Differences, advantages, disadvantages.
2. Where should each work framework be applied?

UNIT 3. Agile Manifesto

Learning outcome

After studying the chapter and completing the exercises, the student will be able to:

- Understand the philosophy and foundations of agility.
- Describe the values and principles of the agile manifesto, in relation to business activities.

Contents

1. Agile principles and how they aim to help us.

UNIT 4. Kanban methodology

Learning outcome

After studying the chapter and completing the exercises, the student will be able to:

- Use Kanban boards as a practical and effective work tool.

- Put together task management boards in different scenarios.

Contents

1. What Kanban boards are, application and practice.

UNIT 5. Scrum work framework

Learning outcome

After studying the chapter and completing the exercises, the student will be able to apply Scrum methodology with their working groups and to effectively manage agile projects.

Contents

1. General overview of the Scrum work framework.
2. Mechanisms, roles, retrospectives and reviews.
3. Poker planning, user stories, user points, definition of 'done'.
4. Scaled Scrum.

UNIT 6. Agile Project Management tools

Learning outcome

After studying the chapter and completing the exercises, the student will be able to master the leading tools in each area of management and apply and configure tools for their own benefit.

Contents

1. Practical work with Scheduling freemium tools, such as ProjectLibre and Openproj.
2. Practical work with Agile Planning and Collaboration freemium tools, such as Asana, and limited versions of Jira, Asana and Trello.

4. TEACHING AND LEARNING METHODOLOGY

Euncet Business School's experiential learning process brings together a combination of methodologies which, in a practical and innovative way, allow students to acquire skills specific to the professional exit profile that is expected for an executive program.

INTERACTIVE CLASSES

The teaching sessions will take place on the basis of continuous interaction between the students and the professors, who will teach with the objective of comparing the relevant concepts through the means of analysis and open debate, with the help of real-world case studies and simulations focused on decision-making.

CASE STUDIES

Solving hypothetical business issues to experiment with using a practical application of the theoretical content of the different subjects.

LEARNING BY PROJECTS

Working in groups to develop and present tasks and projects, by responding to different situations or challenges.

5. ASSESSMENT

The Master's in Management and Leadership is based on a skills evaluation model. The student's progress is assessed on the basis of their accomplishment of various objectives set out throughout the study program, by means of reflection and analysis of case studies and a test.

The final qualification for the module will be calculated mathematically using the marks received in the two proposed assessed activities.

6. BIBLIOGRAPHY

6.1. BASIC BIBLIOGRAPHY

- Anderson, David J.; Carmichael, Andy. *Essential Kanban condensed*. Seattle: Lean-Kanban University, 2016. ISBN 9780984521425. Disponible en: <leankanban.com/guide>.
- Sutherland, Jeff; Schwaber, Ken. *Scrum guide* [en línea]. Disponible en: <scrumguides.org>.

6.2. FURTHER READING

- Womack, James P.; Jones, Daniel T. *Lean Thinking: cómo utilizar el pensamiento Lean para eliminar los despilfarros y crear valor en la empresa*. Madrid: Gestión 2000, 2005. ISBN 8480886897.
- Kniberg, Henrik. *SCRUM y XP desde las trincheras*. InfoQ, 2007. ISBN 9781430322641.
- Burrows, Mike. *Kanban from the inside: understand the Kanban Method, connect it to what you already know, introduce it with impact*. Washington: Blue Hole Press, 2014. ISBN 9780985305192.
- Reinertsen, Donald G. *The principles of product development flow*. California: Celeritas Pub, 2009. ISBN 9781935401001.
- Laloux, Frédéric. *Reinventar las organizaciones: la guía práctica ilustrada del libro que ha revolucionado el management*. Barcelona: Arpa Innovación, 2017. ISBN 9788416601554.
- Adzic, Gojko. *Impact mapping: making a big impact with software products and projects*. Woking: Provoking Thoughts, 2012. ISBN 9780955683640.
<<https://www.impactmapping.org/index.html>>.
- Adkins, Lyssa. *Coaching agile teams: a companion for ScrumMasters, agile coaches, and project managers in transition*. Upper Saddle River: Addison-Wesley, 2010. ISBN 9780321637703.
- Schwaber, Ken. *The enterprise and scrum*. Microsoft Press, 2007. ISBN 9780735623378.
- Appelo, Jurgen, *Management 3.0: leading Agile developers, developing Agile leaders*. Upper Saddle River: Addison-Wesley, 2011. ISBN 9780321712479.
- Pink, Daniel H. *Drive: the surprising truth about what motivates us*. New York: Riverhead Books, 2011. ISBN 9781594484803.