

**Course code: CSC7437**      **Global Laboratory for Industry-Driven Software Development**

<b>Period:</b>	<b>ECTS: 06</b>	<b>Language: English</b>
<b>Organization:</b> Face to face: 36 hours Homework: 72 hours		<b>Total load: 108 hours</b>

### **Objectives:**

The emphasis is on development of a *prototype* system in which *software* has a significant role. The software must be developed following a ***continuous integration*** approach based on *agile* development methods. The *teams* (made up of international students) will be expected to deliver working software (to a real client) in a sequence of weekly sprints.

### **Prerequisites:**

Each team member must be able to program competently in a high-level programming language. They must also know the fundamentals of software engineering, including all aspects of the software life-cycle.

### **Lecturers:**

**Dr J Paul Gibson**

### **Program:**

This module proposal is part of the European project HUBLINKED (<http://www.hublinked.eu>). **Global Labs** are online modules where teams of international students work on software development/other prototypes, which are specified by industry or community partners, with the aim of 'turning real-world ideas into experience-appropriate prototypes'. Student teams are mentored by both academic and industry staff.

This is not an industrial placement – the students continue to work in the academic environment.

The project will be developed over a time period of 12 weeks. Each team is expected to plan/schedule the work on a weekly basis. Every week the team must deliver a progress report, and an updated plan for the weeks ahead. The team must hold a meeting between team members at least twice a week; and a meeting with the academic advisor and/or industrial supervisor at least once a week.

## **The learning laboratories**

Every week, the students will be expected to complete an on-line lab. explaining a useful technique/tool specific to the module in question. These can be completed individually and/or in teams.

### **References:**

<http://agilemethodology.org>

<https://www.martinfowler.com/books/duvall.html>

<https://www.thoughtworks.com/continuous-integration>

<https://theagileadmin.com/what-is-devops/>

### **Evaluation:**

The following **learning objectives** will form the basis of the evaluation –

- 1) Team work in a global context (using appropriate planning, communication and management tools)
- 2) Use of an industrial-strength version control system
- 3) Use of an industrial-strength continuous integration platform-service for agile development
- 4) Quality-assurance on delivered work
- 5) Interaction with an industrial client

The final mark will be calculated from:

- Continual delivery of work (50%)
- Engineering log journal (20%)
- Participation in global learning lab.s (20%)
- Presentation/Soutenance (10%)

**Coordinator:**        ***J Paul Gibson***

**Email:** paul.gibson@telecom-sudparis.eu