1.1 **CS7034: Augmented Reality**

**Aims:**
- To provide students with a solid background in alternative 3D compositing techniques using computer vision with applications in interactive interfaces – most notably augmented reality interfaces on mobile devices.
- Provide students with a comprehensive knowledge in 3D vision
- Develop skills in the design and development of interactive augmented reality games

**Prerequisites:**
Students must have successfully completed a course in computer vision and a course in computer graphics e.g. CS7008 and CS7033 or equivalent.

**ECTS:**
5 ECTS

**Teaching Semester:**
2\textsuperscript{nd} Semester

**Module Coordinator:**
Dr. Mukta Prasad

**Delivery:**
2 Lectures and 1 Tutorial per week

**Learning Outcomes:**
*When students have successfully completed this module they should be able to:*
- Develop interactive augmented reality applications for both PC based mobile devices using a variety of novel input devices
- Demonstrate a knowledge of the research literature in Augmented Reality for both compositing and interactive applications

**Syllabus:**
Specific themes addressed within the module include:
- 3D Vision.
- Approaches to Augmented Reality
- Alternative Interface Paradigms
- Spatial AR
- Lighting and Illumination Issues in AR

**Assessment:**
This module is assessed 100% on the basis of course work. Assessments will include:
- 2 individual programming assignments in AR
- A presentation and 1500 word research paper on AR

**Website:**
http://www.cs.tcd.ie/Gerard.Lacey/Gerard_Lacey_Homepage/AR_Course.html