

COURSE TITLE: Software Applications III		CODE: ST3001
LECTURERS: Assistant Prof. Aideen Keaney (Aideen.Keaney@tcd.ie)		
CREDITS: 10	PREREQUISITES: Software Applications I & II	
TERMS: Semester 1 & 2	LECTURES/WEEK: 2	
Duration (weeks): 22	TOTAL HOURS: 44	
MODULE AIMS & OBJECTIVES		
<p>This course will introduce students to Visual Basic programming and students will use Visual Basic 2010 to learn how to build small software applications. The course will also give students experience in client server database technologies. This course will be based on various databases such as MySQL and Microsoft Access. The course will introduce students to writing database queries using SQL. HTML and PHP will be used to develop user front ends to these databases. This course is a computer laboratory based course. Students are given notes that encourage self-paced learning. Interaction with the course instructor and peers is encouraged.</p>		
SYLLABUS		
<ul style="list-style-type: none"> • Building databases with Microsoft Access. • Programming with Visual Basic 2010 • Using Visual Basic 2010 to access Databases • Generating SQL queries • Creating online databases • Using PHP to access online databases 		
LEARNING OUTCOMES		
<p>On successful completion of this course, students will be able to:</p> <ul style="list-style-type: none"> • Develop software applications with the following tools: <ul style="list-style-type: none"> ○ Microsoft Access ○ Visual Basic.NET ○ MySQL ○ Dreamweaver MX ○ PHP • 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. 		
TEACHING METHODS		
<p>This course is a computer laboratory based course. Students are given notes that encourage self paced learning. Interaction with the course instructor and peers is encouraged.</p>		

ASSESSMENT

This course 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.

Recommended Reading List

1. Access 2010 Bible (2010), Groh, M., John Wiley and Sons.
2. Microsoft Access 2010 In Depth (2010), Jennings, R., Que.
3. Microsoft Access VBA Programming for the Absolute Beginner (2011), Vine, M., Course Technology PRT.
4. Mastering Microsoft Visual Basic 2010 (2010), Petroustos, E., Sybex.
5. Microsoft Visual Basic 2010 Step by Step (2010), Halvorson, M., Microsoft Press.
6. Sams Teach Yourself Visual Basic 2010 in 24 Hours (2010), Foxall, J., Sams.
7. PHP and MySQL Web Development, Fourth Edition (2008), Welling, L. Thomson, L., Addison-Wesley Professional.
8. Learning PHP, MySQL and JavaScript (2009), Nixon, R., O'Reilly Media Inc.
9. PHP and MySQL 24 Hour Trainer (2011), Tarr, A., Wrox.

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