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

<table>
<thead>
<tr>
<th>Period:</th>
<th>ECTS: 06</th>
<th>Language: English</th>
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<td>Organization: Face to face: 36 hours</td>
<td>Homework: 72 hours</td>
<td>Total load: 108 hours</td>
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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 labs (20%)
- Presentation/Soutenance (10%)

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