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Title: Programming and Windows Applications
Status: Definitive
Code: **5308ELE** (121430)
Version Start Date: 01-08-2019

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Electronics and Electrical Engineering

Team	Leader
Paul Otterson	Y

Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 74
Total Learning Hours: 200 **Private Study:** 126

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	48
Tutorial	24

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Exam	70	2
Report	AS1	Report	30	

Aims

To develop students practical programming capability to build windows based applications. To develop the students ability to generate effective user and technical documentation

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate knowledge of data processing within typical software applications
- 2 Outline how data applications are linked through the client interface to a server and how data is managed on servers
- 3 Demonstrate and use commercial software to create deployable Windows applications
- 4 Prepare effective user and technical documentation

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Examination	1	2	3
Report	3	4	

Outline Syllabus

Analysis and modelling.

Systems modelling and technical description.

Top down and bottom up approaches to systems description

Systematic analysis and modelling methods.

Requirements analysis.

The Unified Modelling Language.

Relational and non-relational data.

Database creation, integration and usage.

SQL Query language and reporting.

The Visual C# Environment.

Visual Studio : Solutions, Projects, Forms

Interaction with object linked data structures.

Verification and validation of User Input.

Deployable windows applications.

C# Web applications.

Web-site creation and serving (IIS and ASP.NET).

Local hosting and remote hosting.

Application executables (ASPX pages) within web sites.

Data handling in a web environment.

Web-services.

Developing Simple Object Applications Protocol (SOAP) service.

SOAP v REST applications.

Specifying and schemas.

Integrating web-services into windows application.

Learning Activities

Lecture and practical sessions. Students will be encouraged to work both independently, and within groups.

Notes

The module provides the student with a practical problem in a group learning environment. To complete the assessment tasks satisfactorily, students will need to participate in the group work activities of the module.