Module Specification

1. Factual information			
Module title	**M109: NET Programming**	**Level**	**1**
Module tutor	TBA	**Credit value**	**10**
Module type	Taught	**Notional learning hours**	**3**

2. Rationale for the module and its links with other modules
This module is intended to introduce and present the fundamental skills that are required to design and develop object-oriented programs and applications in .NET Framework.

3. Aims of the module
• To understand the .NET framework architecture. • To provide students with a range of skills to analyze a problem and construct a .NET program that solves it. • To provide the principles of object oriented programming. • To implement object-oriented concepts in .NET environment. • To understand the Visual Studio Integrated Development Environment • To develop .NET applications using the selected programming language.

4. Pre-requisite modules or specified entry requirements
Students are expected to complete EL111 before taking this module.

5. Intended learning outcomes	
A. Knowledge and understanding	**Learning teaching and assessment strategy**
Upon completing this module, students will be able to: **A1.** Explain .NET Platform. **A2.** Describe data types, variables, constants, operators and built-in functions in the selected .NET programming language. **A3.** Discuss decision-making and looping statements.	Knowledge and understanding is acquired from specially prepared teaching texts supported by self-assessment and in-text questions, reference texts, multi -media packages, directed reading, computer mediated conferencing and web-based resources. • 25% face-to-face tutorial sessions • TMA , MTA and Final examination • Module learning booklets and support material

5. Intended learning outcomes	
A. Knowledge and understanding	**Learning teaching and assessment strategy**
A4. Explain object oriented concepts such as classes, objects and methods. **A5.** Describe the features of object oriented programming such as Inheritance and Polymorphism. **A6.** Explain the concept of arrays. **A7.** Identify errors and different types of exceptions in a .NET program.	

B. Cognitive skills	**Learning teaching and assessment strategy**
Upon completing this module, students will be able to: **B1.** Develop appropriate programs in .NET framework. **B2.** Apply object oriented concepts in .NET framework. **B3.** Test and debug a .NET program.	Cognitive skills are promoted in the teaching materials via a range of activities including self-assessment exercises, multi-media tasks and computer-based investigations. • 25% face-to-face tutorial sessions • TMA , MTA and Final examination • Module learning booklets and support material

C. Practical and professional skills	**Learning teaching and assessment strategy**
Upon completing this module, students will be able to: C1. Develop programming skills in .NET platform. C2. Use variables, constants, operators, built-in functions, methods and arrays in a .NET program. C3. Write codes in a .NET programming language that make use of structured programming constructs of sequence, selection and repetition. C4. Apply classes, objects and other object oriented concepts such as inheritance and polymorphism in a .NET program. C5. Test and debug .NET programs.	• Practical Sessions • TMA work • Module learning booklets and support material

C. Practical and professional skills	Learning teaching and assessment strategy
C6. Use the Visual Studio IDE to build .NET applications using the selected .NET programming language.	

D Key transferable skills	Learning teaching and assessment strategy
Upon completing this module, students will be able to: **D1.** Collaborate effectively within a group using electronic conferencing techniques. **D2.** Facilitate discussions in a conference. **D3.** Develop self- learning and performance. **D4.** Discuss about testing strategies, design, and code. **D5.** Use electronic media (the web and electronic conferencing) for information retrieval and communication.	Key skills are taught and developed within the teaching materials and are supported by tutor feedback and guidance on tutor marked assignments. Assessment – key skills are assessed by tutor marked assignments and examinable component • 25% face-to-face tutorial sessions • TMA work • Module learning booklets and support material

6. Indicative content

Unit 1 Understanding .NET Framework Architecture
Unit 2 Overview of .NET programming languages
Unit 3 Visual Studio Integrated Development Environment
Unit 4 Data Types and Variables
Unit 5 Operators and Expressions
Unit 6 Control Structures
Unit 7 Classes and Objects
Unit 8 Methods
Unit 9 Arrays
Unit 10 Inheritance and Polymorphism
Unit 11 Exception Handling

7. Assessment strategy, assessment methods and their relative weightings

TMA Work: 20%
MTA: 30%
Exam: 50%

8. Mapping of assessment tasks to learning outcomes

Assessment tasks	Learning Outcomes																				
	A1	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**B1**	**B2**	**B3**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**D1**	**D2**	**D3**	**D4**	**D5**
TMA	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
MTA	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓						

8. Mapping of assessment tasks to learning outcomes																					
Assessment tasks	**Learning Outcomes**																				
	A1	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**B1**	**B2**	**B3**	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**	**D1**	**D2**	**D3**	**D4**	**D5**
Final Exam	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓	

9. Teaching staff associated with the module	
Tutor's name and contact details	Contact hours
TBA	

10. Key reading list				
Author	Year	Title	Publisher	Location
Rod Stephens	2011	Start Here! Fundamentals of Microsoft .NET Programming 1st Edition	O'Reilly Media, Inc.	
Paul Deitel & Harvey Deitel	2011	Visual C# 2010 How to Program	Pearson	
Andrew Troelsen, Philip Japikse	2015	C# 6.0 and the .NET 4.6 Framework 7th ed. Edition	Apress	
David Chappell	2006	Understanding .NET	Addison Wesley	

11. Other indicative text (e.g. websites)
1. AOU Learning Management System