

ARDEN UNIVERSITY QUALITY ASSURANCE DOCUMENT QA3 - PROGRAMME SPECIFICATION

1. Target Award	Masters in Science
2. Programme Title	MSc Telecommunications Management
3. Exit Awards	PG Diploma in Telecommunications Management PG Certificate in Telecommunications Management
4. Programme Leader(s)	Benjamin Silverstone
5. Delivery Model	Online Blended learning delivery by Arden University staff and supported via the VLE.
6. Start date	January 2017
7. Programme Accredited by <i>(PSRB or other, if applicable)</i>	
8. UCAS Code <i>(If applicable)</i>	
9. Relevant QAA subject benchmark statement	QAA Master's Degrees in Computing (2011) QAA General Master's Degrees (2015)

10. Programme Aims
<p>The aim of the Arden University MSc Telecommunications Management programme is to provide a distinctive, inter-disciplinary and integrative educational programme aimed primarily at individuals who are either employed in or are desirous of entering management or strategic roles within the telecommunications sector. The programme is designed to expose participants to a range of relevant topics relating to management within a telecommunications context.</p> <p>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.</p> <p>Programme participants will build on their existing understanding of the management of computing or telecommunications projects and organisations in a way that allows them to relate this to a range of contemporary management ideas and practice within a global context as well as developing skills commensurate with the selected pathway such as information security, enterprise design and infrastructure management. This is achieved through critical thinking, creativity and personal development.</p>

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:

Critically evaluate and apply skills and knowledge to identify and devise business improvement opportunities and create innovate proposals

Undertake evaluation of implementation through taking ownership of systematic review process to assess benefits.

An ability to evaluate the impact of project and portfolio management on the operations of information management and telecommunications operations.

A maintenance of currency related to existing telecommunications technology.

A critical appreciation of the potential, and ethical impact of emerging technology and trends and ways to leverage these for maximum impact.

Commitment to taking ownership for the reliability, confidentiality, security and integrity of telecommunications systems

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	A2		C3	D1, D5
We Do the Right Thing	A1, A6, A7		C3	D6, D7
We Innovate	A3, A4, A7	B1, B2		D6
We Take Ownership	A1, A2, A3, A4, A5, A6, A7	B1, B2	C1, C2, C3	D1, D2, D3, D4, D5, D6, D7

11. Intended programme learning outcomes and the means by which they are achieved and demonstrated		
MSc (180 credits)		
11a. Knowledge and understanding	The means by which these outcomes are achieved	The means by which these outcomes are demonstrated
<p>A1 – Analyse business planning methods and generate innovative telecommunications solutions to meet planning needs</p> <p>A2 – Evaluate the implications or project and portfolio management on the fulfilment of telecommunications projects in the workplace</p> <p>A3 – Critically understand the evolution of technological trends and evaluate opportunities for adoption of emerging technologies in telecommunications practice</p> <p>A4 – Demonstrate a critical awareness of telecommunications technology development and their innovative applications</p>	<p>Learning and Teaching methods and strategy:</p> <p>Acquisition of knowledge and understanding (A1 – A5) 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>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>A5 – critically evaluate network and internet infrastructure methods</p> <p>A6 – Evaluate the environment of telecommunications operations to include ethical and practical implications</p> <p>A7 – Undertake self-led research into telecommunications issues in the workplace demonstrating an ethical approach to the application of research principles.</p>	<p>Synchronous</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>11b. Intellectual (thinking) skills</p>	<p>The means by which these outcomes are achieved</p>	<p>The means by which these outcomes are demonstrated</p>
<p>B1 - Demonstrate the ability to apply models and theories critically and innovatively to a range of situations of different complexity, with the outcome of giving effective and realistic advice.</p> <p>B2 – Undertake innovative individual and collaborative research on a topic relevant to the work of a telecommunications manager and report the research with appropriate recommendations.</p>	<p>Intellectual skills (B1, B2) 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</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>self-reflection in the development of contextually 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>	
11c. Practical skills	The means by which these outcomes are achieved	The means by which these outcomes are demonstrated
<p>C1 - Develop personal skills to increase effectiveness in managing telecommunications projects.</p> <p>C2 - Show the ability to identify practical solutions to relevant theoretical and practical problems.</p> <p>C3 – Demonstrate an ethical and supportive approach to management within an innovative telecommunications context</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 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. 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 practical skills</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>

	with specific modules devised to highlight the practical differences in management skills required in differing contexts.	
11c. Transferrable skills	The means by which these outcomes are achieved	The means by which these outcomes are demonstrated
<p>D1 - Critically reflect to support enhanced learning, self-awareness and collaboration with others</p> <p>D2 - Identify and critically evaluate pertinent issues, taking responsibility for the generation of relevant and workable solutions within a telecommunications organisation</p> <p>D3 - Undertake effective communication and presentation skills</p> <p>D4 - Effectively use ITC to communicate in a variety of settings</p> <p>D5 - Work independently and collaboratively to take responsibility for own learning and that of others</p> <p>D6 - Undertake multidisciplinary research through the acquisition of skills relevant to telecommunications</p> <p>D7 - Effectively plan and undertake personal development including the awareness of an ethical and socially responsibly dimension to decision making</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, and which further enhance communication and self-reflective skills.</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>

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	C1, C2, C3	D1, D2, D3, D4, D5
Post Graduate Certificate (60credits)	A1, A2, A3	B1	C1, C2, C3	D1, D2, D3

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
Business Plan Development	Lifelong Learning: Manage employability, utilising the skills of personal development and planning in different contexts to contribute to society and the workplace.
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
Telecoms Environment and Operations	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 Project and Portfolio Management	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.
Wireless Technology and Networks	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.
Core Network and Internet Infrastructure	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 learning 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
Business Plan Development	The summative assessment is based on a strategic business plan, for their own workplace, that the students need to develop as a report using the concepts, approaches and frameworks they have studied over the course of this module. The reports key components to be assessed include business case formulation, business model development, market and competitor analysis, cost-benefit analysis, financial projections, risk mitigation strategy and compliance with corporate objectives.	Formative feedback will be provided on each component in the form of feedback on draft work. Draft work may be submitted no less than two weeks prior to summative assessment.
Project and Portfolio Management	5,000 word report based on analysis of a project from the student's workplace that demonstrates application of project management and monitoring tools along with evaluation as to how they have contributed to project success / failure. Assessment of risk and methods of mitigating it in the future will be included.	Formative feedback from the tutor is provided via several in module mini tasks plus the opportunity to submit a report plan prior to the summative assessment. Formative opportunities are listed in detail with the 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 generate a recommendation plan for	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>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>	
Wireless Technology and Networks	<p>Assessment 1</p> <p>Students will research a wireless communication trend that is relevant either to their workplace or the specific area of the industry in which they are employed. It is expected that a range of literature sources will be used to evaluate the use of the technology and then a proposed plan for adopting the technology to include potential benefits.</p> <p>Assessment 2</p> <p>Students will undertake a workplace case study with a set of requirements to build a secure wireless network. The students are expected to produce a 2500-word wireless network solution technical report presenting the proposed design solution to the given specification. Students would be expected to justify the design choices, suggest alternatives and make recommendations for security of the wireless network. The report must be fully referenced with appropriate illustrations.</p>	Formative opportunities will be available for both assessments. In assessment one it is expected that the student will agree the topic and explain the context as well as submit draft work. For assessment two a similar approach is to be adopted.
Core Networks and Internet Infrastructure	The module would be assessed through two assessments. The first assessment (3500 word) is a workplace based technical report of 5000 words, which will require students to critically review existing systems within the area of	A range of activities throughout the module will be used to provide formative feedback. A draft of the final assessment may be submitted

	telecommunications. The second assessment is a narrated presentation (1500 word equivalent) proposing solutions to the current network infrastructure and management	no less than two weeks prior to the final submission date.
Telecoms Environment and Operations	The assessment for this module comprises of a 5000 word external environmental audit which will require students to identify, assess and evaluate the various stakeholders, operational factors and external forces acting upon their own workplace. Student will be required to utilise and justify appropriate analytical models of their choosing to help them acquire a full, complete and detailed picture of the business environment and the operation and environmental forces at work therein.	A range of activities throughout the module will be used to provide formative feedback. A draft of the final assessment may be submitted no less than two weeks prior to the final submission date.
Research Project	15000 word dissertation or 5000 word journal article	Normally at least three formative opportunities within the dissertation supervision process.

15. Employability

Entrants to this programme are highly likely to be in work, (be it Full or part Time). MSc Telecommunications Management programme 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 telecommunications 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.

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 experience (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 Telecommunications Management

Module Code	Module Title	Credits	Module Type (Core/Option)	Assessment Method
BUS7008D	Business Plan Development	20	Core	Report
PRM7004D	Project and Portfolio Management	20	Core	Report
COM7003D	Technology and Trend Monitoring	20	Core	Management Report
COM7009D	Wireless Technology and Networks	20	Core	2 Coursework
COM7010D	Core Network and Internet Infrastructure	20	Core	Assignment and Presentation
COM7011D	Telecoms Environment and Operations	20	Core	Assignment
RES7001D	Research Project	60	Core	Research Proposal and Dissertation of Journal Formatted Article & Viva

18. Subject:	I260 (Data Management),
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Last Updated: November 2018 (V2)

Mapping of Intended Programme Learning Outcomes and Modules

MSc Telecommunications Management

Programme Learning Outcomes		Module Type (Compulsory (C) or	A1	A2	A3	A4	A5	A6	A7	B1	B2	C1	C2	C3	D1	D2	D3	D4	D5	D6	D7
			Modules																		
Level	Business Plan Development	C	X							X	X	X		X	X	X		X			
	Project and Portfolio Management	C		X						X	X	X			X	X	X		X		
	Technology and Trend Monitoring	C			X					X	X		X			X		X	X		
	Wireless Technology and Networks	C				X				X	X		X			X		X	X		
	Core Network and Internet Infrastructure	C					X			X	X	X		X			X			X	
	Telecoms Environment and Operations	C						X		X	X	X			X			X			
	Research Project	C							X	X	X	X	X	X	X	X	X	X	X	X	X