

Introduction to Quality and Innovation



SCHOOL

Polytech Graduate School of Engineering



CAMPUS

Belle-Beille



LEVEL

3rd year Bachelor's degree



OPEN TO EXCHANGE STUDENTS

Yes



SEMESTER

Spring (S2)

- > **Degree course:** Graduate School of Engineering - Automation and Computer Engineering
- > **Teaching unit:** UE 6.2 Sciences de l'ingénieur
- > **Course language:** English
- > **Duration (hours):** 24
- > **ECTS:** 1
- > **Teacher(s):** Anthony Delamarre

> Assessment:

- Continuous assessment
- Final exam

> Teaching methods:

- | | | |
|---|----------|-------------------------------------|
| <input type="checkbox"/> Lecture course | hours | <input type="checkbox"/> Case study |
| <input checked="" type="checkbox"/> Tutorial course | 24 hours | <input type="checkbox"/> Project |
| <input type="checkbox"/> Practical work | hours | |

COURSE DESCRIPTION

The course is divided in 2 parts : 12 hours of tutorial classes describing the innovation process and 4 hours of lecture courses + 8 hours of practical work describing the Quality approach.

The calendar of the innovation process is divided in courses of 1:20 hours as such:

- 3 courses of introduction of innovation : - Definitions , - Risk of innovation : the degree, the nature et intensity of innovation ,
- Panorama of innovation approaches : from project to open innovation - The innovation organisation : from start-up to innovation cell - Managing innovation portfolio.

6 courses of working group on designing a product by a innovation process

First course : thématic choice and brainstorming

Second course : organise your ideas with the mindmapping

Third course : Formalise your ideas with idea sheet and review them

Fourth course : Evaluate your ideas with the radar method

Fifth course : Build you prototype or model (CAD, photomontage)

Sixth course : Build your marketing speech to sell your idea - - The quality programme is as follows:

- Presentation of the World of Quality
- 8 principles of quality management
- Main Standards
- Approach Process and Quality

OBJECTIVES

To teach the innovation process and the quality approach to give a global view of these processes to the students. to allow students to understand the position of the methodological courses in a global process.

PREREQUISITES

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SELECTIVE BIBLIOGRAPHY

- Boly Vincent, Camargo Mauricio, Morel Laure, ingénierie de l'innovation, Hermès science publications-Lavoisier, 2016, 288p. -
- Cap Gemini, l'innovation, dernier des processus sauvages, Edition cap gemini, 2013 -
 - Corsi Patrick, Neau Erwann, les dynamiques de l'innovation, Hermès science publications-Lavoisier, 2011, 231p. -
 - Delamarre Anthony, Contribution de la conception d'un produit concept à l'organisation des phases préliminaires du processus de conception : Application dans la société Rossignol S.A. dans le cadre de la mise en place d'une cellule d'innovation, Thèse de doctorat soutenue le 11 décembre 2006 -
 - ISO 9001, ISO 10018, ISO 10006 ISO 14001, ISO 9100, ISO 18001, ISO 5725 -