

## QUALITY ASSURANCE DOCUMENT QA3 - PROGRAMME SPECIFICATION

<b>1. Target Award</b>	Certificate of Higher Education awarded by Arden University
<b>2. Programme Title</b>	Certificate of Higher Education in Computing
<b>3. Exit Awards</b>	
<b>4. Programme Leader(s)</b>	Dr. Steve Presland
<b>5. Delivery Model</b>	Online Blended learning
<b>6. Start date</b>	September 2015
<b>7. Programme Accredited by</b> <i>(PSRB or other, if applicable)</i>	
<b>8. UCAS Code</b> <i>(If applicable)</i>	
<b>9. Relevant QAA subject benchmark statement</b>	Computing (2007)

### 10. Programme Aims

The Certificate in Higher Education programme is designed to enable students to achieve a Certificate in Higher Education in Computing by undertaking a rigorous study of theories, techniques and issues and acquiring the practical skills that are essential within the changing environment such that they can pursue related careers or further relevant academic study.

The programme is designed to provide opportunities for students to develop their knowledge and skills in computing in a flexible way. Learning materials have been developed which allow students to maximise the time they have available for study and the programme delivery provides additional support through either on-line or structured tutor lead sessions. The curriculum provides a broad based experience exposing the learner to a range of relevant aspects of computing in a progressive way.

More specifically the programme will:

- Allow students to develop professional level skills and understanding across a range of computing disciplines.
- Equip students with the essential skills and tools to work professionally in a computing situation and to be creative and professional practitioners when working independently and when collaborating with others as part of multidisciplinary teams.
- Enable students to communicate effectively through a variety of media and presentational forms to specialist and non-specialist audiences.
- Give students an appreciation of the continuing developments in computing and equip them to keep up to date with these developments.
- Provide a stimulating online academic environment in which students can develop confidence as practitioners and as individuals who are part of a highly engaged community of learners and thereby to inspire students to become lifelong learners.

### 11. Intended learning outcomes and the means by which they are achieved and demonstrated

### **11a. Knowledge and understanding**

- A01 - Identify, explain and evaluate current and evolving trends, technologies and methodologies within Computing.
  - A02 - Systematically appraise relevant principles, theories and methodologies of systems design.
  - A03 - Evaluate relevant computer technologies to meet requirements in a range of novel or complex contexts.
  - A04 - Critically review current computer systems in light of recent developments in the field
- Acquisition of knowledge and understanding (A1 – A4) is through a combination of online tutorials, group discussions and independent and directed study, supported throughout by comprehensive online teaching materials and broader resources. This is achieved through a pedagogy that includes assignment work, group forums and project-based activities.

### **11b. Intellectual (thinking), practical, affective and transferable skills**

- B01 - Identify issues and formulate appropriate methods of investigation and evaluation.
  - B02 - Select and synthesise information from a variety of sources and utilise judgement to draw appropriate conclusions and make recommendations.
  - B03 - Utilise problem solving skills in order to create solutions to well defined problems in a variety of theoretical and practical situations.
  - B04 - Apply appropriate theoretical concepts and practical techniques to the solution of well defined problems.
  - B05 - Synthesise and apply methodologies, techniques, tools and technologies from a range of fields within computing to provide complete solution to novel or complex problems.
- Intellectual skills (B1 – B5) are developed throughout the programme by the methods and strategies outlined in section 11a, above.
- C01 - Select and use appropriate combinations of hardware and software in order to create solutions to novel or complex problems in a variety of theoretical and practical situations.
  - C02 - Select and apply appropriate methodologies and tools in the design of computer systems.
  - C03 - Plan, design, develop and evaluate relevant computer-based solutions to a range of novel or complex problems using up to date tools and technologies.
  - C04 - Articulate reasoned evidence and conclusions.
  - C05 - Demonstrate flexibility in adapting to different contexts.
- Practical and professional skills (C1-C5) are employed in the production of solutions to real life situations developed through set scenarios, exercises and practical activities.
- D01 - Communicate effectively through appropriate media.
  - D02 - Evaluate information sources including academic sources, manufacturer information and Internet sources.
  - D03 - Work effectively on their own and demonstrate understanding of being part of a team, taking personal responsibility for their own efforts and outputs.
  - D04 - Manage time effectively by learning to plan and prioritise work in order to meet specified deadlines.
  - D05 - Learn independently in the spirit of critical and self-reflective enquiry.
- Transferable skills (D1 – D5) are developed throughout the programme. The skills of communication, critical use of source material including the Internet, and self-management (D1, D2, D3 and D4) are integral to coursework. Personal responsibility (D3, D4) is an important skill as the student progresses

through the programme. Students are required to complete a number of assignments that reward independence, originality and critical enquiry, and which further enhance their communication and self-reflective skills. (D1 – D5)

## 12. Graduate Attributes and the means by which they are achieved and demonstrated

- E01 - **Discipline Expertise:** Knowledge and understanding of Computing. Possess a range of skills to operate within this sector, have a keen awareness of current developments in working practice being well positioned to respond to change.
- E02 - **Effective Communication:** Communicate effectively both, verbally and in writing, using a range of media widely used in relevant professional context. Be IT, digitally and information literate.
- E04 - **Professional Skills:** Perform effectively within the professional environment. Work within a team, demonstrating interpersonal skills such as effective listening, negotiating, persuading and presentation. Be flexible and adaptable to changes within the professional environment.
- E05 - **Reflective Practitioner:** Undertake critical analysis and reach reasoned and evidenced decisions, contribute problem-solving skills to find and innovate in solutions.
- E06 - **Lifelong Learning:** Manage employability, utilising the skills of personal development and planning in different contexts to contribute to society and the workplace.

## 13. Learning and teaching methods and strategies

Throughout the programme, the learner is encouraged to undertake independent study to both supplement and consolidate what is being learnt and to broaden their individual knowledge and understanding of the subject. Learning is facilitated largely by set projects with regular tutor support including group forums. This allows students to not only discuss with staff their own work and progress, but to also to engage in the discussions that relate to the work of their peers. There is a requirement for written work at all levels including reports, essays, practical tasks and examinations upon all of which detailed feedback is supplied by tutors. Critical analysis is developed and encouraged throughout the programme..

Intellectual development is further encouraged via formative assessment tasks including set scenarios, in-module activities, self-initiated briefs, and discussion with tutors and peers (in online forums/debates). Specific modules support the development of self-reflective skills. In addition, each student's thinking skills will be evident in a summative assessment process which requires and rewards learners for the demonstration of creative thinking and problem solving, analysis, judgement and self-reflection in the development of solutions. Throughout, the learner is encouraged to develop intellectual skills further by undertaking independent study and research.

Planning development is provided within the modules as assignments build to form realistic project tasks. Practical skills are further developed and integrated through a series of in-course online activities and projects intended to test skills acquired. Group forums provide opportunities to discuss ideas, progress, the work of others and the strengths and weakness in the work presented. Activities are provided so that students can work independently to consolidate their knowledge and grasp of practical skills.

#### 14. Assessment methods and strategies

Intellectual skills are assessed through a combination of in-course formative exercises and summative assignments, including the submission of portfolios of work, complete design documentation and computer based artefacts that demonstrate the skills required.

To support the development of practical skills, students must supply worked materials and evidence in support of their assignments. Critical reasoning, good presentation and sound evidence trails in all assignments are rewarded. Assessment briefs include a variety of contextual setting. Students receive feedback on all activities and assignments which includes practical examples for improvement in the application of theory to practice to help them improve both aspects of their skill base.

To develop transferable skills all assignments must meet time deadlines. All assessed work must be submitted independently even where group activity has been an element of the process. Students must take responsibility for their own work. All assignments require students to adopt a spirit of critical enquiry and self-reflection which is rewarded in marking guides. All assessed work is expected to be presented in appropriate formats with structures and language that meets the needs of the intended audience. These guides are shared with students.

#### 15. Employability

Typically all students on this programme are likely to be in employment. However, an increasing number of younger undergraduate students joining the programme may be in part time work. It is therefore important that there is support given to all students as regards career progression. In the first instance, as well as the subject knowledge and skills covered by the programme, this is achieved by the emphasis on transferrable skills across the programme that also allows students to develop a portfolio of evidence indicating how they have demonstrated a range of skills in different settings.

A University of Glasgow Report, 'Employers Perceptions of the Employability Skills of New Graduates' (2011)<sup>1</sup> identified commonly accepted desirable attributes of graduates:

- Team working (D3)
- Problem solving (B1-B5,C1-C3)
- Self-management (D3, D4)
- Knowledge of the subject (A1-A5)
- Literacy and numeracy relevant to the post (D1)
- ICT knowledge
- Good interpersonal and communication skills (C4,D1,D3)
- Ability to use own initiative but also to follow instructions (C5,D3,D4)
- Leadership skills (where necessary)

These attributes have been mapped against the Programme Learning Outcomes above and, of course, are reflective of the Graduate Attributes (E1-E6).

#### 16. Entry Requirements

- Two Subjects at GCE A level or equivalent, plus passes at grade C or above in three subjects at

<sup>1</sup> [http://www.edge.co.uk/media/63412/employability\\_skills\\_as\\_pdf\\_-\\_final\\_online\\_version.pdf](http://www.edge.co.uk/media/63412/employability_skills_as_pdf_-_final_online_version.pdf)

GCSE level or equivalent; or

- Completion of a recognised Access Programme or equivalent.
- IELTS 6.0 or equivalent for those students whose medium of prior learning was not English.
- Candidates who demonstrate an ability to study the programme as evidenced through a personal statement (of between 350-500 words) that addresses their motivation for undertaking the programme; including their references, relevant prior experience and qualifications.

Exemptions may be granted in respect of other qualifications subject to the Arden University APCL regulations.

## 17. Programme Structure

### Level 4

Module Code	Module Title	Credits	Module Type (Core/Option)
	Professional Development	20	Core
	Computer Technology	20	Core
	Website Design	20	Core
	Database Design	20	Core
	Software Engineering	20	Core
	Information Systems in Organisations	20	Core

18. Subject:

*Select from:*

<https://www.hesa.ac.uk/component/content/article?id=1787>

Last Updated: December 2014

**Annex – Mapping of Programme Learning Outcomes and Modules**

Programme Learning Outcomes		Module Type (Compulsory (C) or Option (O))	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5
			Modules																		
Level 4	Professional Development	C						Y	Y					Y		Y	Y		Y	Y	Y
	Computer Technology	C	Y		Y			Y	Y		Y	Y	Y	Y			Y	Y	Y	Y	Y
	Website Design	C	Y						Y	Y	Y	Y	Y				Y		Y	Y	Y
	Database Design	C	Y	Y					Y	Y		Y	Y				Y		Y	Y	Y
	Software Engineering	C	Y	Y		Y	Y		Y		Y		Y		Y	Y	Y	Y	Y	Y	Y
	Information Systems in Organisations	C					Y		Y		Y		Y	Y		Y	Y	Y	Y	Y	Y

