Module Code  ST3001

Module Name  ST3001 SOFTWARE APPLICATIONS III

ECTS  10

weighting

Semester/term  Semester 1 and Semester 2
taught

Contact Hours  2 hours per week

Module Personnel  Lecturer - Assistant Professor Aideen Keaney

Learning Aims  This module will give students experience in client server database technologies. This module will be based on various databases such as MySQL, MongoDB and Microsoft Access. The module will introduce students to writing database queries using SQL and NoSQL. HTML and PHP will be used to develop user front ends to these databases. The module will also introduce students to building dashboards with Excel Power BI and other tools. This module is a computer laboratory based module. Students are given notes that encourage self paced learning. Interaction with the module instructor and peers is encouraged.

Learning Outcomes  On successful completion of this module, students will be able to:

- Develop software applications with the following tools:
  - Microsoft Access
  - MySQL
  - Microsoft Expression
  - PHP
- Build dashboards using Excel Power BI and other tools.
- Work independently and also as part of a team to develop software solutions.
- Work with written and oral descriptions of software application problems and apply suitable tools to build solutions.
- Source relevant reference material to help in solving software issues.
- Participate effectively in group discussions on technical issues and problems.
- Produce, test and implement suitable software solutions.
Module Content

- Building databases with Microsoft Access.
- Generating SQL queries
- Creating online databases
- Using PHP to access online databases
- Using MongoDB and NoSQL
- Building dashboards.

Recommended Reading List

6. Learning PHP, MySQL and JavaScript (2009), Nixon, R., O'Reilly Media Inc. OK
7. PHP and MySQL 24 Hour Trainer (2011), Tarr, A., Wrox. OK

All these texts are available on the Safari Tech Books Online database. These can be accessed from the local TCD library page at www.tcd.ie/Library/collections/databases.php

Module Pre Requisite

ST1001 – Software Applications I
&
ST2001 – Software Applications II

Assessment Details

This module is entirely examined by continuous assessment. Over the year students hand in approximately 7-8 assignments, based on a mixture of individual and group work. Students must attend a minimum of 75% of classes and are expected to obtain a passing grade of 40% in the coursework. Failure to achieve this may result in students having to undertake additional project work satisfactorily over the summer in order to pass the year.