TUTORED RESEARCH & DEVELOPMENT PROJECT I

1. SYLLABUS INFORMATION

1.1. Course title
Tutored Research & Development Project I

1.2. University
Universidad Autónoma de Madrid

1.3. Semester
First year, second semester

2. COURSE DETAILS

2.1. Course nature
Compulsory

2.2. ECTS Credit allotment
4

2.3. Recommendations
Oral and writing skills course: From the experience of previous courses, it is convenient to present all students basic notions related to the evaluation aspects of the TRDP work, focusing on oral presentations and writing skills. This course will be scheduled during the first four weeks of the second semester.

2.4. Faculty data

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3. COMPETENCES AND LEARNING OUTCOMES

3.1. Course objectives

This course is directly linked with Tutored R&D Project II, which is scheduled for the third semester. Both subjects, TRDP1 and TRDP2, were conceived as a tool to promote advanced research skills and joint teaching into the IPCV Program. Students will therefore have to propose a solution to a problem, while studying the literature available from the different scientific communities. One of the goals of this common course is to maintain continuity across semesters. Students will be able to carry

out an extended effort tackling the same problem from three different but complementary perspectives.

3.2. Course contents

Students will select a topic and then they will be guided by the academic tutor to go defining the problem and finding the resources to solve it. Contents will therefore depend on the selected topic. The process for topic selection is as follows.

The IPCV Academic Committee maintains a hierarchical classification of the IPCV thematic areas and subareas addressed throughout the 2-year Program along with the teaching staff related to each area. This IPCV Areas Catalogue, which is a dynamic document, is the framework to organize the TRDP1 and TRDP2 subjects, the Master Thesis and the Guest Scholars.

IPCV Areas Catalogue and proposal formulation:
At the beginning of the first semester (carried out at PPCU), a set of broad areas will be defined. Each one of these areas will be assigned to a member of the teaching team at each university, i.e. three teachers for each area, one from each University.

During the first semester, students are asked to organize themselves in couples and define a proposal framed at one of these areas. During the proposal formulation stage, students are encouraged to ask for support and ideas from the teaching teams. The teaching teams can also define proposals for students unwilling or unable to define one.

Before submission, students are required to present this proposal to the assigned area tutors from the teaching team at PPCU, UBx and UAM. The supervisors may propose modifications to the proposal or may reject it if the area is already saturated. Feedback on the accepted proposals will be given timely to the students to ensure an evenly distribution on the defined areas. This process iterates until a proposal for each student team is accepted.

Work definition:
Once the proposal is accepted, with the topic and supervisors assigned, each TRDP team (the students and the three tutors), will jointly design a working program for the first semester, i.e., for the TRDP1 subject.
This program, which should follow a corresponding form available to the students, should be uploaded to the IPCV Academic Moodle by the end of the first semester. The working program should identify: the resources (papers, data-sets, available software) that the students will use to analyze, study and evaluate the status of the proposed problem; a follow-up meetings schedule with the supervisors; intermediate milestones, which at least should include an advance delivery of the TRDP Report (see below) so that the supervisors can suggest improvements.

3.3. Course bibliography

To be defined by proponent and supervisors according to the project.

4. TEACHING-AND-LEARNING METHODOLOGIES AND STUDENT WORKLOAD

4.1. Contact hours

To be agreed with team's members.
Weekly meetings with the proponent/supervisors.
Monthly online presentations with the rest of the team.

4.2. List of training activities

To be defined by the team.

5. EVALUATION PROCEDURES AND WEIGHT OF COMPONENTS IN THE FINAL GRADE

5.1. Regular assessment

Outcomes
As the TRDP is developed during the TRDP1 and TRDP2 courses, both courses need to be independently evaluated; hence, students are expected to generate outcomes by the end of each course. The work and achievements carried out during each course should be described in a report (TRDP1 Report and TRDP2 Report). The report will follow a scientific paper template which will be provided by the local TRDP Coordinator. Additionally, by the end of each course, a TRDP Workshop will be held and oral presentations of the report should be done by all the student teams.

Results -the TRDP Report:
The results of the TRDP1 subject will be compactly described by each couple of students in the TRDP1 Report, which should be uploaded by them to the Academic Moodle, following the corresponding format guidelines, by the end of the exams period (i.e., by the end of May) .

Results -the TRDP Oral presentation:
The results of the TRDP1 subject will be presented in an open oral session at the exams period (i.e., by the end of May). Both students in the team are required to jointly present their work and answer questions from the evaluation panel (in which at least the local TRDP coordinator should be present) and the rest of the students.

5.2. List of evaluation activities

Evaluation:
Evaluation of the TRDP1 course will be the result of three different aspects: the local supervisor's evaluation of the students' progress (around 40%), according to their implication in the follow-up meetings, their initiative, their ability to confront the project, etc.; the evaluation of the TRDP1 Report (around 30%) by the TRDP Coordinator at PPCU , according to its content, to the degree of success respect to the initial objectives, and to the complexity and extension of the work; and the evaluation of the TRDP1 oral presentation (around 30%), which will be carried out by the local TRDP Coordinator.

Evaluation of the student's progress (40%) Oral presentation (30%) Final report (30%)

5.2.1 Resit

The couples that fail the course in the ordinary evaluation period will have another chance of submitting their reports and presenting their proposal by the end of the resitting exam period (i.e., by the end of June). The same evaluation criteria previously stated apply for this retaken evaluation.

6 Proposed workplan

August-December: Team construction and Topic assignation.
January-May: Weekly team meetings and monthly oral presentations.
May/June: Final report and oral presentation.
June/July: Resitting exam (Final report and oral presentation)