Programme specification

(Notes on how to complete this template are provide in Annexe 2)

1. Overview/ factual information

Programme/award title(s)	a. B.Sc. (Hons) in Information Technology (Network Technologies) b. B.Sc. in Information Technology c. Diploma of Higher Education in Information Technology d. Certificate of Higher Education in Information Technology
Teaching Institution	The American College of Greece
Awarding Institution	The Open University (OU)
Date of latest OU validation	
Next revalidation	
Credit points for the award	B.Sc. (Hons) in Information Technology: 360
UCAS Code	
Programme start date	
Underpinning QAA subject benchmark(s)	Computing
Other external and internal reference points used to inform programme outcomes	
Professional/statutory recognition	
Duration of the programme for each mode of study (P/T, FT,DL)	
Dual accreditation (if applicable)	
Date of production/revision of this specification	

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in student module guide(s) and the students handbook.

The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.

2.1 Educational aims and objectives

Mission

In congruence with the mission of the College, the B.Sc. in Information Technology and its three pathways have been designed to meet the growing demand for information technology skills and to provide a pathway for students to progress towards information technology careers. Moreover, the programme aims to expose its students to a wide range of subjects while its pathways give them the oportunity to choose one specific *aspect of computing* that interests them and study it in great depth.

Educational Aims

The primary goals of the IT programme are to:
- o Provide students with comprehensive background knowledge in Information and Communication Technologies.
- o Develop the students' analytical and critical skills for problem identification, analysis and solution implementation.
- o Provide students with specialized computing knowledge and skills to implement information technologies in the areas of software development, networking or digital media.
- o Develop students' understanding of the ethical framework that governs the use of information technologies.
- o Provide the students with the broad range of knowledge necessary to pursue graduate studies and/or careers in information technology.
- o Develop students' understanding of the trends in technology and in future product developments.

The **Network Technologies** pathway aims to provide an in-depth understanding and skills needed to design and manage computer networks.

Objectives

Upon successful completion of the network technologies pathway, students will be able to:
- o use high-end network equipment and tools
- o configure and operate the principal components of network infrastructure
- o use network operating systems and apply data communication techniques in linking computer systems
- o apply practical competencies in network design
- o evaluate secure networked system feasibility, sustainability in concert with current and future needs

2.2 Relationship to other programmes and awards
(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

This programme specification is part of a US bachelor's degree programme that consists of 40 modules, comprising 14 liberal education modules, and 20 concentration modules and 6 elective courses.

3. Programme outcomes

Intended learning outcomes are listed below

3A. Knowledge and understanding	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
A.1. Demonstrate knowledge and understanding of basic mathematics and statistics that is relevant to Information Technology.	<u>Where it is taught</u>: **MA 1105 - Applied Calculus (Level 4),** Functions, limits and continuity. Derivative of polynomials, and rational, exponential and logarithmic functions. Sketching the graph of a function. Indefinite and definite integral. Integration techniques. Area as an integral. Functions of several variables. Partial derivatives of first and second order. Application of differentiation and integration to problems in business, economics, and related fields. **MA 2010 - Statistics I (Level 4)** Organizing and summarizing data. Probability distributions: binomial, Poisson, normal, t-distribution, chi-square. Sampling and sampling distribution of the mean. The central limit theorem. **ITC 3106 – Mathematics for Computing (Level 5)** Concepts of Algebra, Geometry, Proofs, Structures, Counting, Probabilities and Inference, Statistics. <u>Learning and Teaching Strategy</u>: In congruence with the Learning and Teaching strategy of the College, the following tools are used: o MA 1105: Classes consist of lectures where the concepts of the course are introduced. Their application to the discussion of problems arising from business, economics and related fields is illustrated through several examples. Assessed coursework is regularly assigned and discussed in class with students actively participating in the discussion. In MA 1105, students are required to attend 1 hour/week recitation session. o MA 2010: The concepts of the course are introduced, exemplified and illustrated through extensive problem solving. Assessed coursework is regularly assigned and discussed in class with students actively participating in the discussion. o ITC 3106: Classes consist of lectures where the concepts of the course are introduced. Their application to the discussion of problems arising from information technology related fields is illustrated through several examples. Assessed coursework is regularly assigned and discussed in class with students actively participating in the discussion. <u>Assessment Methods</u>: Assessment methods give students the opportunity to display knowledge and understanding and staff the opportunity to identify issues in either. Students get timely feedback (within 21 days) on their formative test and midterm exam by their lecturer. Student performance is assessed as follows:

		MA 1105,MA 2010	ITC 3106
In-class, 1-hour, "diagnostic" test - **formative**	0	numerical problems	numerical problems/essay questions
In-class 1-hour midterm examination - **summative**	40	numerical problems	numerical problems/essay questions
Final examination (2-hour, comprehensive) - **summative**	60	numerical problems	numerical problems/essay questions

A.2. Demonstrate knowledge and understanding of the basic psychological principles guiding mental processes and behaviour.	Taught in:
	PS1000 Psychology as a Natural Science (Level 4)
	Overview of psychology as a natural science. Foundations and contemporary perspectives in psychology, research methods and ethical principles, biological foundations of behaviour, perceptual and sensory systems, states of consciousness, learning and memory, thought and language processes, motivation and emotion.
	PS1001 Psychology as a Social Science (Level 4)
	Overview of the field of psychology as a social science with emphasis on theoretical perspectives and research methods, life-span development, mental abilities, personality theory and assessment, stress and coping, psychological disorders and treatment, social behaviour.
	Learning and Teaching Strategy: In congruence with the Learning and Teaching strategy of the College, the following tools are used: o Lectures and class discussions. o Relevant educational films are also shown. o Office hours o Use of Blackboard site
	Assessment Method:

In-class, 1-hour, "diagnostic" test - **formative**	0%	Multiple choices & short answer questions
In-class 1-hour midterm examination - **summative**	40%	Multiple choices & short answer questions
In-class final examination (2-hours) - **summative**	60%	Multiple choices & short answer questions

A.3.	Demonstrate awareness of moral theories and ethical issues and evaluate their impact on information technologies.	Taught in:

PH 3005 Business Ethics (Level 5)

Introduction to major theories and basic moral problems in the domain of business. The use of reasoning in moral assessment of business practices. Application of moral theories to specific cases of corporate conduct ranging from the individual to society in general, in the local and the international context.

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used::*

o   Classes consist of lectures and interactive learning (class discussions of contemporary articles, as well as of case studies assigned by the instructor). Emphasis is put on the application of moral theoretical tools in business decision making.

o   Use of video presentations.

o   Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can discuss the course material.

o   Use of a Blackboard site, where instructors can post lecture notes assignment instructions, timely announcements, and additional resources

Assessment Methods:

In-class, 1-hour, "diagnostic" test –**formative**	0	Case study
1-hour midterm exam - **summative**	40	Essay-type questions
Final examination (2-hour, comprehensive) - **summative**	60	Essay-type questions

A.4.	Demonstrate knowledge and understanding of structured and object-oriented programming.	Taught in:

ITC 2188 Introduction to Programming (Level 4)
Problem solving; problem analysis; top-down design of algorithms; implementation; testing and debugging techniques; documentation. Structured programming language constructs: data types, variables, constants, parameters, input and output, selection, iteration, file handling, classes and methods, arrays, elementary sorting and searching algorithms.

ITC 2276 C language programming (Level 4)
C language logic and code structure; data types; scalars and aggregates; pointers and address arithmetic; files and devices; programming and debugging techniques.

ITC 3234, Object Oriented Programming (Level 5)
Advanced object-oriented concepts and problem solving techniques. Advanced GUI components; event handling, java

collections framework and data structures, data persistence, efficiency issues.

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

o   Lectures and class discussions. Laboratory practical sessions and programming problem solving.

o   Office hours held by the instructor to provide further assistance to students.

o   Use of the online content management system (Blackboard CMS) to further facilitate communication, by posting lecture notes, assignment instruction, announcements, and online submission.

Assessment Methods:

Student performance in **ITC 2188** is assessed as follows:

Take-home –**formative**	**0**	programming problems
Online quizzes –**formative**	**0**	online quizzes
Midterm Examination -**summative**	**40**	short programming problems / short essay questions
Coursework: programming problems -**summative**	**60**	programming problems

Student performance in **ITC 2276** is assessed as follows:

In-class, 1-hour, "diagnostic" test –**formative**	**0**	programming problems
Take-home - **formative**	**0**	take home assignments and/or in-class quizzes
Coursework-**summative**	**40**	programming problems
Final Examination (2-hour comprehensive) -**summative**	**60**	programming problems and short answers to essay questions

Student performance in **ITC 3234** is assessed as follows:

Short programming exercises –**formative**	**0**	Short programming exercises
Online Quizzes –**formative**	**0**	Short programming exercises
Midterm examination -**summative**	**40**	Short programming problems, short essay questions
Project -**summative**	**60**	Programming project

A.5	Demonstrate knowledge and understanding of several database models with emphasis to the relational model, of database design methods, of normalization and data integrity rules.	**ITC 3260 Fundamentals of RDBMS (Level 5)**

ITC 3260 Fundamentals of RDBMS (Level 5)

Relational Database Management Systems concepts. Data modelling, systems development and data administration in a database environment. The relational model, normalization, transaction management, concurrency, control, database security and the Structured Query Language (SQL).

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

o   Lectures and class discussions. Laboratory practical sessions and programming problem solving.

o   Office hours held by the instructor to provide further assistance to students.

o   Use of the online content management system (Blackboard CMS) to further facilitate communication, by posting lecture notes, assignment instruction, announcements, and online submission.

Taught in:

Assessment Methods:

Take-home "diagnostic" test - **formative**	**0**	short answers to essay questions
Coursework - **formative**	**0**	programming problems
Project - **summative**	**40**	queries, conceptual design, connections
Final examination (2-hour, comprehensive) - **summative**	**60**	short answers and database design exercises

A.6 Demonstrate knowledge and understanding of the concepts of computer architecture and the principles of computer communications. A.6.1 Demonstrate knowledge and understanding of networking models and configurations, of networking standards and protocols, of the characteristics of local and wide area networks, and of different communication transmission media and data.	<u>Taught in</u>: **ITC 3275 Introduction to Computer Networks (Level 5)** Computer communications systems components, models, operation, and applications. Networking standards, protocols and connectivity aspects. Local area networks design, implementation. Wide area networks, emerging technologies. <u>Learning and Teaching Strategy-</u> *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*: o Classroom lectures, discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions. o Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material. o Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources. <u>Assessment Methods:</u>

Coursework - **formative**	0	programming problems
Project - **summative**	40	a study that may include any of the following: protocol evaluation, network design, literature review
Final examination (2-hour, comprehensive) - **summative**	60	answers to short essay questions including problem solving cases

A.6.2	Demonstrate knowledge and understanding of the design of computer hardware.	Taught in:

ITC 2186 Computer Systems Architecture (Level 4)

Computer architecture. Digital circuits and components. Types of data representation. Computer organisations and design. Logic design.

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*:

o Classroom lectures, discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions.

o Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.

o Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

Assessment Methods:

In class 1-hour "diagnostic" test –**formative**	**0**	short answers to essay questions and mathematical problems
Coursework –**summative**	**40**	design and implementation of a digital circuit
Final Examination (2-hour, comprehensive)-**summative**	**60**	short answers to essay questions and mathematical problems

A.7 Demonstrate knowledge and understanding of the fundamental concepts underlying an operating system and relate them to its function, evolution and design.	Taught in:

Taught in:

ITC 2293 Operating Systems Concepts (Level 4)

Operating system structures; functions and techniques; Performance; avoidance of deadlock and security issues. Management of Operating System resources and processes.

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*:

o   Classroom lectures, discussions, laboratory practical sessions.

o   Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.

o   Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

Assessment Methods:

In-class, 1-hour, "diagnostic" test **–formative**	**0**	short answers to essay questions
Coursework-**summative**	**40**	Case Problems
Final Examination (2-hour comprehensive) - **summative**	**60**	combination of short essay questions and case problems

A.8.	Select, design, and apply several interdisciplinary project management techniques in order to ensure highly effective and efficient project outcomes.	Taught in:

Taught in:

MG/CS 4157 Project Management (Level 6)

Project management as an interdisciplinary and cross-functional activity in an organization. Emphasis on the relationship of projects to the management of change and to the approaches and roles required to achieve successful project implementation

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

o Lectures, class discussions, and review of cases taken from the real world and applicable to specific theoretical concepts.

o Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.

o Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments.

Assessment Methods:

In-class, 1-hour, "diagnostic" test - **formative**	0	short answers to essay-questions
Project - **formative**	0	presentation
Coursework - **formative**	0	case studies
Project (1,800 – 2,200 words) - **summative**	40	case study
Final Examination (2-hour comprehensive) - **summative**	60	essay type

A.9	Demonstrate knowledge and understanding of Web 2.0 rich Internet application-development methodologies and programming principles.	<u>Taught in:</u> **ITC 4314 Internet Programming (Level 6)** Internet standards and infrastructure. Client and server technologies. Rich Internet applications. Scripting Languages. Server side Programming. Frameworks. Security and privacy. <u>Learning and Teaching Strategy-</u> *In congruence with the Learning and Teaching strategy of the College, the following tools are used*: o Classroom lectures, discussions, laboratory practical sessions and problem solving. o Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material. o Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources. <u>Assessment Methods:</u>

Coursework - **formative**	**0**	short programming exercises
Online quizzes - **formative**	**0**	online quizzes
Midterm Examination - **summative**	**30**	combination of short essay questions and case problems
Project - **summative**	**70**	rich internet application development

A.10 Demonstrate knowledge and understanding of fundamental concepts of AI.	Taught in:

ITC 4680 Artificial Intelligence Principles (Level 6)

State space search, knowledge representation, probabilistic reasoning, machine learning.

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

- o Classroom lectures, discussions, and review of theoretical concepts. Laboratory practical sessions.
- o Office hours held by the instructor to provide further assistance to students.
- o Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments.

Assessment Method:

In class exercises- **formative**	0	problem solving
Mid-term Examination - **summative**	40	quantitative and/or qualitative solutions in mathematical format and/or short essay format or in another format as deemed appropriate.
Project **- summative**	60	programming and/or tool usage to address one or more problems in artificial intelligence.

A.11. Demonstrate knowledge and understanding of network administration on both operating system and hardware levels.	Taught in: **ITC3319, Network Administration (Level 5)** Installation and administration concepts. Management, monitoring, and optimization of system performance, reliability, and availability. Design issues and support in a corporate environment. Troubleshooting and end user support. Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:* • Lectures, lab sessions, class discussions, problem-solving sessions, and review of real-world cases based on specific theoretical concepts. • Office hours held by the instructor to provide further assistance to students. • Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments. Assessment Method:

In class exercises- **formative**	0	
Project - **summative**	50	evaluation of a network, or design and set-up of a network solution
Final Examination (2 hour comprehensive)-**summative**	50	short essay questions including problem solving

A.12. Demonstrate knowledge and understanding of converged network architectures, technologies, and connectivity for voice, messaging, video and multimedia networking.	Taught in: **ITC3121, Computer Networks, Modelling and Analysis (Level 5)** Data communications technologies. Computer network systems. Network convergence architectures. Connectivity and internetworking of LANs. Broadband networking. Computer networks modeling and analysis. Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:* o Lectures, class discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions. o Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material. o Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources. Assessment Method:

In-class, 1-hour, "diagnostic" test - **formative**	0	short answers to essay questions
Coursework - **formative**	0	case problems
Project: **summative**	50	the design and implementation of a small scale telecommunications system
Final Examination (2-hour comprehensive) - **summative**	50	combination of short essay questions and case problems

A.13.	Demonstrate knowledge and understanding on the techniques of cryptography and network security.	Taught in:

Taught in:

ITC 4322, Network Security and Cryptography (Level 6)

Security trends and solutions; encryption techniques and standards; symmetric and public key encryption; hash functions; confidentiality issues; authentication and identity management; system security issues.

Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

o   Lectures, class discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions.

o   Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.

o   Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

Assessment Method:

In-class, 1-hour, "diagnostic" test **- formative**	**0**	short answers to essay questions
Coursework **- formative**	**0**	case problems
Project- **summative**	**50**	literature review/data collection/ methodology/implementation (code, script or simulation)
Final Examination (2-hour comprehensive) - **summative**	**50**	combination of short answers to essay questions and case problems.

A.14	Demonstrate comprehensive knowledge in the area of virtualization, tools and principles.	<u>Taught in</u>:

ITC4443, Virtualization Concepts and Applications (Level 6)

Virtualization architectures, techniques, applications and virtualization at server, client, desktop and application level.

<u>Learning and Teaching Strategy</u>- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

o   Lectures, class discussions, and laboratory sessions.

o   Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.

o   Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments.

Assessment Methods:

In-class, 1-hour, "diagnostic" test **- formative**	**0**	Short essay-questions
Coursework - **formative**	**0**	Practical Training
Project - **summative**	**100**	Literature Review / Benchmarking / Report / Lab Implementation / Codes and Scripts.

A.15	Demonstrate comprehensive knowledge in the area of distributed computing, and their real-world applications.	Taught in:

<u>Taught in</u>:

ITC4426, Distributed Systems (Level 6)

Distributed systems principles; communication; processes; naming; synchronization; fault tolerance; security; consistency and replication; object-based systems; document-based systems; distributed file systems; coordination-based systems; payment systems; Internet and web protocols; scalability.

<u>Learning and Teaching Strategy</u>- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:*

o   Lectures, class discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions.

o   Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.

o   Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

o   **Assessment Methods:**

In-class, 1-hour, "diagnostic" test - **formative**	0	short essay questions
Coursework- **formative**	0	Case problems
Midterm Examination **- summative**	40	combination of short essay questions and case problems
Research Project**- summative**	60	literature review/data collection/ methodology/interpretation

A.16 . Demonstrate comprehensive knowledge in the area of designing enterprise networks.	Taught in: **ITC4242 Network Design (Level 6)** Design of enterprise computer networks, concepts and best practices. Assessment of network performance. Learning and Teaching Strategy- *In congruence with the Learning and Teaching strategy of the College, the following tools are used:* o Lectures, class discussions, and review of real-world cases based on specific theoretical concepts. Laboratory practical sessions. o Office hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material. o Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources. **Assessment Methods:**

In-class, 1-hour, "diagnostic" test -**formative**	0	short essay questions
Coursework – **formative**	0	case problems
Project -**summative**	**100**	Problem review / data collection / methodology / implementation / simulation / codes and scripts

3B. Cognitive skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods

B.1. Locate, extract, analyze data from library and other resources including the acknowledgement and referencing of sources. (Levels 5 and 6).	**ITC 3275 Introduction to Computer Networks**
	    Computer communications systems components, models, operation, and applications. Networking standards, protocols and connectivity aspects. Local area networks design, implementation. Wide area networks, emerging technologies.
	
	ITC 4322 Network Security and Cryptography
	    Security trends and solutions; encryption techniques and standards; symmetric and public key encryption; hash functions; confidentiality issues; authentication and identity management; system security issues.
	
	ITC 4443 Virtualization Concepts and Applications
	    Virtualization architectures, techniques, applications and virtualization at server, client, desktop and application level.
	
	ITC 4426 Distributed Systems
	    Distributed systems principles; communication; processes; naming; synchronization; fault tolerance; security; consistency and replication; object-based systems; document-based systems; distributed file systems; coordination-based systems; payment systems; Internet and web protocols; scalability.
	
	ITC 4827 Networking Capstone Project
	    Focus on the on the design of a reliable, secure, performance efficient, fault-tolerant network or network component. Step-by-step design, development and evaluation process.
	
	Learning and Teaching Strategy:
	Students use library and other resources in carrying out the major research project required in this course.
	
	Assessment Method:
	The assessment rubric used in this course includes an assessment of these cognitive skills; assessment is summative.
	
	Assessment of students through a research project that requires them to conduct a literature review. Collect, synthesize and critically evaluate data. Case study analysis.

B.2.	Interpret, analyse, and solve structured problems, and to a limited extent unstructured problems, from a generated data set. (Levels 4, 5, and 6)	Taught and/or assessed in:

Taught and/or assessed in:

MA 2010 Statistics I

Organizing and summarizing data. Probability distributions: binomial, Poisson, normal, t-distribution, chi-square. Sampling and sampling distribution of the mean. The central limit theorem.

ITC 3260 Fundamentals of RDBMS

Relational Database Management Systems concepts. Data modelling, systems development and data administration in a database environment. The relational model, normalization, transaction management, concurrency, control, database security and the Structured Query Language (SQL)

MG/CS 4157 Project Management

Project management as an interdisciplinary and cross-functional activity in an organization. Emphasis on the relationship of projects to the management of change and to the approaches and roles required to achieve successful project implementation

ITC 4680 Artificial Intelligence Principles

State space search, knowledge representation, probabilistic reasoning, machine learning.

Learning and Teaching Strategy:

Students analyse real world cases and suggest suitable solutions.

Assessment Method:

Assessed in exams, projects or coursework.

Students are engaged in conceptual thinking and are encouraged to analyse and solve problems of mathematical, programming and real case nature.

B.3.	Develop and critically evaluate arguments and evidence including identifying assumptions and detecting false logic. (Level 6)	Taught in:

B.3.	Develop and critically evaluate arguments and evidence including identifying assumptions and detecting false logic. (Level 6)	Taught in: **ITC 4680 Artificial intelligence principle** State space search, knowledge representation, probabilistic reasoning, machine learning **ITC 4426 Distributed Systems** Distributed systems principles; communication; processes; naming; synchronization; fault tolerance; security; consistency and replication; object-based systems; document-based systems; distributed file systems; coordination-based systems; payment systems; Internet and web protocols; scalability. **ITC 4242 Network Design** Design of enterprise computer networks, concepts and best practices. Assessment of network performance. **ITC 4827 Networking Capstone Project** Focus on the on the design of a reliable, secure, performance efficient, fault-tolerant network or network component. Step-by-step design, development and evaluation process. Learning and Teaching Strategy: Students apply theory and processes and develop critical thought through class discussions and case studies. Assessment Method: Assessed in coursework, programming problems and projects and research papers. For example: In ITC 4827, students are required to develop a complete networking solution to a given problem, based on the knowledge and the skills acquired during their studies. They gain the experience of working on a real-time basis and combine academic with professional practices, including domain-specific research, gradual progression, revisiting, and evaluation.

B.4.	Apply critical thinking to create, evaluate and assess a range of options in solving complex problems. (Levels 6)	**ITC 4680 Artificial intelligence principle** State space search, knowledge representation, probabilistic reasoning, machine learning **ITC 3121 Computer Networks, Modelling and Analysis** Data communications technologies. Computer network systems. Network convergence architectures. Connectivity and internetworking of LANs. Broadband networking. Computer networks modeling and analysis.

ITC 4314 Internet Programming

Internet standards and infrastructure. Client and server technologies. Rich Internet applications. Scripting Languages. Server side Programming. Frameworks. Security and privacy

ITC 4426 Distributed Systems

Distributed systems principles; communication; processes; naming; synchronization; fault tolerance; security; consistency and replication; object-based systems; document-based systems; distributed file systems; coordination-based systems; payment systems; Internet and web protocols; scalability.

ITC 4242, Network Design

Design of enterprise computer networks, concepts and best practices. Assessment of network performance.

ITC 4322 Network Security and Cryptography

Security trends and solutions; encryption techniques and standards; symmetric and public key encryption; hash functions; confidentiality issues; authentication and identity management; system security issues.

ITC 4827 Networking Capstone Project

Focus on the on the design of a reliable, secure, performance efficient, fault-tolerant network or network component. Step-by-step design, development and evaluation process.

Learning and Teaching Strategy:

Students evaluate a range of alternatives and choose an action plan to meet specified needs for various situations.

Assessment:

Assessed in examinations, projects and research paper.

For example:

In ITC 4314, provides students with the opportunity to develop complex, data driven web applications, enhancing their understanding of web development and their judgement of the effectiveness of different development techniques.

In ITC 4827, students are required to develop a complete network solution to a given problem, based on the knowledge and the skills acquired during their studies. They gain the experience of working on a real-time basis and combine academic with professional practices, including domain-specific research, gradual progression, revisiting, and evaluation.

B.5.	Analyse and evaluate ethical choices. Assess the moral and ethical dimensions of actions, persons, and organisational practices and develop an awareness of and framework for ethical decision-making. (Levels 4, 5, and 6)	Taught in: **PH 3005, Business Ethics** Introduction to major theories and basic moral problems in the domain of business. The use of reasoning in moral assessment of business practices. Application of moral theories to specific cases of corporate conduct ranging from the individual to society in general, in the local and the international context. *Discussion about ethical choices is embedded in almost all IT courses.* Learning and Teaching Strategy: Students learn through lectures, class discussions, and analysis of cases. Assessment Methods: Assessed in exams and case studies
B.6.	Analyse various aspects of professional communication and evaluate effectiveness of oral as well as written communication. (Level 5)	Taught in: **EN 3942, Professional Communication (Level 5)** A study of communication modes in professional contexts with focus on the development of communication expertise needed within businesses as well as technical and academic communities. Learning and Teaching Strategy - *In congruence with the Learning and Teaching strategy of the College, the following tools are used:* o Lectures, video presentations, class discussions, pair and group activities o Office Hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material. o Use of a Blackboard site, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources. Assessment Methods:

Drafts of assignments listed below -- **formative**	0	Exercises + Drafts of assignments listed below
Individual Work (including writing skills and presentation skills)-- **summative**	70%	Business Communication Problem 35% Individual Presentation with PowerPoint 35%
Team Work -- **summative**	30%	Analytical Group Report of 2800-3500 words

B.7. Apply appropriate theory, practices and tools to address design and development issues of information technology related problems. (Levels 4, 5, and 6)	**ITC 2188 Introduction to Programming** Problem solving; problem analysis; top-down design of algorithms; implementation; testing and debugging techniques; documentation. Structured programming language constructs: data types, variables, constants, parameters, input and output, selection, iteration, file handling, classes and methods, arrays, elementary sorting and searching algorithms.
	ITC 3275 Introduction to Computer Networks Computer communications systems components, models, operation, and applications. Networking standards, protocols and connectivity aspects. Local area networks design, implementation. Wide area networks, emerging technologies.
	ITC 2186, Computer System Architecture Computer architecture. Digital circuits and components. Types of data representation. Computer organisations and design. Logic design.
	ITC 2276, C language Programming C language logic and code structure; data types; scalars and aggregates; pointers and address arithmetic; files and devices; programming and debugging techniques.
	ITC 3234, Object Oriented Programming Advanced object-oriented concepts and problem solving techniques. Advanced GUI components; event handling, java collections framework and data structures, data persistence, efficiency issues.
	ITC 2293, Operating Systems Concepts Operating system structures; functions and techniques; Performance; avoidance of deadlock and security issues. Management of Operating System resources and processes.
	ITC 3260, Fundamental of RDBMS Relational Database Management Systems concepts. Data modelling, systems development and data administration in a database environment. The relational model, normalization, transaction management, concurrency, control, database security and the Structured Query Language (SQL).
	ITC 4314, Internet Programming Internet standards and infrastructure. Client and server technologies. Rich Internet applications. Scripting Languages. Server side Programming. Frameworks. Security and privacy.
	ITC 4426 Distributed Systems Distributed systems principles; communication; processes; naming; synchronization; fault tolerance; security; consistency and replication; object-based systems; document-based systems; distributed file systems; coordination-based systems; payment systems; Internet and web protocols; scalability.
	ITC 4242, Network Design Design of enterprise computer networks, concepts and best practices. Assessment of network performance.
	ITC 4322 Network Security and Cryptography Security trends and solutions; encryption techniques and standards; symmetric and public key encryption; hash functions; confidentiality issues; authentication and identity management; system security issues.

	ITC 4443 Virtualization Concepts and Applications Virtualization architectures, techniques, applications and virtualization at server, client, desktop and application level. **ITC 4827 Networking Capstone Project** Focus on the on the design of a reliable, secure, performance efficient, fault-tolerant network or network component. Step-by-step design, development and evaluation process. Learning and Teaching Strategy: During class discussions, and laboratory sessions students are practicing program design and development techniques. Assessment method: Assessed in all formative and summative methods presented in section A. Students are assessed in applying theory and tools in the design and development of software systems and applications, network types, and data logic circuits, either in an introductory or in an advanced level.

B.8.	Exhibit reasoning ability and creativity to address a given problem. (Levels 4, 5 and 6)	*Taught throughout the curriculum.* Throughout the curriculum students are assessed through projects. All modules in Levels 4, 5 and 6 use project type assessments where students are required to exhibit the ability and creativity in solving problems.

3C. Practical and professional skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
C.1. Use numeric skills, including quantitative techniques in problem solving of increasing complexity and with increasing autonomy depending on the course level. (Levels 4, 5, and 6)	Taught and assessed in: MA 2010, Statistics I MA 1105, Applied Calculus ITC 3106, Mathematics for Computing MG/CS 4157, Project Management ITC 2186, Computer System Architecture In Level 4 modules, students are required to solve simple mathematical problems using pre-specified methods and techniques. In Level 5 and 6 modules, students are encouraged to apply knowledge and acquired skills in order to solve increasingly complex problems.
C.2. Use Information Technology effectively to retrieve, process, analyze and communicate information. (Levels 4, 5, and 6)	*Taught throughout the curriculum.*
C.3. Relate the importance of people management within projects in terms of resource allocation, leadership, teamwork, and motivation. (Levels 6)	Taught and assessed in: MG/CS 4157 Project Management Students develop their skills in project management, recognize and avoid the causes of project failure, and manage a project from its initial stage to its completion.
C.4. Specify, design and construct solutions involving programming to given problems. (Levels 4, 5, and 6)	Taught and assessed in: ITC 2188 Introduction to Programming ITC 3234, Object Oriented Programming ITC 2276, C language Programming

	ITC 3260 Fundamentals of RDBMS
	ITC 4314, Internet Programming
	ITC 4680, Artificial Intelligence Principles
	ITC 4322, Network Security and Cryptography
	ITC 4242, Network Design
	ITC 4443, Virtualization Concepts and Applications
	ITC 4426, Distributed Systems
	ITC 4827, Networking Capstone Project
	All programming modules in Levels 4, 5 and 6 use project type assessments where students are required to exhibit the ability and creativity in design and constructing solutions.
C.5. Determine the risks, controls and safety measures in the use of computing technologies. (Levels 4, 5, and 6)	Taught and assessed in: ITC 2293, Operating system concepts ITC 3260 Fundamentals of RDBMS ITC 3275 Introduction to Computer Networks ITC 4314, Internet Programming ITC 4322, Network Security and Cryptography ITC 4242, Network Design ITC 4426, Distributed Systems ITC 4827, Networking Capstone Project Students are exposed to various authentication and authorization techniques and to the risks of unauthorised system access.

C.6.	Synthesize prior acquired knowledge to design and develop information technology solutions. (Level 6)	<u>Taught and assessed in:</u> ITC 4827, Networking Capstone Project Students are required to develop a complete network solution to a given problem, based on the knowledge and the skills acquired during their studies. They gain the experience of working on a real-time basis and combine academic with professional practices, including domain-specific research, gradual progression, revisiting, and evaluation.

3D. Key/transferable skills	
Learning outcomes:	Learning and teaching strategy/ assessment methods
D.1. Communicate ideas successfully orally and in writing following English discourse conventions. Adapt message content to a particular audience and medium of communication in a professional context. (Levels 4, 5, and 6)	<u>Taught and assessed in:</u> EN 3942, Professional Communication *English language skills are reinforced through assignments, projects, class participation and oral presentations in all courses.* The courses listed below are considered the most language intensive: ITC 3260, Fundamentals of RDBMS ITC 3275, Introduction to Computer Networks ITC 4680, Artificial Intelligence Principles MG/CS 4157, Project Management ITC 4827, Networking Capstone Project PH 3005, Business Ethics PS1000, Psychology as a Natural Science PS1001, Psychology as a Social Science

D.2.	Develop interpersonal, teamwork and/or leadership skills. Work effectively with others in small groups or teams.(Levels 4, 5, and 6)	Taught and/or assessed in:
		ITC 2188, Introduction to Programming
		ITC 3260, Fundamentals of RDBMS
		EN 3942, Professional Communications
		ITC 4242, Network Design
		MG/CS 4157, Project Management
D.3.	Reflect intellectually and become an independent self-managed lifelong learner.(Levels 4, 5, and 6)	*Taught throughout the curriculum.*

4. Programme Structure

Programme Structure - LEVEL 4			
Compulsory modules	**Credit points**	**Optional modules**	**Credit points**
PS 1001 PSYCHOLOGY AS A SOCIAL SCIENCE	15		
PS 1000 PSYCHOLOGY AS A NATURAL SCIENCE	15		
MA 1105 APPLIED CALCULUS	15		
MA 2010 STATISTICS I	15		
ITC 2188 INTRODUCTION TO PROGRAMMING	15		
ITC 2186 COMPUTER SYSTEMS ARCHITECTURE	15		
ITC 2293 OPERATING SYSTEMS CONCEPTS	15		
ITC 2276 "C" LANGUAGE PROGRAMMING	15		
TOTAL LEVEL 4	**120**		

Exit Award: Certificate of Higher Education in Information Technology, 120

Programme Structure - LEVEL 5			
Compulsory modules	**Credit points**	**Optional modules**	**Credit points**
EN 3942 PROFESSIONAL COMMUNICATION	15		
PH 3005 BUSINESS ETHICS	15		
ITC 3234 OBJECT ORIENTED PROGRAMMING	15		
ITC 3106 MATHEMATICS FOR COMPUTING	15		
ITC 3260 FUNDAMENTALS OF RDBMS	15		
ITC 3275 INTRODUCTION TO COMPUTER NETWORKS	15		
ITC 3319 NETWORK ADMINISTRATION	15		
ITC 3121 COMPUTER NETWORKS, MODELLING AND ANALYSIS	15		
TOTAL LEVEL 5	**120**		

Exit award: Diploma of Higher Education in Information Technology, 240 credits

Programme Structure - LEVEL 6			
Compulsory modules	**Credit points**	**Optional modules**	**Credit points**
MG/CS4157 PROJECT MANAGEMENT	15		
ITC 4680 ARTIFICIAL INTELLIGENCE PRINCIPLES	15		
ITC 4314 INTERNET PROGRAMMING	15		
ITC 4322 NETWORK SECURITY AND CRYPTOGRAPHY	15		
ITC 4443 VIRTUALIZATION CONCEPTS AND APPLICATIONS	15		
ITC 4426 DISTRIBUTED SYSTEMS	15		
ITC 4242 NETWORK DESIGN	15		
ITC 4827 NETWORKING CAPSTONE PROJECT	15		
TOTAL LEVEL 3	**120**		

Exit award: BSc (Honours) in Information Technology (Network Technologies), 360 credit

5. Distinctive features of the programme structure

- **Where applicable, this section provides details on distinctive featurs such as:**
- **where in the structure above a professional/placement year fits in and how it may affect progression**
- **any restrictions regarding the availability of elective modules where in the programme structure students must make a choice of pathway/route**

N/A

6. Support for students and their learning

Academic Advising
Responsible for coordinating all aspects of the undergraduate advising process, the Academic Advising Office aids students in choosing and completing their academic programs. The advising staff provides academic advice and information to undergraduate students, advising all first-year students, some second-year students, and transfer students; support for academic staff advisors; and resources for all students in need of academic advice. Once students have declared their major they participate in an advising program that uses academic staff as advisors to handle the responsibility of advising on academic and career-related matters.

International students have an additional non-academic international student advisor who assists them in their efforts to adjust to the new culture and supports them in obtaining any student visas and residence permits required by Greek law.

Student Orientation
Organized and coordinated by the Office of Student Affairs, the New Student Orientation Program introduces incoming students to the campus, the academic system (dual OU/DEREE degrees), College rules and regulations, and academic and social life. Students receive information on student programs and services such as advising, financial aid, and co-curricular programming. Various sources of information are employed to help the student make a smooth transition to the College environment. Among these are orientation folders containing material on available services, information sessions with administrators and student Orientation Leaders, activity fair, and stands that promote student organizations. A parent orientation session is held as part of the orientation program. The Validation Office and the Registrar offer presentations on the OU award and its academic policies at Student Orientation.

The **Student Academic Support Services** (SASS) is open daily and offers academic assistance to all DEREE-ACG students through individual learning facilitation sessions and/or workshops. SASS learning facilitators are peers who assist students in improving and strengthening academic study skills.

The **Office of Student Affairs** is dedicated to promoting student development and continually improving the quality of student life. Through extra-curricular activities the College strives to provide students with opportunities parallel to the classroom experience that are consistent with its educational values, such as presentations, lectures, excursions, debates, theatrical plays, blood drives, happenings and events. The students are encouraged to explore personal and professional goals by participating in clubs, societies, organizations and athletic teams. All the student groups

have an advisor, or coach, who is knowledgeable in the subject area, monitors their activity, attends their general assemblies and supports the group during the year.

The **Student Association** maintains bridges of communication between the students and the administration. Members of the Student Association participate in academic committees where they contribute their input.

The **Student Success Center** supports students by offering comprehensive, integrated services in the areas of academic advising, OU validation issues, student records, registration, and payments in a one-stop area. The Student Success Center aims to create the optimum conditions so that students can follow the path to academic success. The SSC web page has been set up to reflect the one-stop concept of the Center and includes information from different departments. It may be accessed from the "Quick Links" on the ACG homepage (www.acg.edu) and it allows students to print forms or view the academic calendar, academic policies, final exams schedule, course schedule, graduation instructions, major requirements, frequently asked questions (FAQs), the e-mail directory, and financial aid and international student information.

Disability Status and Provisions

Students are responsible for alerting the Educational Psychologist to a special need, and for providing relevant documentary evidence. The Educational Psychologist suggests actions to be taken to accommodate a student with special needs, having ensured that there has been full consultation with faculty in the department(s) responsible for the assessment of that student. The accommodation is approved by the Committee of Disabilities and Learning Differences. This action must be endorsed by the Chair of the relevant Board of Examiners in the case of the validated award. Information, guidance and support are provided to all disabled students who declare their disabilities. Students with learning difficulties may be eligible for special accommodations, such as extra time for examination completion, and receive support and counseling from the Educational Psychologist on campus.

The **Office of Career Services** offers centralized, comprehensive and coordinated career development, through appointments, sessions and workshops, building relationships and longstanding collaborations between students/alumni and potential employers. In the past three years the Office has expanded the quality of the services offered by acquiring a Career Services Manager tool, Goinglobal, as well as the handling of the international internship positions and the work study positions, transforming it thus into a hub for career-related issues. The Office moved dynamically to the era of social media utilizing Facebook and Linkedin. The variety of programs and services offered to students and alumni include: counseling sessions about career advising and graduate studies advising; an online test which identifies strengths and personality preferences aiming to assist the students in their selection of a major; Goinglobal, a tool offering job openings abroad; skills workshops about job search and job interview techniques; Career networking events; JobBank offering part-time and full-time positions; Career Days where the students have the opportunity to have a short interview with a company representative; International Internship program.

7. Criteria for admission

Admission requirements are not major specific. The College has a general admissions policy based on the American system of higher education. Admissions criteria are specified in the College catalogue and are in accordance to the QAA Quality Code Part B: Assuring and enhancing academic quality Chapter B2: Recruitment, Selection and Admission to higher education.

Upon admission, students register for a BA in Combined Studies and may transfer to the OU programme up until completion of Level 4.

In relation to the recruitment strategy, the Admissions Office organizes 5 promotional "Discover DEREE Day" recruitment events per academic year, where members of the faculty provide brochures and information about the programme. During that event, faculty and the admissions team are also provided with the opportunity to communicate the aim and educational objectives of School of Business programmes. The Admissions Office also produces print / marketing material for specific programmes with the direct aim to promote them to target audiences through all types and methods of Above the Line and Bellow the Line Advertising. More specifically, the Admissions Office promotes the programme by:

- Participating in Education Fairs and third party events with an Admissions Booth including brochures/banners.

- Coordinating school visits and presentations on the specific programme to all target audiences (school pupils, parents, teachers, principals, career advisers, other public university students with the intention to study in parallel with our Education Institution).

- Organizing focused events across the country to attract candidates from other provinces into the main city campus to study.

- Running direct mailing campaigns (via post and electronic) including Degree Course information.

- Conducting one-on-one info sessions with pupils and parents.

The Admissions Process

To qualify for admission to the academic programs of the College, applicants must demonstrate that they possess the appropriate qualifications to enable them to be successful in the program of their choice. To this end, applicants must meet the following requirements:

The standard minimum entry requirement for the major's programme is the following: 14/20 in the Greek system, an overall average grade of C in the US system, or 24 and above in the International Baccalaureate or the equivalent of any other educational grading system. Applicants whose grades are between 11/20 and 13.99/20 or its equivalent, may be admitted to the College on a provisional basis.
Students admitted on a provisional basis will be required to fulfil the following conditions in order to be allowed to continue on their selected major after the completion of one academic year after their acceptance to DEREE:

- Meet with an assigned advisor at the Academic Advising Office at least twice every month or whenever the advisor thinks it is necessary. The assigned advisor will monitor the student progress very closely and may require that they seek academic help through the Student Academic Support Services.

- The number of courses students will be allowed to register for will be determined by their English language placement (see section "English Language Requirements"). However, in no case will they be allowed to register for a total of

more than 2 courses if placed in EAP 1002 or for more than 4 courses if placed in WP 1010. Students with provisional status who are placed in EAP 999, EAP 1000, EAP 1001 must first complete their English for Academic Purpose courses before they begin taking College level courses along with EAP 1002.

- Students who have successfully completed only the EAP sequence during their first academic year will be able to continue.

- Achieve a minimum cumulative average (CI) of at least 2.0 after one academic year.

- After the completion of one academic year on provisional status, students' performance will be reviewed by the Committee on Academic Standards and Policies (CASP), which will decide on student progression and/or new conditions.

- Students on provisional status are subject to the College probation policy (see section "Academic Probation").

The following is required for all freshmen applicants:
1. A completed application form.
2. A letter of recommendation from an academic teacher or professor.
3. An official secondary school transcript and an official copy of a secondary diploma, both legally certified.
4. A certified copy of their identity card for Greek citizens or a valid passport for non-Greek citizens.
5. An interview with an admissions counsellor.
6. Evidence of proficiency in English.

Evidence of Proficiency in English

All applicants must demonstrate proficiency in the English language either by taking the College's English Placement Test (EPT) or by submitting any evidence derived from one of the following tests:

Pearson test of Academic English (PTE Academic): 58 or greater
Michigan State University Certificate of Language Proficiency (MSU-CELP)
Michigan Proficiency Certificate
Cambridge Proficiency Certificate
Cambridge Advanced English (CAE) with Grade A only
International Baccalaureate Certificate*
International Baccalaureate Diploma
IELTS: (academic) 6.5 or above
SAT: 450 or above
ACT: 18 or above
TOEFL (paper based): 567 or above
TOEFL (computer based): 227 or above
TOEFL (internet based): 87 or above
GCE higher level English: Grade C or greater
Oxford Online Placement Test: 99 or above

* With grade 4 and above in the English higher-level subject or at least an average of 12 in the higher level subjects.

Applicants presenting a TOEFL score should arrange to have the test results sent directly to the Office of Admissions by the Educational Testing Service (ETS). The College's Institution Code Number is 0925. TOEFL scores are valid for 2 years.
Students may also qualify to take WP 1010 by submitting evidence of fluency based on graduation from an English speaking secondary school or program.

The above listed grades qualify the student for placement directly into WP 1010.

Applicants who do not qualify for WP 1010 but who otherwise show academic promise may be admitted conditionally and placed in the English for Academic Purposes Program.

8. Language of study

The language of instruction is English.

9. Information about assessment regulations

The assessment methods for each module are included in the module syllabus and made known to the student through postings on the Blackboard CMS.

The programme uses a variety of summative assessments which directly connect to the Learning Outcomes and measure the mastery of students' knowledge and understanding, cognitive, creative as well as technical and practical skills. Mark schemes are used for each type of summative assessment which comprise a number of criteria for testing the degree to which the students have achieved these outcomes. There are usually two summative assessments per semester/session module: a midterm and a final, each contributing a percentage toward the overall grade in the module. A sample of the assessments is second marked and this sample is reviewed by the External Examiner. Grades are ratified by the Board of Examiners. Several courses also include formative assessments which do not contribute to the mark of the module but provide valuable opportunities for learning and offering feedback to students.

Summative assessments include:
- Individual projects.
- Team projects.
- Research papers.
- In-class examinations.
- In-class presentations.
- Critical review papers.
- Portfolios

Formative assessments include:
- In class presentations.
- In class discussion.
- In class and out of class practice exam tests and quizzes.
- Self-assessments and peer review exercises.
- Lab assignments.
- Summary reports.
- Internet/database searches.

Assessment Procedure (Regulatory Framework)

6.1 Although courses may employ assessment instruments which perform only a diagnostic or formative unction, credit for the completion of a course can only be obtained on the basis of one or more summative assessments. A summative assessment provides a measure of the extent to which a student has achieved the

intended learning outcomes of a course.

6.2 The assessment of a student's academic performance requires a judgment of the quality of his or her work. In all cases, this assessment must be governed by criteria which are explicit and communicated to students.

6.3 Faculty develop rubrics for the assessment of students, and department head ensures that these rubrics are consistent with the program specification and other documentation approved at validation.

6.4 *Second Marking*
All assessed work submitted for credit in programs leading to Open University validated awards are subject to the policy of second marking. This policy extends to all modes of assessment. In implementing the College's policy on second marking, the following procedure is adopted:

6.4.1 The first marker provides the rubric for the assessment of the course (6.3, above), the grade assigned to each item of assessed work and a brief justification for this grade.

6.4.2 Second markers are selected by the department head from the first marker's department, and s/he should be familiar with the course content. The second marker examines a minimum sample of 25% of completed assessments. In all cases the samples is not lower than five.

6.4.3 The sample of work for second marking is generated automatically by the online grading system. This sample comprises all items that have been assigned an A grade or a grade below C (40%), and a representative selection of the remaining items of assessed work. The sample includes work that will be sent to external examiners (thereby providing them with evidence that second marking has been carried out).

6.4.4 The mark should be agreed between the original instructor and the second marker. In cases where it is not possible to reach agreement, a third internal marker is appointed by the department head or area coordinator. All items of assessment for that course are re-marked if the third marker recommends a significant change in the grade assigned to any item of assessed work. In this event, the entire cohort is subject to the process of re-marking.

6.4.5 The second (or, in the event of a disagreement, the third) marker prepares a brief report during the marking process to be sent to the external examiner for that course. This report should explain the basis upon which the assessed work was graded and the procedure adopted for the second (and where relevant the third) marking; provide an analysis of the distribution of marks between students and modes of assessment; identify any issues that were encountered in the assessment problems; and make recommendations for the future assessment of the course.

6.4.6 All decisions on grades remain provisional until they have been confirmed at the relevant Board of Examiners.

6.5 *External Examiners*
The University is responsible for the appointment of external examiners. Their role is to ensure that justice is done to the individual student and that the standard of the University's validated awards is maintained.

6.5.1 The specific responsibilities of external examiners include:

- the impartial assessment of students comparing their performance with that of their peers undertaking comparable programs of higher education elsewhere and in the light of subject benchmarks and qualification descriptors;
- approving the form and content of proposed examination papers, coursework, assessment rubrics and other assessments that count towards the award, including the approval of alternative assessments and adjustments made for students with declared disability or special needs;
- advising on any proposed changes to the approved assessment regulations or assessment strategy
- which will directly affect students currently on the program;
- ensuring that assessment criteria are correctly interpreted and that there is parity of assessment across the cohort;
- moderating the marks awarded by internal examiners;
- meeting students and, where appropriate, conducting *viva voce* examinations;
- ensuring that the assessments are conducted in accordance with the approved program regulations;
- attending the meetings of the board of examiners at which decisions on recommendations for award are made and ensuring that those recommendations have been reached by means in accordance with the University's requirements and normal practice in UK higher education.
- Enhancement-led reporting to the College including student performance and academic standards, appropriateness of curriculum content/teaching and learning strategies as well as on the effectiveness of the assessments and any lessons to be drawn from them
- reporting to the Open University on the required report proforma and any matters of serious concern arising from the assessments which put at risk the standard of the University's award.

6.5.2 Once the process of second marking has been completed (6.4, above), the summative work completed by a sample of students on each course is sent to the relevant external examiners. This sample will comprise all items that have been assigned an A or F (all work above 70% and below 40%) grade and a representative selection from items receiving intermediate grades.

6.5.2.1 The size of the samples will be agreed with the external examiners, and they will include items that have been second marked (6.4.3, above).

6.5.2.2 Samples of assessed work completed in the Summer Session II and Fall Semester will be available for External Examiners to review on campus in the Fall; samples of work completed in the Spring Semester and Summer Session I will be available for External Examiners to review on campus in the Summer.

6.5.2.3 Any amendments to the marks of the sample as a result of external moderation must be applied to the rest of the cohort.

6.5.2.4 The Validation Office will receive the external examiners' reports and forward them for consideration by Boards of Examiners, Program Committees, and the Registrar's Office. The Open University also receives copies of response to External Examiners reports.

6.6 *Boards of Examiners*
Boards of Examiners carry full responsibility for the assessment of students in accordance with the College's regulations and for recommending the conferment of an

Open University award to students who have fulfilled the objectives of the approved program of study and achieved the standard required for the award.

6.6.1 A Board is established for each program or cluster of programs that leads to Open University awards. The responsibilities of a Board of Examiners are to:
- approve (or establish arrangements for the approval of) assessment tasks, examination papers and project titles both for the initial assessment of students and any subsequent reassessments;
- ensure that assessment tasks, examination papers and project titles are moderated by appropriate external examiners; confirm the grades assigned to students majoring in the relevant discipline or clusters of disciplines in accordance with the College's regulations;
- recommend the conferment of awards to students who have fulfilled the objectives of an approved program of study and achieved the standard required for the award;
- review the progress of students, ensuring that they achieve the required learning outcomes and taking into account the recommendations of the Committee of Academic Standards and Policies on students with mitigating circumstances;
- determine the form of assessment that should be offered to those students who have failed or have been unable to take the assessment for acceptable reasons;
- receive and approve recommendations from the Committee on Disability and Learning Differences for the assessment of students with special requirements; monitor the forms and conduct of assessment and patterns of student achievement on the programs for which it is responsible;
- act in accordance with the outcome of any appeals made through the Appeals Procedure.

6.6.2 The membership of Boards of Examiners shall comprise a representative for each course contributing to the program(s) for which it is responsible, the external examiner(s), and the relevant department head(s) or area coordinator(s). The chairs of Boards (who will normally be department heads or area coordinators with responsibility for programs other than those which fall within the remit of the Board) will be appointed by the Academic Council. Students are not members of Boards of Examiners.

6.6.3 External examiners must be present at meetings of the Board of Examiners which have been convened for the purpose of assessing students for an award or recommending the conferment of an award upon a student (6.6.1 (c) and (d) in the Board's terms of reference). All decisions on grades remain provisional until they have been ratified at a meeting of the Board attended by the relevant external examiner(s).

More information on Assessment, Progression and Awards is provided under section 7 in the Regulatory Framework (APPENDIX).

10. Methods for evaluating and improving the quality and standards of teaching and learning.

Programmes use the following direct and indirect methods for evaluating and improving the quality of teaching:

- On line Course Evaluation for each module (through *CourseEval*). This is submitted anonymously by students in all modules. The completed evaluation forms are processed by the Registrar's office. Following submission of grades, results are sent electronically to the Provost, the Deans, the Department Heads/Programme Coordinators and the course instructor. They are also available to the President and the VP of Human Resources. Results are taken into consideration both in terms of improving teaching but also evaluating faculty.
- Senior Exit Survey: completed by all graduating students.
- Module Leader Reports where feedback from the course evaluations is also considered.
- At the end of each academic year faculty members and instructors submit a Faculty Activity Report (FAR) to their respective academic Dean. In the FAR faculty summarize their teaching and professional activities for the academic year as well as define their goals and aspirations for the next academic year. The FAR also includes a self-evaluation section.
- Feedback from meetings between External Examiners and students.
- Departmental meetings with the student Academic Society.
- Representation of Academic Societies through their presidents in the Programme Committees. Student concerns are discussed and feedback is communicated back to the students by the relevant Society presidents.
- Student advising.
- Students may always express concerns to the Department Heads, Deans, the Provost or the President either individually or through the Student Association.

The College places high value on effective pedagogical practices in the classroom by:

- Providing its faculty with the resources to improve the quality of instruction such as computers, smart classrooms, and electronic and print library resources, and training in new instructional technologies such as Blackboard.
- Supporting workshops, seminars, guest speakers, and retreats on best practices in teaching.
- Supporting faculty in the organization and hosting of international conferences at ACG
- Supporting faculty on visiting teaching fellowships.

The College is an institutional member of the **Faculty Resource Network** (FRN) at New York University. Established in 1984, the Network is an award-winning, nationally recognized faculty development initiative involving over 16,000 faculty members who teach more than 200,000 undergraduate students at a broad cross section of colleges and universities across the United States.

DEREE-ACG is also a member of the **Global Liberal Arts Alliance** (GLAA), an international, multilateral partnership of American style liberal arts institutions with the goal of supporting excellence in liberal arts education on a transnational basis.
The Great Lakes Colleges Association, based in Ann Arbor, Michigan, coordinates the activities and projects of the Alliance and was instrumental in its formation. There are presently 27 institutions representing 15 nations in the Alliance membership.
GLAA's purpose is to exchange knowledge, expertise and experience among institutions committed to education in the tradition of the liberal arts and sciences.

DEREE-ACG's **Teaching and Learning Center** (TLC) focuses on academic staff

development. The goals of the TLC are to promote best practice (both US and UK) in pedagogy by

- Offering programs which engage faculty in continuous improvement of teaching.
- Supporting faculty in professional development in teaching.
- Promoting the value of teaching inside and outside the University Community.
- Encouraging faculty to explore new teaching methods and technologies.

Throughout the academic year the TLC organizes frequent training sessions on pedagogy and encourages faculty to explore developments in teaching technologies and adopt learner-centered practices. Through a dedicated Blackboard container full of material related to classroom needs, which is made available to all DEREE instructors, TLC facilitates faculty efforts to keep up with best practices in pedagogy.

Annexe 1: Curriculum map

Annexe 2: Notes on completing the OU programme specification template

Annexe 1 - Curriculum map

This table indicates which study units assume responsibility for delivering (shaded) and assessing (✓) particular programme learning outcomes.

LEVEL 4

	Unit	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	D1	D2	D3
1	PS1000		✔																			▓				▓						✔		
2	PS1001		✔																			▓				▓						✔		
3	MA1105	✔																									✔							
4	MA2010	✔																	✔								✔							
5	ITC2188				✔				▓													▓		✔					✔				✔	
6	ITC2186						✔															▓		✔		✔								
7	ITC2293							✔																✔						✔				
8	ITC2276				✔																			✔					✔					

LEVEL 5

	Unit	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	D1	D2	D3
1	EN3942																					▓	✔									✔	✔	
2	PH3005			✔															✔													✔		
3	ITC3234				✔				▓										✔			▓							✔					
4	ITC3106	✔																								▓								
5	ITC3260				✔														✔			▓		✔					✔	✔		✔	✔	
6	ITC3275						✔											✔				▓		✔						✔		✔		
7	ITC3319											✔																						
8	ITC3121												✔								✔													

LEVEL 6

	Unit	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	D1	D2	D3
1	MG/CS4157								✔										✔			▓				✔		✔				✔	✔	
2	ITC4680										✔								✔	✔	✔								✔			✔		
3	ITC4314								✔		▓										✔			✔					✔	✔				
4	ITC4322													✔				✔			✔			✔					✔	✔				
5	ITC4443														✔			✔						✔					✔					
6	ITC4426													✔				✔		✔	✔			✔					✔	✔				
7	ITC4242															✔				✔	✔			✔					✔	✔			✔	
8	ITC4827																	✔		✔	✔			✔					✔	✔	✔	✔		

Annexe 2: Notes on completing programme specification templates

1 **-** This programme specification should be aligned with the learning outcomes detailed in module specifications.

2 – The expectations regarding student achievement and attributes described by the learning outcome in <u>section 3</u> must be appropriate to the level of the award within the **QAA frameworks for HE qualifications**: <u>http://www.qaa.ac.uk/AssuringStandardsAndQuality/Pages/default.aspx</u>

3 – Learning outcomes must also reflect the detailed statements of graduate attributes set out in **QAA subject benchmark statements** that are relevant to the programme/award: <u>http://www.qaa.ac.uk/AssuringStandardsAndQuality/subject-guidance/Pages/Subject-benchmark-statements.aspx</u>

4 – In section 3, the learning and teaching methods deployed should enable the achievement of the full range of intended learning outcomes. Similarly, the choice of assessment methods in section 3 should enable students to demonstrate the achievement of related learning outcomes. Overall, assessment should cover the full range of learning outcomes.

5 - Where the programme contains validated **<u>exit awards</u>** (e.g. CertHE, DipHE, PGDip), learning outcomes must be clearly specified for each award.

6 - For programmes with distinctive study **routes or pathways** the specific rationale and learning outcomes for each route must be provided.

7 – Validated programmes delivered in **<u>languages other then English</u>** must have programme specifications both in English and the language of delivery.