

## ARDEN UNIVERSITY QUALITY ASSURANCE DOCUMENT QA3 - PROGRAMME SPECIFICATION

<b>1. Target Award</b>	Masters in Science
<b>2. Programme Title</b>	MSc IT Security Management
<b>3. Exit Awards</b>	PG Diploma in IT Security Management  PG Certificate in IT Security Management
<b>4. Programme Leader(s)</b>	Benjamin Silverstone
<b>5. Delivery Model</b>	Online  Blended learning delivery by Arden University staff and supported via the VLE.
<b>6. Start date</b>	January 2017
<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>	QAA Master's Degrees in Computing (2011) QAA General Master's Degrees (2015)

### 10. Programme Aims

The aim of the Arden University MSc IT Security Management programme is to provide a distinctive, inter-disciplinary and integrative educational programme aimed primarily at individuals who are either reemployed in or are desirous of entering management or strategic roles within the computing sector. The programme is designed to expose programme participants to a range of relevant topics relating to management within a computing or telecommunications context.

Online teaching materials are derived from established academic research in order to develop critical powers of analysis, reflection and the further development of interpersonal skills in preparation for management roles.

Programme participants will build on their existing understanding of the management of computing projects and organisations in a way that allows them to relate this to a range of contemporary management and computing ideas and practice within a global context as well as developing skills such as information security, enterprise design and infrastructure management. This is achieved through critical thinking, creativity and personal development.

In particular, based upon the established tasks and responsibilities associated with graduates, the purpose of the programme is to enable students to demonstrate the following:

A critical understanding of the processes and procedures associated with Information Systems Security and how to implement them

Critically assess and contribute to organisational security policies to ensure that they operate in a supportive and ethical manner enabling effective workflow

Take ownership of the security agenda within an organisation and work to support managers in the implementation of policies.

Take ownership of the generation and implementation of the prevention plan

Evaluate and embed the security charter within the organisation and support others in ensuring that it is effectively implemented by all employees.

Critically understand the rules for Information Systems security and ensure that they are applied ethically and equally across the organisation.

Arden Values Mapping: the table below identifies how programme outcomes (listed within section 11) meet provide for full coverage of Arden University Values.

	Knowledge & Understanding	Intellectual Thinking	Practical Skills	Transferable Skills
We Support People	A4	B1	C6	D4, D6
We Do the Right Thing	A2, A4, A5, A7	B1, B2, B3, B5	C2, C4, C5	D3, D5, D6
We Innovate	A1, A6	B4, B5	C1, C3, C5	D4, D6
We Take Ownership	A1, A2, A3, A4, A5, A6, A7	B1, B5	C1, C2, C3, C4, C5	D4, D5, D6

<b>11. Intended programme learning outcomes and the means by which they are achieved and demonstrated</b>		
<b>MSc (180 credits)</b>		
<b>11a. Knowledge and understanding</b>	<b>The means by which these outcomes are achieved</b>	<b>The means by which these outcomes are demonstrated</b>
<p>A1 – Critically understand the evolution of technological trends and evaluate opportunities for adoption of emerging technologies in IT practice</p> <p>A2 – Evaluate internal and external security threat and work to develop innovative strategic approaches to mitigate them</p> <p>A3 – Analyse potential risk factors and demonstrate a critical understanding of risk reduction initiatives within an IT or enterprise context</p> <p>A4 – Critically evaluate approaches to the development of security policies and demonstrate the skills needed for application of ethical practice</p> <p>A5 – Critically apply ethical approaches to the development and management of</p>	<p>Learning and Teaching methods and strategy:</p> <p>Acquisition of knowledge and understanding (A1 – A7) at all levels is through an integrated learning and teaching pedagogy that includes both asynchronous and synchronous activity. That is:</p> <p>Asynchronous</p> <p>Independent and directed student study, supported throughout by comprehensive online multi-media teaching materials and resources accesses through our VLE</p> <p>Guided group / project based work</p> <p>Discussion forums where students discuss and critically engage with themes emerging from the materials they engage with, following the posing of questions or propositions, case studies or similar by either tutor or students themselves</p> <p>Podcasts and narrated PowerPoints</p> <p>Synchronous</p>	<p>Knowledge and understanding are assessed through in-module assessments of portfolio submissions, presentations, time-constrained examinations, and report based assignments.</p> <p>Formative assessments are the precursor to the summative assessments. Appropriate and diverse formative assessments are provided for students and are communicated to them via a clear overview to be found in the assessment brief for each module.</p>

<p>Information Systems governance within an organisation</p> <p>A6 – Evaluate the implications of cloud systems and associated application for information systems in the workplace</p> <p>A7 – Undertake self-led research into computing issues in the workplace demonstrating an ethical approach to the application of research principles.</p>	<p>Online seminars facilitated by VOIPs where theory and practice are integrated.</p> <p>Live chats</p> <p>Based upon the profile of our typical student body, our strategy enables students to engage with a variety of learning tools that best meet their learning styles, overall objectives and personal circumstances.</p> <p>Independent study is the cornerstone of the learner experience supported by engagement with the specialist tutor and peer engagement.</p> <p>There is a requirement for written work at all levels including reports, essays, practical tasks, developed targeted plans etc., and our formative assessment policy informs how feedback is supplied by tutors at the draft assessment phase.</p>	
<p><b>11b. Intellectual (thinking) skills</b></p>	<p><b>The means by which these outcomes are achieved</b></p>	<p><b>The means by which these outcomes are demonstrated</b></p>
<p>B1 – Individually and collaboratively analyse complex problems and requirements and systematically synthesise and evaluate a range of potential solutions.</p> <p>B2 - Demonstrate systematic, ethical and creative approaches to problem solving, showing initiative and originality.</p>	<p>Intellectual skills (B1 – B5) are developed throughout the programme by the methods and strategies outlined in section A, above.</p> <p>Specific modules support the development of quantitative and qualitative analysis, and the development of criticality and self-reflective skills. In addition, the 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 contextually</p>	<p>Intellectual skills are assessed through a combination of in-course formative exercises and summative assignments, including the submission of portfolios, self-reflective evidence, statistical analyses, qualitative judgements, and research reports/dissertation.</p>

<p>B3 - Systematically collect and use data from a wide range of sources to synthesise and evaluate effective decision alternatives in relation to design, construction or management of Information Systems.</p> <p>B4 - Synthesise and apply innovative methodologies, techniques, tools and technologies from a range of fields within computing to provide complete solution to novel or complex problems.</p> <p>B5 - Utilise judgement to draw appropriate conclusions and make innovative recommendations.</p>	<p>relevant solutions, and a willingness to explore and engage with a range of media.</p> <p>Throughout, the learner is encouraged to develop intellectual skills further by undertaking further independent study and research.</p> <p>Students will be required to demonstrate skill development both individually and collaboratively through the collection of information, analysis and evaluation of findings and presentation of solutions.</p>	
<p><b>11c. Practical skills</b></p>	<p><b>The means by which these outcomes are achieved</b></p>	<p><b>The means by which these outcomes are demonstrated</b></p>
<p>C1 - Shows technical expertise, making effective and efficient use of skills and adapting to new situations.</p> <p>C2 - Effectively and efficiently undertake a project within an organisation demonstrating effective individual working skills</p>	<p>Practical and professional skills are employed in the production of solutions to real life situations developed through set briefs, exercises and practical activities. The important modern day skills of managing projects, working within differing organisational and national cultures are provided by specific modules, as are specific inputs with an emphasis upon practical functional decision making skills related to market planning and strategy, market intelligence and communications; managing others; and managing knowledge in addition to specific</p>	<p>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 commercial and geographical 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.</p>

<p>C3 - Effectively identify relevant information, software and data strategies in an organisation to enable innovation</p> <p>C4 - Articulate reasoned evidence to justify conclusions and recommendations.</p> <p>C5 - Demonstrate flexibility in adapting to novel and complex contexts.</p>	<p>practical skills commensurate with the chosen pathway.</p> <p>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 and particularly support the development of C4. Activities are provided so that students can work independently to consolidate their knowledge and grasp of practical skills. The in-course activities and assessment process in the final year particularly emphasise the acquisition of C2 and C3 with specific modules devised to highlight the practical differences in management skills required in differing contexts.</p>	
<p><b>11c. Transferrable skills</b></p>	<p><b>The means by which these outcomes are achieved</b></p>	<p><b>The means by which these outcomes are demonstrated</b></p>
<p>D1 - Systematically and competently collate, synthesise and communicate complex information effectively</p> <p>D2 - Critically evaluate and use relevant research methods, both qualitative and quantitative.</p> <p>D3 - Demonstrate a reflective approach to work and the capacity to take responsibility</p>	<p>Personal responsibility becomes an increasingly important skill as students' progress, culminating in the writing of the Dissertation.</p> <p>As the programme progresses work becomes more complex and students are tested on their abilities to respond positively to feedback from a variety of audiences, as well as to manage increasingly large workloads. Students are required to complete a number of assignments and a 'research artefact' that rewards independence originality, and critical enquiry,</p>	<p>To develop transferable skills all assignments must meet time deadlines and word count guidelines. 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. These guides are shared with students.</p>

<p>for engaging in self-directed life-long learning for professional development.</p> <p>D4 - Work autonomously and collaboratively demonstrating the highest professional and ethical standards</p> <p>D5 - Manage time effectively by learning to plan and prioritise work in order to meet specified deadlines.</p> <p>D6 - Learn independently and collaboratively in the spirit of critical and self-reflective enquiry.</p>	<p>and which further enhance communication and self-reflective skills.</p>	
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Exit Awards: Programme Outcome

Exit Award	Knowledge & Understanding	Intellectual Skills	Practical Skills	Transferrable Skills
Post Graduate Diploma (120 credits)	A1, A2, A3, A4, A5, A6	B1, B2, B3, B4	C1, C3, C5	D1, D3, D4, D6
Post Graduate Certificate (60credits)	A1. A2. A3	B1, B2, B3	C1, C3	D3, D6

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

**Graduate Attributes**

The concept of the Arden University Graduate, based upon the definition of ‘graduate attribute’ by Bowden et al (2000) has been developed around 6 attributes.

Lifelong Learning: Manage employability, utilising the skills of personal development and planning in different contexts to contribute to society and the workplace.

Reflective Practitioner: Undertake critical analysis and reach reasoned and evidenced decisions, contribute problem-solving skills to find and innovate in solutions

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

Discipline Expertise: Knowledge and understanding of chosen field. 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.

Responsible Global Citizenship: Understand global issues and their place in a globalised economy, ethical decision-making and accountability. Adopt self-awareness, openness and sensitivity to diversity in culture.

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.

Discipline Expertise: Knowledge and understanding of chosen field. 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

**The means by which these outcomes are achieved and demonstrated**

All six attributes are relevant to this programme, however, five will be developed throughout Level 7 of the MSc Engineering Management where they are integrated into all modules and assessed via unit study tasks (individual and group work) and through summative assessment tasks. Some graduate attributes are assessed in more than one module allowing for greater development of skills.

Graduate Attribute Mapping

Module	Graduate Attribute
Information Security Strategy Development	Lifelong Learning: Manage employability, utilising the skills of personal development and planning in different contexts to contribute to society and the workplace.
Risk Management Technology and Trend Monitoring	Reflective Practitioner: Undertake critical analysis and reach reasoned and evidenced decisions, contribute problem-solving skills to find and innovate in solutions
Cloud Systems and Applications	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.
Research Project	Discipline Expertise: Knowledge and understanding of chosen field. 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.
IS Governance	Responsible Global Citizenship: Understand global issues and their place in a globalised economy, ethical decision-making and accountability. Adopt self-awareness, openness and sensitivity to diversity in culture.
IT Security Management	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.

### 13. Learning and teaching methods and strategies

#### Distance Learning

Acquisition of all learning outcomes is via engagement with the online module learning material and the online tutoring and programme participant support mechanisms, both of which are delivered via Arden University's ilearn platform (a moodle-based system). The learning material comprises purpose-written self-contained lessons with frequent activities and feedback to generate learning and reinforce the knowledge acquisition through frequent application of learning to specific examples.

Embedded within the text are links to further reading and appropriate websites. Feedback within the learning material is provided to allow programme participants to check their understanding with that of the tutor. Additionally, group learning activities direct programme participants to the tutor-facilitated discussion forums where they engage in discussion with their peers and receive formative feedback from the module tutor.

Each of the 20 credit modules provide programme participants with an understanding of key theoretical and practical management issues, debates and academic informed literatures.

Teaching/learning methods adopted are transferrable across modules and are similar across modules and include online class discussions, exercises/case studies and group discussions.

For each subject being taught a programme of structured online learning activities using both formative and summative assessment is applied. The emphasis is on action learning through the mediation of the module leader for each module.

Learning and Teaching activities are:

Asynchronous

Independent and directed student study, supported throughout by comprehensive online multi-media teaching materials and resources accesses through our Virtual Learning Environment

Guided group / project based work

Research tasks

Discussion forums where students discuss and critically engage with themes emerging from the online materials they engage with, following the posing of questions or propositions, case studies or similar by either tutor or students themselves

Podcasts and narrated PowerPoints

Synchronous

Online seminars facilitated by VOIPs where theory and practice are integrated

Live chats

Based upon the profile of our typical student body, our strategy enables students to engage with a variety of learning tools that best meet their learning styles, overall objectives and personal circumstances. Independent study is the cornerstone of the learner experience, supported by subject specialist engagement with the tutor and peer engagement.

Blended Learning

A strategy which incorporates elements from the above criteria plus the support of face to face input will be utilised.

A-synchronous learning will be supported by in class face to face lectures, seminars and workshops. Students will have full access to the ilearn platform and all programme resources within it. Formative opportunities will be available in class and also via Adobe hosted seminars.

Students will also have access to learning resources at each partner institution.

Student leaning will be supported and nurtured at our partner institutions by our tutor team and dedicated centre administrator and on line via our student support team.

Summative submissions will all be made via the 'Turnitin platform.

#### 14. Assessment methods and strategies

The assessment process involves both formative and summative elements and is continuing in nature.

There will be a focus on encouraging students to apply their knowledge to practical situations. A significant part of this comes from the Dissertation module. Here students will be required to identify a topic of interest to them, which falls within the encompassing field of management. Students will explore this, and will apply their research to the topic, putting forward recommendations which are of practical benefit to the organisation.

The approach to coursework assignments will be to encourage students to apply their knowledge to organisations or case study data sets. This could be achieved through the use of case studies, but will also involve employees applying information and approaches to their own organisations, or an organisation with which they are familiar.

The assessment designed for each module reflects the intentions of that module and will measure the identified learning outcomes. A variety of assessment strategies will be used to reflect and test the achievement of the learning outcomes. These are detailed within each module and mapped in the table below. Assessment questions and cases are seen to be dynamic and are reviewed quarterly in order to maintain rigour and reflect changes in professional focus and practice.

There is a requirement for written work at all levels including reports, essays, developed plans, portfolios of work etc. and our assessment policy informs how feedback is supplied by tutors at the formative and summative assessment stage. Critical analysis is encouraged at all levels culminating in a Dissertation.

#### Assessment Mapping

All Modules	Summative Assessment	Formative Assessment
Technology and Trend Monitoring	The module will be assessed through a single, 5000 word document (100%). The assessment will be split into two parts. In part one the students will undertake research and evaluate the potential impact of a selected emerging technology. The second part of the assessment will require the students to	Formative feedback opportunities will be via ongoing tasks throughout the module as well as submission of a draft no less than two weeks prior to the final submission date.

	<p>generate a recommendation plan for integrating the emerging technology evaluated in part one to generate an innovative solution to a need within the business.</p> <p>Exact topic and content to be addressed in the paper would be dependent on the research question and would be detailed in the coursework document.</p>	
Information Security Strategy Development	<p>Summative assessment will be catered for through two assessments. Firstly, a case study that evaluates potential information risks as well as security problems within their own organisation will be undertaken to include consideration of strategic issues related to information security. The second assessment will also be via a case study that assesses the application of basic computer forensics skills and how it may impact upon security strategy development.</p>	<p>Formative assessment opportunities will be ongoing through practical task during the module. Before each assessment, students will have the opportunity to submit a draft of their work no less than two weeks prior to the deadline for summative assessment.</p>
Risk Management	<p>2,500 words. Individual Assignment comprising a research into the terms, concepts and principles of risk management. This is with a view to evaluating the existing risk management architecture within their own organisation as a basis to solve IT risk problems.</p> <p>2,500 words. Individual Assignment comprising focusing on risk management architecture within their own organisation, The assessment will require the student to set out the concepts, principles and practices of IT risk management, and how these relate to the business of the organisation. This is with a view to identifying IT risks and how their impact may be assessed positively and negatively going forward</p>	<p>Formative feedback will be provided by tutor responses to online work in the areas specified above and on a draft of the work to be formally submitted for summative feedback.</p>

	by a combination of adopting best-practice and being research informed.	
IT Security Management	<p>Summative assessment is via a report that investigates the student's own workplace to assess the organisations information security policy against the organisations IT practices.</p> <p>Recommendations and solutions will also be effectively communicated as part of the assessment to demonstrate an understanding of the principles of security management.</p>	<p>Formative assessment opportunities will be ongoing through practical task during the module. Before the assessment, students will have the opportunity to submit a draft of their work no less than two weeks prior to the deadline for summative assessment.</p>
IS Governance	<p>Assessment one consists of an audit of existing IS governance within an organisation. It is envisaged that the student will use their own organisation for the context of this assignment. The governance of the organisation will be critically assessed along with the effectiveness and how it links to overall values and strategies. (60%)</p> <p>In assessment two, Students will produce a narrated presentation using established models to suggest revisions to the existing governance of information systems and to demonstrate the vales, risks and opportunities that it will present. This presentation will be graded via peer assessment by three other members of the group. (20%)</p> <p>The final 20% mark for the module will be allocated by the tutor as an assessment of the engagement with the peer assessment process. The report generated by the student on others presentations will form the evidence of assessment. (20%)</p>	<p>Formative assessment will include an agreement of the context, presentation of an outline of the IS governance strategy critique and an outline recommendations and plan document.</p> <p>Draft presentations will be accepted and students will have the opportunity to practice their critiquing skills in preparation for the peer assessment activity.</p>

<p>Cloud Systems and Applications</p>	<p>Part A:</p> <p>A selection of academic papers in the area of cloud and distributed computing would be made available to students. As part of Part A, students are expected to conduct a critical review of the given literature and present a 2000-word review report. Guidance on conduction literature review and the format for the review report shall be provided in the assignment document.</p> <p>Part B:</p> <p>Students will produce a workplace case study for the consumption of non-expert senior managers within their own organization, this demonstrating professional skills. The students will individually submit a 3000-word technical report that forms a reasoned discussion regarding the benefits that their own organization would see from migrating their applications to a cloud architecture addressing issues related to security and management by considering the mechanisms that the organization currently employs and suggesting alternative frameworks to support a move of architecture. The report must be fully referenced and provide justification for the decisions that the student has made.</p>	<p>An outline answer may be submitted for formative assessment no less than two weeks prior to final submission of each component.</p>
<p>Research Project</p>	<p>15000 word dissertation or 5000 word journal article</p>	<p>Normally at least three formative opportunities within the dissertation supervision process.</p>

## 15. Employability

Entrants to this programme are highly likely to be in work, (be it Full or part Time). MSc IT Security Management is designed to offer the degree of flexibility required to ensure that even those employed in full time positions have the maximum opportunity to fulfil their programme of study. The programmes aim to develop skills and knowledge such that graduates can confidently enter the computing management environment or can improve their existing career prospects within it. This degree develops a range of transferrable skills and provides opportunities for these to be evidenced. In particular, the final research project provides the ability to demonstrate higher level academic skills.

The distributed nature of Arden University students makes conventional careers support difficult but the use of the Abintegro provider allows us to offer a range of support in career development and there are opportunities for students to purchase more specialist support if required.

The addition of imbedded graduate attributes adds value to the qualification in terms of providing industry ready graduating students.

## 16. Entry Requirements

Arden University is keen to ensure that the programme is available to all those who can benefit from it.

Normally entry is via:

A degree equivalent to UK second class honours standard in a relevant Computing or IT related subject,

English ability equivalent to IELTS 6.5 (no less than 6.0 in any element), where the medium of undergraduate study was not English;

Applicants with existing postgraduate computing management awards may be eligible for entry with advanced standing and will be considered through the APL process.

Applicants who have substantial managerial / supervisory experience in a relevant IT related function (typically 5 years) and are able to demonstrate via references and supporting curriculum vitae an ability to successfully complete the programme may be admitted where they do not possess degree equivalent qualifications. It is not intended to offer exemptions based on experiential learning.

## 17. Programme Structure



MSc IT Security Management

Module Code	Module Title	Credits	Module Type (Core/Option)	Assessment Method
COM7003D	Technology and Trend Monitoring	20	Core	Management Report
COM7005D	Information Security Strategy Development	20	Core	2 Part Case Study
BUS7006D	Risk Management	20	Core	2 x Assignment
COM7006D	IT Security Management	20	Core	Report on an Organisation's Case Study
COM7007D	IS Governance	20	Core	Report, Presentation and Peer Engagement
COM7008D	Cloud Systems and Applications	20	Core	2 Part Coursework
RES7001D	Research Project	60	Core	Research Proposal and Dissertation or Journal Formatted Article & Viva

18. Subject:	I260 (Data Management)
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Last Updated: December 2018 (V3)

## Mapping of Intended Programme Learning Outcomes and Modules

### MSc IT Security Management

Programme Learning Outcomes Modules		Module Type (Compulsory (C) or Option (O))	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	
Level	Technology and Trend Monitoring	C	X							X	X	X	X	X			X	X		X			X			
	Information Security Strategy Development	C		X						X	X			X	X		X		X			X		X		
	Risk Management	C			X						X		X	X			X	X	X			X	X			
	IT Security Management	C				X				X	X			X	X		X		X			X		X		
	IS Governance	C					X			X	X	X						X	X	X			X	X	X	X
	Cloud Systems and Applications	C						X				X	X	X	X		X	X		X		X				
	Research Project	C						X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	