

SHAKE THE FUTURE.



ENGINEERING PROGRAMME

SPECIALISATION

PRODUCT ENGINEERING
SPRING SEMESTER

COSTING, PURCHASING AND PRICING

PRODUCT ENGINEERING, ENGINEERING PROGRAMME SPECIALISATION
SPRING SEMESTER

Professor: Catherine DA CUNHA

Objectives

Understand the economic dimension of value chains.

Course contents

- Purchasing
- Costing
- Pricing
- Negotiating

Course material

Keywords

Links with other programmes

LANGUAGE	ECTS CREDITS	LECTURES	TUTORIALS	LABO	PROJECT
French	3	8 hrs	18 hrs	4 hrs	0 hrs

PROJECT 2

PRODUCT ENGINEERING, ENGINEERING PROGRAMME SPECIALISATION
SPRING SEMESTER

Professor: Matthieu RAUCH

Objectives

Product development project in a real-life situation with a professional customer.

The objective of this project is to apply the concepts studied throughout the courses to an industrial environment and to develop practicality as well as an ability to work in teams.

Course contents

Students are divided into groups either to lead an independent project, or to work competitively on the same project.

Course material

Keywords

Teamwork, Industrial project, Professional development, Product development

Links with other programmes

All the courses of the Product Engineering specialisation.

LANGUAGE	ECTS CREDITS	LECTURES	TUTORIALS	LABO	PROJECT
French	2	0 hrs	0 hrs	0 hrs	48 hrs

INDUSTRIAL DESIGN

PRODUCT ENGINEERING, ENGINEERING PROGRAMME SPECIALISATION
SPRING SEMESTER

Professor: Jean-François PETIOT

Objectives

To discover the three main values that drive industrial product development: technical values, usage values, communication values.

To learn tools and methods to control connotative aspects of products

To acquire the necessary skills to understand the remit of an industrial designer, his/her added value in a design project, and organize his/her activities in a design project team.

Course contents

Lectures:

Semiology - design theory

Gestalt theory, semiotics, mood boards, constraints and creativity

Conjoint analysis for product design.

Communication via graphic design

Tutorials:

Design exercises - communication on trends by product

Conjoint analysis tutorial

Group design project

Course material

Danielle QUARANTE. Eléments de design industriel. 3ième Edition. Polytechnica. 2001.

EGER A., BONNEMA M., LUTTERS E., VAN DER VOORT M. Product Design. Eleven International Publishing, 2013.

Keywords

Semiology. Product semantics. Style. Form theory. Mood boards. User centered design.

Links with other programmes

Product Design. Customer satisfaction and quality management

LANGUAGE	ECTS CREDITS	LECTURES	TUTORIALS	LABO	PROJECT
French	3	10 hrs	22 hrs	0 hrs	0 hrs

RAPID MANUFACTURING

PRODUCT ENGINEERING, ENGINEERING PROGRAMME SPECIALISATION
SPRING SEMESTER

Professor: Jean-Yves HASCOËT

Objectives

The objective of this course is to propose the methods and tools to be implemented within the framework of Computer Aided Manufacturing with Numerical Control Machine-Tools

Course contents

1. Evaluate the industrial situation of Rapid Manufacturing
2. Define the setup of Rapid Manufacturing in a CadCam Context: High Speed Machining, Incremental Sheet Forming
3. Tutorial.

From a designer specification we will set up High Speed Machining: Reception of the design specifications, Setup of the reverse engineering, Generation of the multi axe trajectories, High Speed Machining on Parallel Kinematic Machine, Comparison with an ISF process, Additive Manufacturing

Course material

Machine à Commande Numérique, B. Méry, Hermès
CadCam Theory and Practice, I. Zeid, Mc Graw-Hill
Surface Modeling for CadCam, BK. Choi, Elsevier
Fundamentals of Computer Integrated Manufacturing, A.L. Foston, C.L. Smith, T. Au, Prentice Hall
La CFAO- Concevoir et produire autrement, F. Piquet, JP Poitou, JC Tasse – Nathan
NC Machine Programming and Software Design, C.H. Chang, M.A. Melkanoff, Prentice Hall
Lecture and tutorial notes.

Keywords

CAM, Kinematic, Control, Motion, Paths, Multiaxis, Simulation, Machine-Tool, Parameters

Links with other programmes

Manufacturing, CAD/CAM

LANGUAGE	ECTS CREDITS	LECTURES	TUTORIALS	LABO	PROJECT
French	3	8 hrs	0 hrs	24 hrs	0 hrs

MARKETING

PRODUCT ENGINEERING, ENGINEERING PROGRAMME SPECIALISATION
SPRING SEMESTER

Professor: tba

Objectives

t.b.a

Course contents

t.b.a

Course material

t.b.a

Keywords

t.b.a

Links with other programmes

LANGUAGE	ECTS CREDITS	LECTURES	TUTORIALS	LABO	PROJECT
French	3	t.b.a	t.b.a	t.b.a	t.b.a