PROCESSES OF GRADUATE SCHOOL OFFICE

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APPLICATION TO REGISTER:

A candidate wishing to carry out research in the Technological University of the Shannon: Midlands Midwest needs to be able to fund their research by either applying for research grant funded projects or by self-funding the project. In either case a supervisor is assigned to the candidate and the research proposal developed. Where necessary the proposal may need to be reviewed externally.

A completed registration document (GS1) is submitted to the Graduate School to be reviewed for completeness, qualifications, and English language requirement. The application is passed for review at the Research Committee. The review should include the following: project content, supervision, faculty resources such as equipment, time and supervision, type of enrolment and where necessary the content of a qualifier programme. On sign-off by the RC, the Graduate School informs the candidate of his/her requirement to register, issues documentation/information and enrols the candidate. Banner is updated by the Graduate School. See Registration below.

See Appendix 1 for the Postgraduate Application Process

See Appendix 2 for standard operating procedure of interview process for the Graduate School.

REGISTRATION:

Once approved, candidate is contacted with formal offer letter, instructions to register, instructions for enabling student email address, GS18 (finance set up) form, intellectual property form, tax exemption form, medical insurance requirements (for international students), data protection/confidentiality form. Candidate is registered on Banner providing all details including programme of study, fees, address, dob, phone number, bank details, stipend particulars, cost centre. Registration and Project Accountant are informed of new registrations.

Induction is arranged for all new entrants at the earliest available opportunity.

See Appendix 3 for Guides for New and Existing Research Students

CREDITS REQUIREMENT PROCESS:

Graduate School oversees the up taking of Core and Elective modules for Research Students. This includes; registration of all modules (internal & external), Banner manipulations, addition of external credits etc. Core modules are delivered by Dr Jeff Buckley. Elective modules are taken from existing Level 9 taught programmes within the faculties. Bi-yearly an application process is launched by the Graduate School whereby the research student applies for Semester 1 or Semester 2 modules.

See Appendix 4 for Credit Requirement: Core & Elective Modules

See Appendix 5 for Elective Module List

RESEARCH INTEGRITY – EPIGEUM ONLINE MODULE:

The Graduate School Office registers all new research students as a pre-starter on an online training module called Research Integrity. This training module is delivered by Epigeum and is at the request of external funding agencies and also by TUS's Internal Research Funding programmes. It is also a pre-requisite of the core module of the same name.

Funding agencies (SFI, IRC, etc.) will be seeking proof of completion of the training in their annual reporting. TUS will require all research students to have completed the training to be eligible for Seed Funding or Research Time Release Support.

Once successfully completed please ensure you print off a copy of the Completion Certificate and retain it for your files. The Completion Certificate will be accepted by an HEI in Ireland or the UK.

CONTINUATION OF STUDIES:

Once registered and commenced all research students are directed to continue their studies using Graduate School Forms (GS1 to GS19). Any changes to a research student status/details must be processed formally through the Graduate School, namely; amendment of registration status; change of supervisor; intention to present etc . See Fig. 1.

Fig 1: List of Graduation School Forms.

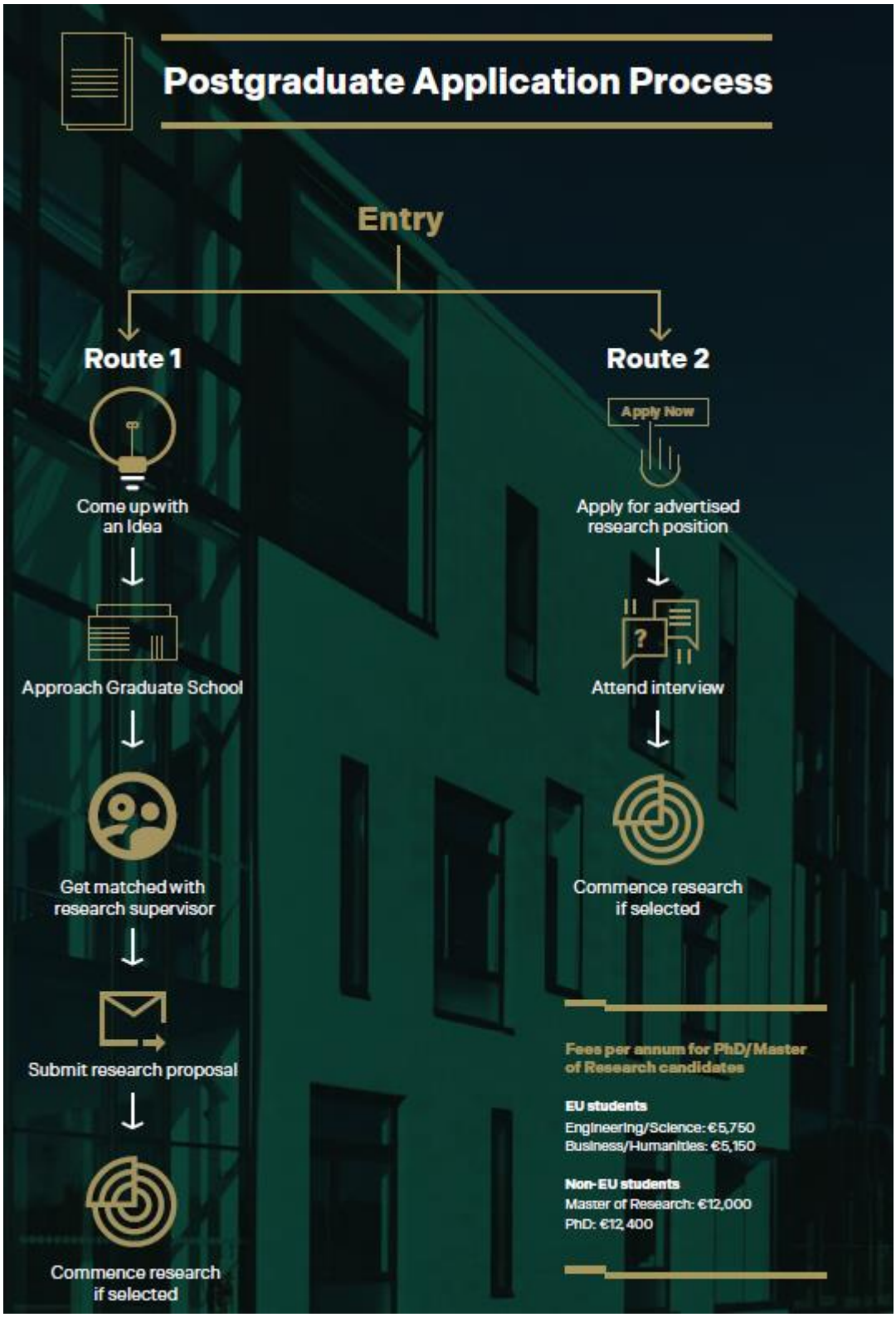
RESEARCH ETHICS COMMITTEE:

The Graduate School provides administrative support for the Research Ethics Committee meetings.

The function of the TUS Athlone Research Ethics Committee is to safeguard the health, welfare and rights of participants and (in the case of hazardous materials) researchers in research studies and to afford dignity to the handling and treatment of biological materials, taking into account the scientific procedures and concerns of the local community. For any research proposal to gain ethical approval it must be of a design that minimises predictable risk to both the research participant and the researcher.
The TUS Research Ethics Committee aspires to provide timely, comprehensive and independent reviews of the ethics of proposed studies.
Through its operation, the AIT Research Ethics Committee would hope to provide AIT researchers (staff and students) with the resources for understanding and addressing ethically significant problems which might arise in their research and to promote responsible research and practice.

Application form, Guidance Notes and Submission/Meeting dates are available on the TUS website.

APPENDIX 1: POSTGRADUATE APPLICATION PROCESS



APPENDIX 2: STANDARD OPERATING PROCEDURE FOR RESEARCH STUDENT RECRUITMENT & INTERVIEWS

1. The supervisor completes a project description template document which details all information about the postgraduate research post.

2. Supervisor supplies Graduate School (GS) with the project description (via gsr@tus.ie) which the GS then posts on the TUS website – all positions must be advertised on the TUS website.

3. A minimum closing period of **two weeks** must be allowed for from the date of the advertisement being posted on the TUS website to allow candidates every opportunity to apply.

4. Once the closing date for the project has passed the supervisor should request sight from the GS of all applications that applied for the project, and they will be shared via OneDrive.

5. A minimum of **one weeks' notice** prior to interviews must be given to allow prospective applicants time to prepare for the interview process.

6. The supervisor/s undertake a shortlisting process and identify candidates for interview. It is important to note that clear shortlisting criteria aligned to the criteria in your advert is essential and most importantly to the TUS Regulations. Please outline clearly the criteria as to why you are including and excluding any candidates. Have a clear justification noted in case you are asked for reasons at a later stage. Please ensure that you have a second person to confirm your shortlisting criteria and selected list for interview and any candidates that you deem ineligible also.

7. Supervisor contacts shortlisted candidates to be interviewed along with date, time of interview.

8. Supervisor/s must ensure interview panel has a gender balance and made up of at least 2 or 3 panel members.

9. GS provides supervisor with the relevant 3 documents for interview:
    a) Declaration of interest form - one for each panel member & must be signed by him or her.
    b) Interview assessment form - 1 per candidate to be completed by panel.
    c) Interview selection form - detailing order of successful candidates. Outline the no. 1 candidate being offered the postgraduate position and any names in order for other candidates to be panelled for the position.

7. Following receipt of the scanned interview documents back from the interview chair the GS contacts successful candidate outlining conditional offer. On acceptance of provisional offer the GS provides the candidate with the GS1 (Registration) form with the instruction that they complete the personal details, sign and forward to supervisor. Supervisor completes their section of the form.

8. Graduate School alerts the relevant faculty that they have a candidate for approval and for presentation to the next Research Committee meeting.

9. RC signs off on candidate's registration after which they forward the GS1 to the GS for final approval at the Postgraduate Studies & Research Committee meeting.

Things to ensure when reviewing applicant CV's.

- Set out shortlisting criteria including TUS Research Student eligibility outlined in the TUS Regulations.

- Evaluate your applicants against the research student eligibility and the project shortlisting criteria.

- Ensure the level of English for non-EU Candidates to meet the English Language criteria set out in the TUS Regulations

- Review the TUS Regulations before the interview to ensure you and your panel are up to date on TUS regulations for the supervisor and research student to answer any questions.

- Please ensure any notes taken during your interview are submitted back to the GS with your post interview documentation as the GS may be asked for such notes as feedback.

- Please consider the use other mechanism such as short written piece or short presentation as part of your interview for applicants to assist in assessing project subject area understanding, presentation and writing skills.

APPENDIX 3: GUIDES FOR NEW AND EXISTING RESEARCH STUDENTS

1. Before you commence/arrive

- You will receive correspondence by email prompting you to register on your research programme and to set up your student email account. All formal correspondence from the TUS will be sent to your student email account. It is important to check it regularly.
- Familiarise yourself with the Graduate School Regulations here https://www.ait.ie/contact/staff/quality/graduate-school
- You will receive various forms (IP agreement, Scholarship form, Data Protection form, Bank Details Form) from the Graduate School Office- complete and return them.
- Contact your supervisor to discuss and agree your arrival date.
- If international, apply for Visa – contact gsr@tus.ie for statement of registration to support visa.
- Secure your accommodation - https://www.aitsu.ie/accommodation
- Check out Fees Office for fees (if self-funded) - studentfees.midlands@tus.ie
- If you are in receipt of a scholarship you will need a PPS number for payment - https://services.mywelfare.ie/en/topics/identity-services/personal-public-service-pps-number/#:~:text=What%20is%20a%20Personal%20Public,services%20and%20information%20in%20Ireland
- Do you require Disability Support Services? https://www.ait.ie/life-at-ait/student-supports/disability-supports/
- All other queries please email Graduate School Office gsr@tus.ie
- Any IT issues log them here https://www.ait.ie/life-at-ait/campus-services/student-learning-portal

2. After you arrive

- Email gsr@tus.ie to identify a desk space.
- Email tuscard@tus.ie to arrange to collect your student card. Your student card will also contain access to rooms/labs – agree what rooms are needed in advance with your supervisor.
- Plan out your elective and core modules with your supervisor (identify suitable electives and develop a timeline for completion).
- Start your Individual Study Plan (consult with Supervisor)
- Shortly after you register you will receive an email detailing an online module – Research Integrity – which you must complete. This later links in with a core module of the same name.
- If in receipt of Stipend; it will commence on or before the 17th of each month after you arrive/commence.
- Check out https://www.ait.ie/life-at-ait/ for information on campus facilities, campus services, living in Athlone, your Students' Union, clubs & societies, your health & wellbeing etc.
- Check out the Library services available to you at https://library.ait.ie/getting-started/postgraduate/

- All other queries please email Graduate School Office gsr@tus.ie
- Any IT issues log them here https://www.ait.ie/life-at-ait/campus-services/student-learning-portal

3. During your studies

- Check student email regularly for workshops, module information, funding opportunities etc.
- Go to https://www.ait.ie/contact/staff/quality/graduate-school for Graduate School forms (GS1 - GS19b). GS Forms oversee transfer from masters to PhD, submission of thesis, intention to present, change to registration, leave of absence, bank details for stipend etc.
- Email gsr@tus.ie for letters for e.g. medical card, visa, proof of address etc.
- Email gsr@tus.ie to book meeting room in Research Hub
- If you require an update on your postgraduate funding email gsr@tus.ie
- Research involving human subjects requires prior approval by the TUS Research Ethics Committee (REC). Applications to the TUS Research Ethics Committee (REC) must at all times be submitted on the designated Application Form. If you need to make a Research Ethics application you can find application form & info here: https://www.ait.ie/contact/staff/quality/research-ethics Email ethics@tus.ie .
- All other queries please email Graduate School Office gsr@tus.ie
- Any IT issues log them here https://www.ait.ie/life-at-ait/campus-services/student-learning-portal

APPENDIX 4: CREDIT REQUIREMENT: CORE & ELECTIVE MODULES

Masters Students

- Graduate Studies Pathway (5 ECTS credits) RES 09026
- Research Integrity Across the Disciplines (5 ECTS credits) RES 09027
- Writing Skills for Graduate Students (5 ECTS credits) RES 09028
- Introduction to Research Paradigms (5 ECTS credits) RES 09032
- Advanced Writing for Graduate Students (5 ECTS credits) RES 09030

Doctoral Students

- Graduate Studies Pathway (5 ECTS credits) RES 09026
- Research Integrity Across the Disciplines (5 ECTS credits) RES 09027
- Writing Skills for Graduate Students (5 ECTS credits) RES 09028
- Introduction to Research Paradigms (5 ECTS credits) RES 09032
- Advanced Writing for Graduate Students (5 ECTS credits) RES 09030
- Dissemination and Research Profile for Doctoral Researchers (5 ECTS credits) RES 09031

Graduate Studies Pathway

- Runs every semester
- Seminars
    1. Programme Overview & Introduction to Research
    2. "Doing Research", Reflective Practice & Goals of Research
    3. The Individual Study Plan (ISP), Skills Needs & Regulations
    4. Useful Research Tools & Research Profiles
- Assessment
- Draft Individual Study Plan (ISP)

Note: Module content is subject to change with updated material over time.

Research Integrity Across the Disciplines

- Runs every semester
- Seminars
    1. Epigeum
    2. Ethics Before the Research Commences
    3. Ethics During the Research
    4. Ethics After the Research has Concluded
- Assessment
- Essay on research ethics within the student's field of study

Note: Module content is subject to change with updated material over time.

Writing Skills for Graduate Students

- Currently runs once per academic year with an intention to run every semester in future
- Seminars
    1. Research Outlets

2. Research Questions and Hypotheses

3. Types of Literature Review

4. Writing a Narrative Literature Review

5. Database Searching and Reference Management

6. Structuring Abstracts and Empirical Papers

7. Writing for Different Venues and Audiences

8. Critiquing Research Papers (Disciplinary)

• Assessment

• Write a narrative literature review (field specific), similar to what could be found in a research thesis

Note: Module content is subject to change with updated material over time.

Introduction to Research Paradigms

• Currently runs once per academic year with an intention to run every semester in future

• Seminars

1. An Overview of research Paradigms

2. Positivism, Post-Positivism & Quantitative Methodologies

3. A Primer on Quantitative Data Analysis I

4. A Primer on Quantitative Data Analysis II

5. Interpretivism & Qualitative Methodologies

6. A Primer on Qualitative Data Analysis

7. Pragmatism, Transformativism, & Mixed-Methods Research

8. Sampling Techniques & Determining Sample Sizes

• Assessment

• Write a research methodology that will or has been implemented by the student, in relation to their current programme of study

Note: Module content is subject to change with updated material over time.

Advanced Writing for Graduate Students

• Currently runs once per academic year with an intention to run every semester in future

• Seminars

1. Research Proposals & Introductions
2. Reporting Research Methods, Results & Findings
3. Replicability, Reproducibility, Repeatability & Transparency
4. Questionable Research Practices
5. Discussing Research Results & Findings
6. The Monograph Thesis
7. The Compilation Thesis
8. The Peer Review Process

• Assessment

• Write an introduction to the student's research project or field, similar to what could be found in a research thesis

Note: Module content is subject to change with updated material over time.

Dissemination and Research Profile for Doctoral Students

• Currently runs once per academic year with an intention to run every semester in future

• Seminars

1. Motivating your Research & Developing a Research Plan
2. Preparing Academic Articles & Introduction to Class Project (Writing an Empirical Article)
3. Open Science
4. Data Visualisation
5. Research Profiles, Metrics, & Altmetrics
6. Class Project Analysis and Consolidation
7. Academic Posters and Conferences
8. Dissemination to the General Public & Preprint Upload

• Assessment

• Write a draft of a submission ready journal article.

• Where conference papers are more relevant to a field such as in certain areas of computing research, a draft conference paper may be the assessment. • This is for the student and supervisor to decide.

APPENDIX 5: ELECTIVE MODULES

Faculty of Business

Accounting & Business Computing	Module Title	Module Code	Semester	Credits
AL_KDATA_9	Database Systems	ICT09002	1	5
MSc in Data Analytics	Programming for Data Analytics	ICT09003	1	10
	Data Analytics	ANLY09004	1	5
	Interpretation of Data	DANL09004	1	5
	Advanced Analytics (pre-requisite: Data Analytics)	DANL09002	2	5
	Data Visualisation (pre-requisite: Interpretation of Data)	ANLY09008	2	10
	Advanced Databases (pre-requisite: Database Systems)	COMP09001	2	10
Business & Management	**Module Title**	**Module Code**	**Semester**	**Credits**
AL_BDMPG_9	Social Media Marketing & Digital Advertising*~	DIGI09002	2	10
PgD in Digital Marketing	Managing Search Marketing*~	MKTG09007	2	10
	Digital Technology & Design *~	DIGI09004	2	10
AL_BMBUS_M	Information Systems for Managers*	ICT09001	2	10
AL_BMBUS_M	Business Strategy for a Sustainable World	STRA09033	2	10

Hospitality, Tourism & Leisure	Module Title	Module Code	Semester	Credits
	Destination Management & Marketing**	TOUR09002	2	10
	Tourism Environment, Society & Development**	TOUR09001	2	10

***Limited places available.**
~Blended delivery mode with classes on Fridays & some Saturdays
****Subject to demand (will not run if insufficient demand)**

Faculty of Engineering and Informatics

AL_KCNCM_9	Module Title	Module Code	Semester	Credits
MSc in Software Design Cloud Native	Object Oriented Programming I	SFTW 09055	1	5
	Applied Scripting Languages	SCRP 09001	1	5
	Container Design and Deployment	SFTW 09061	1	10
	Object Oriented Programming II (Pre requisite Object Oriented Programming I SFTW09055)	SFTW 09057	2	5
	Microservices Architecture	SFTW 09053	2	10
	Continuous Build and Delivery	SFTW 09060	2	5
AL_KCYBM_9	**Module Title**	**Module Code**	**Semester**	**Credits**
MSC in Software Design Cyber Security	Network Security	ICT 09008	1	10
	Security in the Enterprise	COMP 09003	1	5

	Computer and Cloud Security	COMP 09004	2	10
	Applied Cryptography	COMP 09008	2	5
AL_KSAIM_9	**Module Title**	**Module Code**	**Semester**	**Credits**
MSc in Software Design Artificial Intelligence	Applied Scripting Languages	SCRP 09001	1	5
	Data Mining and Machine Learning	DEVC 09001	1	10
	Advanced Machine Learning	AI 09001	2	10
AL_EAPLG_9	**Module Title**	**Module Code**	**Semester**	**Credits**
MSc in Advanced Polymer Materials	Core Polymer Materials	POLY 09009	1	5
	Core Polymer Chemistry and Physics	POLY 09011	1	5
	Core Polymer Characterisation	POLY 09007	1	5
	Core Polymer Processing	POLY 09006	1	5
	Advanced Polymer Materials	POLY 09008	2	5
	Advanced Polymer Chemistry and Physics	POLY 09010	2	5
	Advanced Polymer Characterisation	POLY 09012	2	5
	Advanced Polymer Processing	POLY 09004	2	5
AL_KSWFT_R	**Module Title**	**Module Code**	**Semester**	**Credits**
	Software Design 5	SFTW09027	1	5
	Data Science 5	SFTW09033	1	5
	Service Oriented Architect 5	SFTW09028	1	5
	Computer Networks & Telecoms 5	SFTW09030	1	5
	Agile, Build & Delivery 5	SFTW09049	1	5

	Database Systems	SFTW09002	2	5
	Data Visualisation 5	SFTW09035	2	5
	Rich Internet Applications 5	SFTW09037	2	5
	Cyber Security	SFTW09051	2	5

AL_CENVI_9 AL_ENVMA_9	**Module Title**	**Module Code**	**Semester**	**Credits**
MSc/PgD in Environmental Infrastructure	Community Energy Development	ENGE09028	1	5
	Resource Economics	ENGE09030	1	5
	Innovation and Project Management	PROJ09003	1	5
	Sustainable Energy Systems 2	ESCI09002	1	5
	Intelligent Design & Modelling	RES09046	1	10
	Planning and Environmental Regs	ENGE09027	2	5
	Sustainable Energy Systems 1	ESCI09001	2	5
	Industrial Ecology and Waste Management	ENVN09012	2	5
	Sustainable Water Engineering	ENVN09011	2	5
AL_EENER_9 AL_EMECI_9_JN	**Module Title**	**Module Code**	**Semester**	**Credits**
MEng/PgD in Energy Infrastructure	Community Energy Development	ENGE09028	1	5
	Resource Economics	ENGE09030	1	5
	Innovation and Project Management	PROJ09003	1	5
	Sustainable Energy Systems 2	ESCI09002	1	5
	Intelligent Design & Modelling	RES09046	1	10

	Work Placement & Professional Practice	RES09040	1	30
	Planning and Environmental Regs	ENGE09027	2	5
	Sustainable Energy Systems 1	ESCI09001	2	5
	Energy Infrastructure	ENGE09026	2	5
	Utilisation of Renewable Energy	ENGE09029	2	5

AL_ENGMA_9_MA	Module Title	Module Code	Semester	Credits
MEng Engineering Management	Resource Economics	ENGE09030	1	5
	Supply Chain Management	BUS09024	1	5
	Intelligent Design & Modelling	RES09046	1	5
	Data Analytics	ANLY09004	1	5
	Innovation & Project Management	PROJ09003	1	5
	Agile Design & Testing	SFTW09013	1	5
	Computer & Cloud Security	COMP09004	1	10
	Intro to Industry 4.0	INST09002	1	10
	Quality Management Standards	QUAL09005	1	10
	Strategic Management Leadership	BUS09038	1	10
	Data Visualisation	ANLY09013	2	5
	Financial Statement Analysis	FIN09036	2	5

Faculty of Science and Health*

Nursing and Healthcare	Module Title	Module Code	Semester	Credits
AL_NLDRM_9	Research Methods in Healthcare	NURS09017	1	10
MSc Nursing in Leadership & Quality Healthcare	Clinical Leadership & Management**	NURS09018	1	10
	Nursing in a Modern Health System	NURS09016	1	10
	Application of Evidence to the Healthcare Setting	NURS09019	2	10
	Professional Legal & Ethical Issues	NURS09020	2	10
	Quality Initiatives and Outcomes in Healthcare	NURS09022	2	10
Life and Physical Sciences	**Module Title**	**Module Code**	**Semester**	**Credits**
AL_SBIOP_9	Characterising Bioharmaceutic	PHAR09001	1	5
MSc Biopharmaceutical Technology	Protein Biochemistry	BIOT09002	1	5
	Lean Six Sigma	QUAL09002	1	5
	Immunobiologics	BIOT09005	2	5
	Contemporary Issues in Biophar	BIOT09001	2	5
	Bioprocess Technology	BIOT09003	2	5
	Quality by Design & Project Management	QUAL09001	2	5

* In some cases there may be prerequisites involved for modules with a heavy associated science delivery. Check with Faculty.

** Must be registered nurse