« Remote Project »
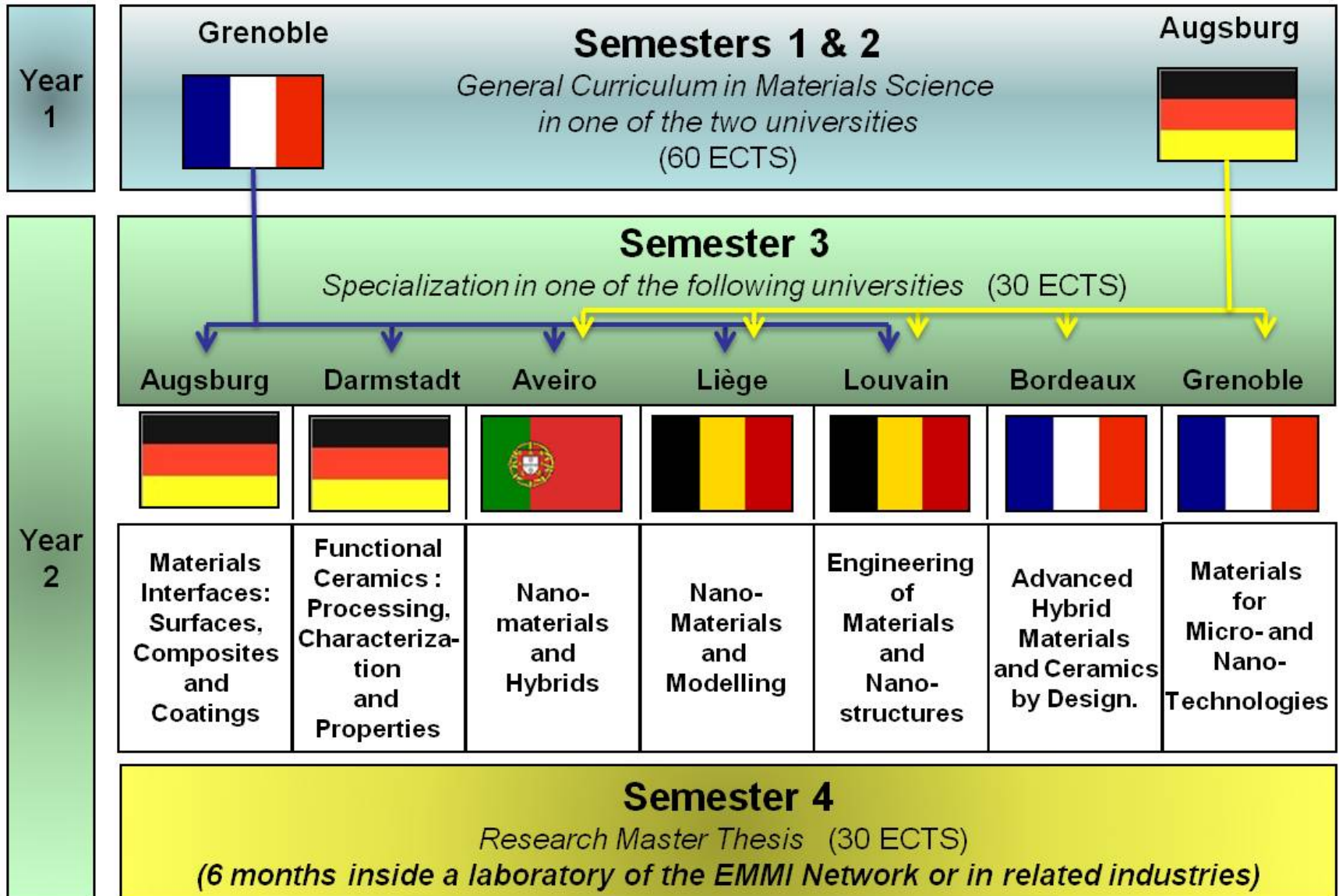Enseignement en groupe, sur projet, à distance, blended mobility
Master Erasmus Mundus FAME+
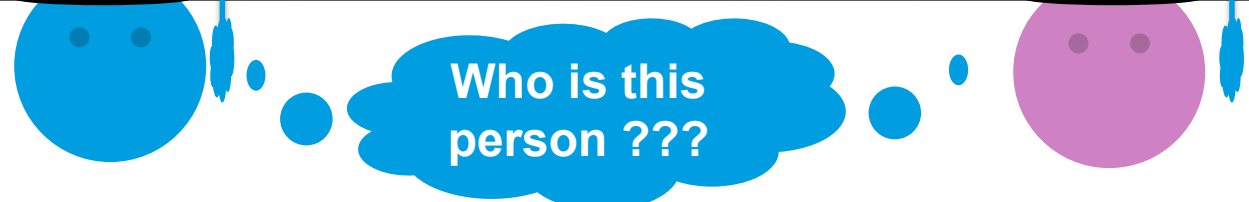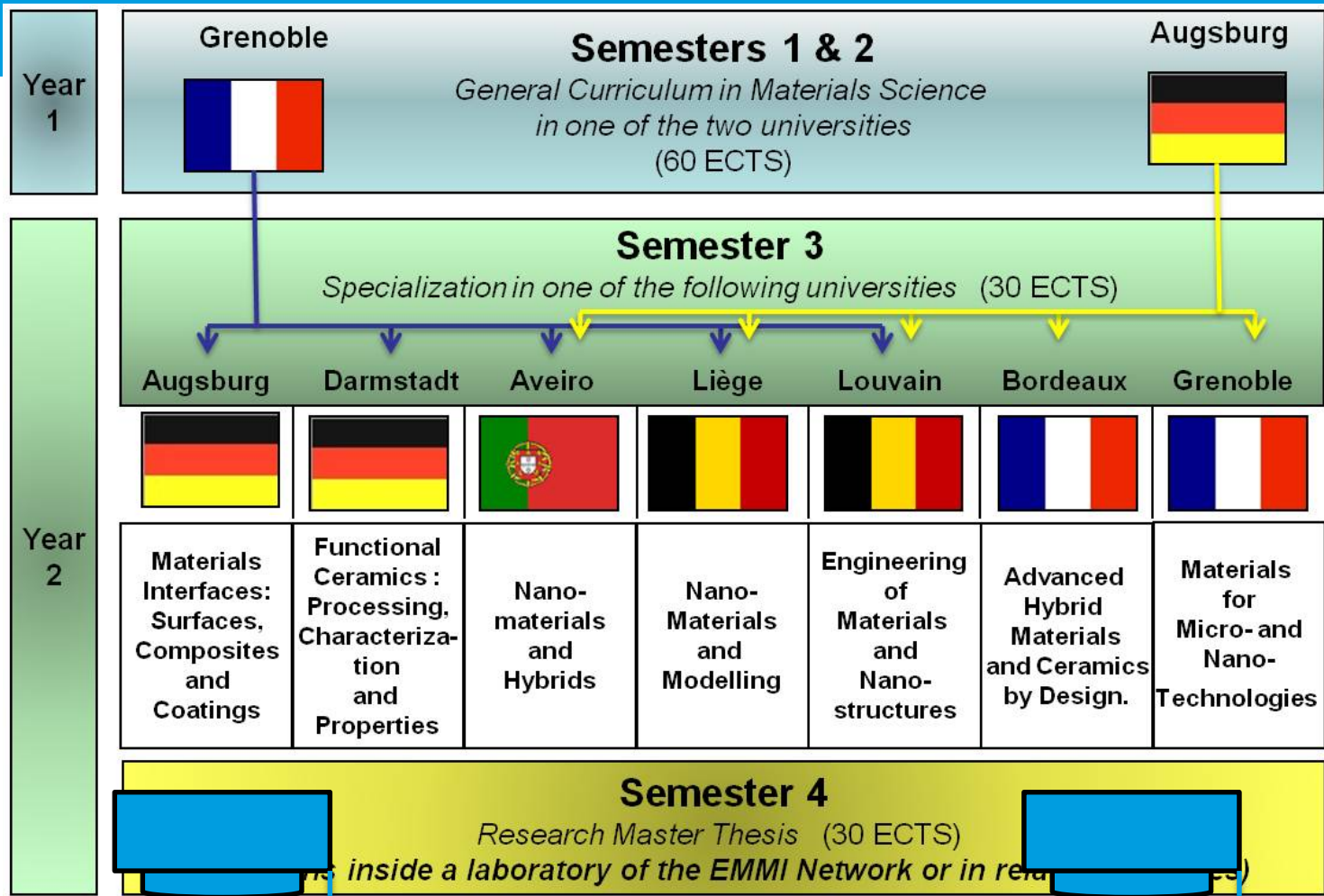**Master EIT-AMIS**

Michaël Josse

université de **BORDEAUX**

	Grenoble	Semesters 1 & 2 *General Curriculum in Materials Science in one of the two universities* (60 ECTS)					Augsburg

Year 1

Semester 3
Specialization in one of the following universities (30 ECTS)

Year 2

Augsburg	Darmstadt	Aveiro	Liège	Louvain	Bordeaux	Grenoble
Materials Interfaces: Surfaces, Composites and Coatings	Functional Ceramics : Processing, Characterization and Properties	Nano-materials and Hybrids	Nano-Materials and Modelling	Engineering of Materials and Nano-structures	Advanced Hybrid Materials and Ceramics by Design.	Materials for Micro- and Nano-Technologies

Semester 4
Research Master Thesis (30 ECTS)
(6 months inside a laboratory of the EMMI Network or in related industries)

Master Erasmus Mundus FAME 2007-2012

Certains étudiants ne se croiseront jamais au cours des deux ans !

Remote Project

Aim:

(i)   Provide you some experience of **project management** in **distant teams**,
(ii) Use **collaborative creation tools** (in the present case a **wiki** to setup a rudimentary website), and
(iii) Write scientific reports for a *general* scientific audience.

How:

• By the use of advanced materials for a given functional application, which is analyzed by small groups of students, spread over the two M1 Partners.

• Via **four assignments**, you will progressively build a **wiki website** which presents to a general scientific **non-specialized audience** the results of their investigation (why, how).

• The students are **supervised remotely** by a teacher/Tutor belonging to one of the partner Universities (Augsburg, Darmstadt, Liège, Louvain, Aveiro, Bordeaux and Grenoble).

Prof. A. Jonas, UCL, Belgique

2012

design of coatings for window glass panes to decrease

infrared heating of building and spare energy

2013

design of thin film structures for junction-based solar cells and improved

energy efficiency

2014

critical appraisal of possibilities and limits of crystal chemistry

2015

use of computer simulations and supercomputing clusters to predict the

emission properties of optically-active materials for more efficient light-emitting

devices

2016 coatings for window

2017 *Solar Cells*

Remote Project

Course Content:

The project is made of 4 modules of 10 hours work.
Each module runs over ~one month.

1. A module starts by an assignment on this website,

2. Followed by two weeks of group and personal work, ended by a mid-term skype discussion of a few minutes with the tutor,

3. Followed by two further weeks of work,

4. Ending by the creation/completion of the wiki website designed for a general audience.

5. The resulting wiki website is discussed in a short skype interview with the tutor, before the next assignment is given.

You are allowed to improve your previous wiki pages at any time, even after the end of a module, based on the comments provided by the tutor.

Remote Project

Support :

Via la plateforme Moodle / Outil Wiki

- The **first module** of the project will be available in the 'Document' section

- A **set of documents** will be made available to help you start the project.

- **Inquiries** regarding the **use of this site** are to be directed to Prof. X.

- **Inquiries about the project** itself are to be directed to the **tutor** of the group.

Evaluation :

The **evaluation is done by the tutor**, based on the: **interviews, quality of the work and wiki website**.

Part of the note will reflect the **ability of the students to organize**;
(for instance, systematic delays in completing the assignments, non-attendance to skype discussions, lack of respect of the requirements will result in a negative note for this part of the evaluation)

The new version differs significantly from the previous one, by:

2. adding an ambitious project of 10 credits for the acquisition of technical and softer skills, and for developing student awareness to societal and industrial issues,

6. increasing blended mobility by mixing online and physical meetings,

running over a complete year, **groups of 3 to 4 students (Grenoble and Darmstadt**)

"learning by doing", integrating higher skills and goals, advanced scientific and

technical content.

beyond previous expertise, double the volume of credits, and adding :

1. **blended mobility**;

2. **awareness to market relevance, industrial needs and societal concerns**;

3. **communication skills** (including modern tools);

4. **personal and inter-personal skills**.

creating a sense of community

first module, students acquainted with **basic communication and reporting tools**, **work in distant groups**, **remotely interacting with tutors** in other countries.

second module, **group work on the topic** of the project, substantial amount of simulations/computations/readings.

third module is based on **personal work**, aiming at digging deeper into a specific question. Students will be allowed to select freely this specific question.

FAMEfest

one-week physical meeting
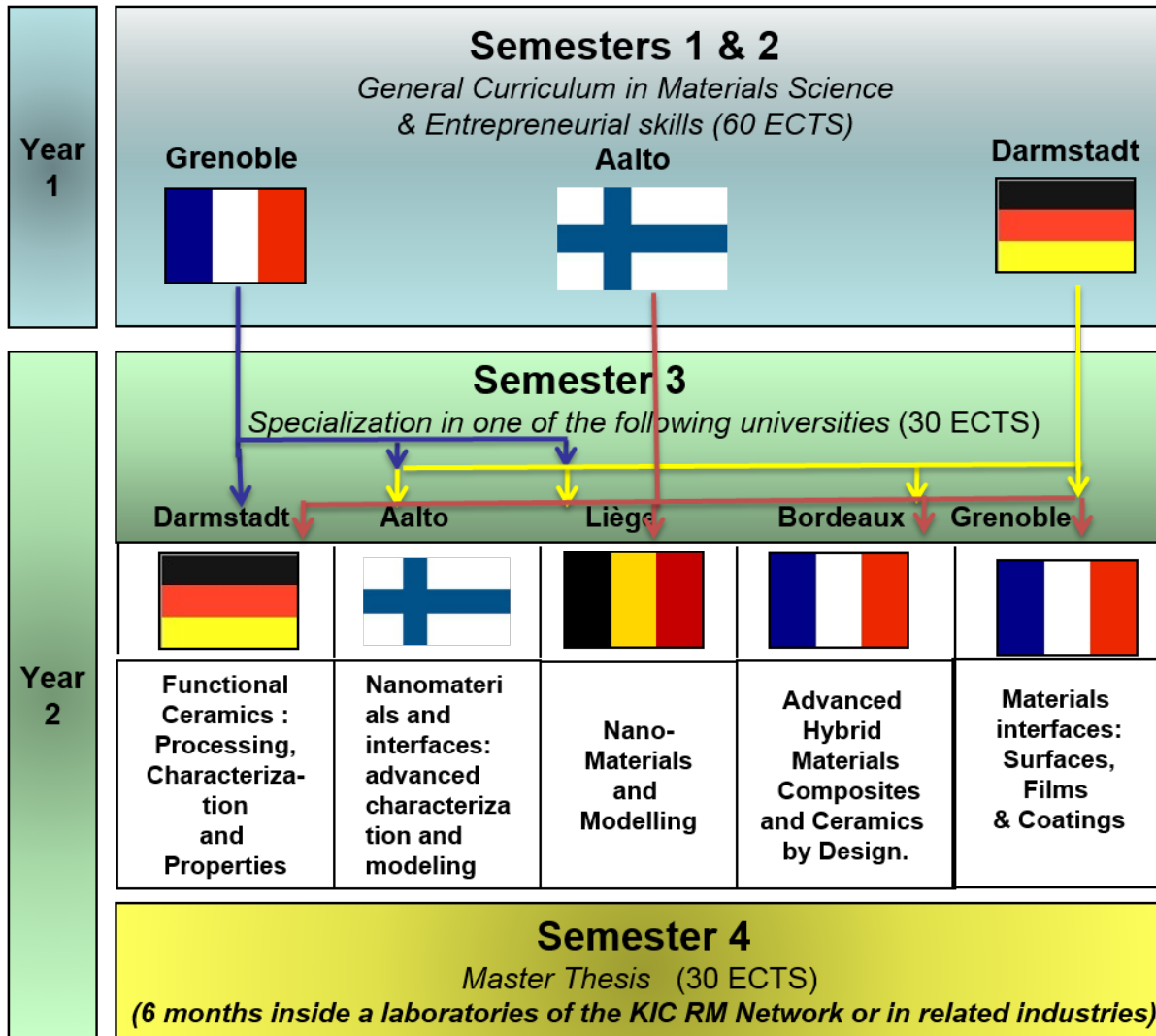
Several full days of work

creating a sense of community

1. *Design of a reporting website*.
2. *Mid-term presentation of the work*
3. *Production of a 5 min. promotional video*

FAME Summer School

4. *Final remote presentation of the work*. (vs M2 students)

➔ Onto implementation into another labelled European Master

EIT-AMIS Curriculum and Mobility chart

Semesters 1 & 2
General Curriculum in Materials Science & Entrepreneurial skills (60 ECTS)

Year 1

Grenoble · Aalto · Darmstadt

Semester 3
Specialization in one of the following universities (30 ECTS)

Year 2

Darmstadt	Aalto	Liège	Bordeaux	Grenoble
Functional Ceramics : Processing, Characterization and Properties	Nanomaterials and interfaces: advanced characterization and modeling	Nano-Materials and Modelling	Advanced Hybrid Materials Composites and Ceramics by Design.	Materials interfaces: Surfaces, Films & Coatings

Semester 4
Master Thesis (30 ECTS)
(6 months inside a laboratories of the KIC RM Network or in related industries)

EIT- Overarching LOS

Innovative learning :
Inno- project
Inno-Mission / Internship
Innovation module : management, entrepreneurship

eit RawMaterials

E-seminars
Summer camp
Innovation project
with academic, industrial
and business school partners

EIT-AMIS INNO Projects I & II

INNO-project I

Identical to FAME Remote Project 2012-2018 (group work, distant work, project-based learning, learning by doing). Learning outcomes are essentially soft skills (no disciplinary knowledge evaluated, some gained anyway). **Ends with "Innovation" proposal** on the topic selected from the project

INNO project II

Currently under construction, principle is to **build a business model from "Innovation" proposals** stemming from INNO-project I. Groups will be formed on a local basis (IP and business opportunities are managed on a national basis).

Remote Project « To do list »

➢ Create IDNUM for students and tutors (yearly, UF Chimie)

➢ Assign students and tutors to groups (yearly)

➢ Create a dedicated Moodle course for each project (yearly, MAPI)

➢ Register students and tutors to the course (yearly)

➢ Create the groups in Moodle (yearly)

➢ Schedule the project (modules & co) (yearly)

➢ Communicate to students and tutors (monthly)

➢ Update files and infos in Moodle (monthly)

➢ Answer students/tutors questions/requests about IDNUMS (continuous, UF Chimie)

➢ Answer students/tutors questions and requests about Moodle (continuous, MAPI)

➢ Answer students/tutors questions and requests about the project (continuous)

➢ Solve problems and/or request help when needed (continuous, UF Chimie, MAPI)

➢ Extract data and content for evaluation purpose (yearly)

➢ Save the project globally (yearly, MAPI)

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