

<b>MODULE 18</b>	<b>HCI &amp; GUI PROGRAMMING</b>	
COURSE CODE	BSCH-3-1-09	
STATUS	Core	
ASSESSMENT	Continuous Assessment	40%
	Project	60%

### 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. identify 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

Topic	Description
Introduction and	Overview of subject. Why do we need HCI? How do we evaluate the

motivation	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 user	Layout guidelines. Flow of information. Principles of colour 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.