

## **MODULE: HCI & GUI PROGRAMMING (course code BSCH-HGP)**

**Griffith College Dublin – Computing Science**

**Fall semester**

**This module is intended for junior and senior level students who are majoring in this field.**

### **Aims**

This module will enable you to critically evaluate the importance of the human aspect of system development. You will learn about the key issues involved in designing computer interfaces. You will experience the skills needed to program for a GUI based environment.

### **Learning Outcomes**

Upon successful completion of this module, you should be able to:

1. write programs for a GUI based environment
2. explain how programs interact with the GUI based environment
3. discuss aspects of good interface design
4. write methods to link your applications to third party applications
5. indentify the need for custom controls and demonstrate their implementation
6. identify and implement the importance of human factors within system development
7. demonstrate the application of correct HCI concepts when designing computer interfaces
8. demonstrate the features of event-driven programming

### **Indicative Content**

<b>Topic</b>	<b>Description</b>
Introduction and motivation	Overview of subject. Why do we need HCI? How do we evaluate the usability of systems?
Event-driven programming overview	Principles of event-driven programming. Procedure types. Passing by reference verses passing by value.
Presentation of information to the	Layout guidelines. Flow of information. Principles of colour

user	theory. Methods for displaying different categories of information.
Accepting information from the user	Field entry. Validation of data. Multiple inputs. Gathering information for the mouse. Restricting input options.
Testing and verification	Principles of testing. Different testable aspects of an application. User testing. QA testing.
Third party software	Allowing applications to communicate. Creating links between applications.

### **Assessment Methods**

Continuous assessment will be based on a combination of some of the following:

- Programming assignments
- Selected homeworks
- Case studies
- Class tests
- Practical tests
- Oral examination

The continuous assessment work addresses all the learning outcomes. The project at the end addresses learning outcomes 1, 4, 7 and 8.