

# PROJET COLLABORATIF TUTEURÉ

## *INTRODUCTION AND ORGANIZATION*

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MASTER 2 ICE, 2017-2018

Available at <https://combemale.github.io/teaching/m2ice/>

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U.E. 1003 P - **code MIOA113V** - **5 ECTS – 50h**  
 Libellé : « Projet Collaboratif Tuteuré (S10) » (PCT)

Coordinateur pédagogique	B. Combemale				
Modules prérequis	CPOA, GL, EC, IPC, PDC, MP1				
Modules liés					
Compétences visées	<ul style="list-style-type: none"><li>Maîtriser la mise en œuvre d'un projet de développement collaboratif, agile et open source</li><li>Gestion du projet, de l'équipe et de la collaboration avec le <i>product owner</i></li><li>Mise en place et utilisatoin d'un environnement de développement industriel</li></ul>				
Contenu	Heures	Cours	TD/TP	Modalités de contrôle des connaissances	Intervenants
<u>Prérequis</u> : Maîtriser les différentes méthodes de gestion de projet.					
Projet collaboratif tuteuré, monté en partenariat avec des entreprises	<b>50</b>				
PCT a – Introduction et définition des projets (P2)	14			1 note de réalisation technique attribué par le product owner. (coef. 0,5)	B. Combemale (46h eq.TD), S. Motet (15h eq.TD) et F. Pugeault (18h eq.TD)  <i>Product owners: industriels</i>
Qualité (S. Motet)	4	4			
Communication/Valorisation (F. Pugeault)	2	2			
Présentation / démarrage des projets (B. Combemale et industriels)	8	8			
PCT b – Réalisation (P3)	18			+	
Qualité (S. Motet)	2	2			
Projet (B. Combemale et industriels)	16		16	1 note de présentation du projet attribuée par le jury (coef. 0,5)	
PCT c – Réalisation et évaluation (P4)	18				
Communication/Valorisation (F. Pugeault)	2	2			
Projet (B. Combemale et industriels) et entretien ind. (F. Pugeault)	12		12		
Evaluation des projets (B. Combemale, S. Motet, F. Pugeault et industriels)	4	4			
Remarques :	<ul style="list-style-type: none"><li>RAS</li></ul>				

# Objectives

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## ▶ Technical skills

- ▶ Development, with state-of-the-art design and architectural choices
- ▶ Modern application domains and frameworks,
- ▶ Set up an industrial and collaborative development environment
- ▶ Application of agile principles
- ▶ Application of modern and industrial principles for releasing the solution
- ▶ Software quality management

## ▶ Soft skills

- ▶ Project-team organization and management
- ▶ Communication and valorization
- ▶ Evolve in an international context, including the use of English for communication materials, project management and project implementation (specification, code, etc.).

# General organization

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- ▶ Lectures (scheduled) about communication and quality
- ▶ Workgroup sessions for project implementation
  - ▶ Technical support
  - ▶ *Unscheduled lectures (opportunistic mode) on emerging topics*
- ▶ Project meetups with project owners
- ▶ Final presentation
  
- ▶ Project team:
  - ▶ Composed of 4-5 complementary members
  - ▶ Assigned to a unique project (fill-in: <http://goo.gl/XjQqSe>)
  - ▶ Driven by a personal product owner from industry
  
- ▶ Stakeholders:
  - ▶ Product owners: project definition and monitoring (introduction, project meetup, and final presentation)
  - ▶ Team members: M2ICE students (all timeslots)
  - ▶ Technical support / opportunistic lectures: Benoit Combemale (all timeslots)
  - ▶ Communication: F. Pugeault (scheduled lectures, and final presentation)
  - ▶ Quality: S. Motet (scheduled lectures, and final presentation)

# Timeline

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## ► W47, 2017 (P2: *flight plan*):

- course introduction: Nov. 23rd, 14h-16h
- project presentations: Nov. 24th, 10h30-12h00
- definition of the teams and **project kickoff** (definition of the scope, user stories, KPIs, etc.): Nov. 24th, 13h-16h (*up to 17h30*)

## ► W2-3-4, 2018 (P3: *take-off*):

- **Sprint #1** (W2-3, 8h +4): training, set up of the development/project infrastructures, main design choices, backlog definition, draft prototype
  - *project meetup tentative date: Friday, January 19th, 2018, 16-18h*
- **Sprint #2** (W4 8h +5): first running prototype, all main scenarios should have the nominal functional chains
  - *project meetup tentative date: Friday, January 26h, 2018, 16-18h*

## ► W10-12, 2018 (P4: *landing*):

- **Sprint #3** (W10, 6h +5): intermediate delivery, including customer release (as defined with the product owner)
  - *project meetup tentative date : Monday, March 12<sup>th</sup>, 2018, 16-18h*
- **Sprint #4** (W11, 6h +5): final delivery, including customer release (as defined with the product owner)
  - *project meetup tentative date: Friday, March 16<sup>th</sup>, 2018, 16-18h*
- **Final presentation and awards** (W12, 4h +4): 30min per project, including presentation, demo and Q&A
  - *tentative date: Friday, March 23<sup>rd</sup>, 2018, 14–18h*
    - *14-17h: project presentations*
    - *17-18h: deliberation, awards and debrief with students.*

- ✓ Project meetup = debrief of the completed sprint, backlog grooming, task board definition for next sprint.
- ✓ Intermediate project meetup = debriefing.

**Great team force, but  
tight schedule . . .**

**Optimize your  
teamwork!**







GOAL

COACHING



TRAINING

TEAM

BUILDING



COLLABORATION



SOLUTION



100 %

MOTIVATION

# Guidelines

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- ▶ Set up a shared **development environment**, incl.:
  - ▶ IDE (design and implementation), and the underlying technological stack (e.g., exec. platform, middleware...)
  - ▶ Shared code repository (Github) + collab. tools (issues, trackers, tasks, release...)
  - ▶ Complete CI (build, test, deployment, documentation)
- ▶ Provide a project **management platform**, incl.:
  - ▶ User stories
  - ▶ Task board
  - ▶ Planning and tasks management
- ▶ Set up the appropriate **communication channels** for your development team, and the relation with the product owner (mailing list, slack, ...)
- ▶ All **developments** must include:
  - ▶ Design: functional, structural, behavioral and implementation modeling
  - ▶ Implementation: source code and project descriptors
  - ▶ Test: unit, integration and system tests
  - ▶ Documentation (user/developer)
- ▶ Use English, provide polished documents, clean source code, etc.
- ▶ Be formal, professional, pro-active, pragmatic, solution-driven, and keep going!



# Evaluation

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## ► Technical delivery (coef. 0.5)

*Explicit KPIs must be defined during kickoff in collaboration with the product owner*

- Attributed by the product owner
- Evaluation criteria:
  - Overall relationship between the project team and the product owner
  - Quality of the final delivered solution
    - !?** Product owners may require specific outcomes in addition to the code, such as an annotated screencast of a demonstration, a written tutorial of the solution, etc.
  - Documentation, test

## ► Overall project implementation (coef. 0.5)

- Attributed by the jury of the final presentation, composed of B. Combemale, S. Motet, F. Pugeault, and the product owner
- Evaluation criteria:
  - Project management: set up, implementation, delivery
  - Development environment: right tools for right tasks
  - Conformity to the project guidelines
  - Overall quality of the developments
  - Overall quality of the presentation of the project, and description of the solution
    - Includes the individual interview (F. Pugeault)

# Projects: topics

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## 1. Internet of Things (IoT): AGILE gateway

- ▶ Product owner: Philippe Krief

## 2. Robotique: Polarsys Rover

- ▶ Product owner: Gaël Blondelle



## 3. GraphQL Support for EMF Models (Web)

- ▶ Product owner: Fabien Coulon

## 4. Data Visualization for EMF Models (Web)

- ▶ Product owner: Fabien Coulon

**Enjoy, and keep going!**

*be pro-active with your product owner,  
and make it Your project!*



**KEEP  
CALM  
AND  
CARRY  
ON**