Irish Aid
Government of Ireland
Rialtas na hÉireann

Irish Aid IDEAS Programme

Directory of Postgraduate Courses suitable for Scholarship Awards 2016 (for 2017-2018 Entry)

Application by invitation only

VIETNAM

Compiled by:

ICOS
Irish Council for International Students

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UNIVERSITIES, INSTITUTES OF TECHNOLOGY AND COLLEGES WITH LISTED COURSES

IRELAND

AIT	**Athlone Institute of Technology**	Athlone	www.ait.ie
CIT	**Cork Institute of Technology**	Cork	www.cit.ie
DBS	**Dublin Business School**	Dublin	www.dbs.ie
DCU	**Dublin City University**	Dublin	www.dcu.ie
DIT	**Dublin Institute of Technology**	Dublin	www.dit.ie
DKIT	**Dundalk Institute of Technology**	Dundalk	www.dkit.ie
GCD	**Griffith College Dublin**	Dublin	www.gcd.ie
GCL	**Griffith College Limerick**	Limerick	www.gcl.ie
ICHAS	**Irish College of Humanities & Applied Science**	Limerick	www.ichas.ie
MU	**Maynooth University**	Near Dublin	maynoothuniversity.ie
NCI	**National College of Ireland**	Dublin	www.ncirl.ie
NUIG	**National University of Ireland, Galway**	Galway	www.nuigalway.ie
TCD	**Trinity College Dublin**	Dublin	www.tcd.ie
UCC	**University College Cork**	Cork	www.ucc.ie
UCD	**University College Dublin**	Dublin	www.ucd.ie
UL	**University of Limerick**	Limerick	www.ul.ie

NOTES ON COURSE LISTINGS

The courses included here have been identified as appropriate for applicants to the Irish Aid IDEAS Programme. Every care has been taken in compiling the listing. However, certain information for 2017-2018 was not fully available at the time of printing. In addition, some course information, web addresses and contacts will inevitably change during each academic year. **Before preparing or submitting an application, you are advised to check the latest details provided online by the relevant institution and you should not rely solely on the information in this document.**

ABBREVIATED WEB ADDRESSES

Many long course web addresses have been shortened, e.g. www.bit.ly/qEdRCn, for ease of transcription, if required. Any capitalisation should be noted accurately as these addresses are case-sensitive.

Irish Council for International Students (ICOS)

The Irish Council for International Students (ICOS), based in Dublin, is an independent non-profit network of educational institutions, NGOs and individuals interested in international education and working with government and other agencies to promote good policies and best practice in relation to the recruitment, access and support of international students in Irish education. ICOS manages administrative aspects of the IDEAS Scholarship Programme on behalf of Irish Aid.

Map of Ireland

The Irish cities and towns with universities, Institutes of Technology and colleges that are included in this directory are **highlighted** below (for a listing of the institutions, please see p2).

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D13	MSc in IT Enabled Innovation	MU
D14	MSc in Computing (Advanced Software Development)	DIT
D15	MSc in Computing (Security & Forensics)	DIT
D16	MSc in Computing (Information Systems Process)	WIT
D17	MSc in Global Financial Information Systems	WIT
D18	MSc in Data Science and Analytics	UCC
D19	MEngSc in Electrical & Electronic Engineering	UCC
D20	MSc in Computing Science	UCC

E Biotechnology

E1	MSc in Biomedical Science	NUIG
E2	MSc in Biomedical Diagnostics	DCU
E3	MSc in Biopharmaceutical Engineering	UCD
E4	MSc in Bioprocess Engineering	DCU
E5	Masters in Applied Science – Biotechnology	UCC
E6	MSc in Biotechnology	UCD
E7	MSc in Biotechnology	NUIG
E8	MSc in Immunology	TCD
E9	MSc in Plant Biology – Future Crops	UCD

F Management and Business

F1	MSc in Project Management	UL
F2	MSc in Project Management	UCD
F3	Msc in Strategic Management	DIT
F4	MA in Business Management	UL
F5	Master in Business Studies (MBS) – Management	WIT
F6	MSc in Business Economics	UCC
F7	MSc in Accounting	DIT
F8	MSc in International Business	CIT
F9	MA in Global Business Practice (Traditional Platform only)	CIT
F10	MSc in Supply Chain Management	DIT
F11	MA in Human Resource Management	CIT
F12	MSc in Supply Chain Management	UCD
F13	MSc in Finance	UCD
F14	MSc in Financial Economics	UCC
F15	MSc in Food Business	UCC
F16	MSc in Food Marketing	UCC

G Engineering and Sustainable Technology

G1	MSc in Engineering (Environmental / Structural and Geotechnical / Transport)	TCD
G2	MEngSc Structural Engineering	UCD
G3	MSc in Sustainable Energy Engineering	WIT
G4	MEngSc in Sustainable Energy	UCC
G5	MSc in Energy Management	DIT
G6	ME Energy Systems Engineering	NUIG

G7	ME in Sustainable Electrical Energy Systems	DIT
G8	MSc in Environmental Technology	UCD
G9	MEngSc in Water Waste and Environmental Engineering	UCD
G10	MSc in Sustainable Resource Management: Policy and Practice	NUIG/UL
G11	MSc in Water Resource Engineering	NUIG
G12	ME in Sustainable Development	DIT
G13	MEng in Mechanical Engineering	CIT
G14	ME in Mechanical Engineering	DIT
G15	MEng in Electronic Engineering	WIT
G16	MEng in Innovative Technology Engineering	WIT
G17	MSc in Marine Renewable Energy	UCC

H Other Courses

H1	MA in Journalism with New Media	CIT
H2	MA in Public Relations with New Media	CIT
H3	MSc in Tourism Management	DIT
H4	MSc in Hospitality Management	DIT

A

Agriculture, Environmental Science, Conservation, Rural Development and related studies

A1 MSc (Agr) in Sustainable Agriculture and Rural Development UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course represents a return to core values in the development of rural areas which are rooted in agricultural change as well as responding to new societal demands such as safe and ethically produced food, a healthier environment and sustainable and affordable energy. The programme will equip graduates with capabilities in core analytical, conceptual, communications and research skills as well as providing the knowledge base required to develop careers in the broad arena of sustainable agriculture and rural development.

Course Suitability: Graduates of this programme typically work in government, agricultural and rural development agencies, local development agencies, NGOs involved in rural development as well as donor agencies and international development organisations.

Indicative Content: Core - Sustainable Agriculture; Strategic Communications for Development; Policies and Strategies for Sustainable Agriculture and Rural Development; Research Methods I and II; Minor Thesis. Options - World Heritage and Sustainable Development; Global Biodiversity and Heritage; Rural Resource Planning; Planning for Development; Agricultural Extension and Innovation.

Admission Requirements: Normally an Honours university degree. Graduates who hold a pass level combined with substantial relevant professional or voluntary experience will be considered.

Course Webpages: [shortened as] www.bit.ly/2c7QJn0

Application: Apply online from course webpage.

A2 MSc (Agr) in Environmental Resource Management UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course provides training in development and utilisation of land resources in an environmentally sensitive manner. It is concerned with the nature, utilisation and conservation of land and other biogeophysical resources. It addresses the impact of agricultural and industrial activities on the environment, and fosters the planned development and sustainable management of the rural environment and other resource sectors.

Course Suitability: Graduates in a wide range of disciplines, including Agriculture, Engineering, Geography, Economics and various Sciences, seeking to operate effectively as professionals in natural resource management and conservation.

Indicative Content: Core – Data Analysis for Biologists; Research Project; Functional Biodiversity; Human Impact on the Environment; Soil, Plant & Water Resources; Geographic Information Systems; Ecosystem Services and Natural Capital; Practical Research Skills; Ecological Modelling. Options – Wildlife Conservation; One Health; Rural Planning & Environmental Law.

Admission Requirements: Second class honours degree (2.2 grade) or higher in Biological Science, Environmental Science, Agricultural Science, Geography, Earth Sciences, Natural Science or cognate degree programme. English language requirement: IELTS 6.5 (no band less than 6.0 in each element), or equivalent.

Course Webpage: [shortened as] www.bit.ly/2c3C2mu

Application: Apply online from course webpage.

A3 MSc Sustainable Resource Management: Policy and Practice UL/NUIG

Study Location: University of Limerick / NUI Galway (Joint programme)

Course Duration: 1 year

Course Outline: This research led course is a multidisciplinary approach to environmental sustainability which focuses on environmental science theory, policy development, implementation and best practice. The courses brings together theory, policy and practice to provide participants with the skills, knowledge and experience that are needed to pursue careers in managing environmental resources sustainably.

Course Suitability: Graduates of Environmental Sciences/Engineering or Geography/Biological Sciences/Ecology and Earth Sciences. Students with relevant experience will also be considered.

Indicative Content: Ecosystem Assessment; Biodiversity and Conservation; Environmental Problems and Solutions; Material and Energy Flows**;** Urban Form and Transport**;** Urban Household Sustainability**;** Sustainable Lifecycle Engineering and Research Project.

Admission Requirements: Minimum Second Class Honours primary degree in an appropriate discipline.

Course Webpage: [shortened as] www.bit.ly/1qUpizh

Application: Apply online via UL course webpage. Email postgradadmissions@ul.ie for any queries relating to application.

A4 MSc in Environmental Science TCD

Study Location: Trinity College Dublin

Course Duration: 1 year

Course Outline: This course aims to produce environmental scientists with an interdisciplinary background able to tackle the broadest range of environmental protection issues. It is concerned with strengthening the technical scientific and academic background of students in environmental protection. Learners become familiar with scientific literature, receive detailed technical training in field and laboratory procedures, maintain private notebooks, prepare essays and desk studies and carry out minor and major projects as members of a team.

Course Suitability: Administrative and scientific workers with an appropriate biological/earth science background.

Indicative Content: Introduction to environmental science; Environmental and chemical analysis; Hydrology and Groundwater quality; Earth system science I: Deep time; Earth system science II: Environmental and climate change; Environmental policies; Waste and Energy management in Urban Environments; Practical skills modules; Data handling and analysis; Practical environmental skills; Individual desk study; Project planning; Individual research project.

Admission Requirements: Minimum 2:1 Honours degree or equivalent or other degree or relevant qualifications, including professional qualifications, with at least three years' work experience in an environmental profession.

Course Webpage: [shortened as] www.bit.ly/1scpnzt

Application: Apply online from course webpage.

A5 MSc Applied Science (Environmental Science) UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course seeks to provide a broad training in the science underpinning environmental assessments and related disciplines. There is a heavy emphasis on practical training in fieldwork, laboratory analyses, information sourcing, data analysis, reporting and communication. Some exercises provide experience in planning and teamwork. A major input from Civil Engineering is included, relating particularly to water quality, hydrology and waste treatment processes.

Course Suitability: Graduates, especially in Science, Engineering or Architecture, employed by local authorities, state or semi-state agencies, industry and environmental consultants.

Indicative Content: Applied Water Resources Engineering; Environmental Impact Assessment; Core Skills for Research; Freshwater Resources Assessment (included biological and chemical assessment of water quality); Global Change Ecology; Wildlife and Resources Management; Marine/Coastal Ecology; Soil Ecology; Environmental Geology; Ecotoxicology and Air Quality Monitoring; Vegetation Ecology; Geographic Information Systems (GIS); Remote Sensing; Introduction to Ecological Modelling; Literature Review;
Minor Research Project and Thesis.

Admission Requirements: An Honours primary degree in Science, Engineering, Geography, Architecture or related subject. Candidates with a pass degree will be considered with relevant work experience or academic award.

Course Webpage: [shortened as] www.bit.ly/2c1YgQN

Application: Apply online from course webpage.

A6 MSc in Biodiversity and Conservation TCD

Study Location: Trinity College Dublin

Course Duration: 1 year

Course Outline: This course is designed to provide students with a sound theoretical and practical grounding in the science of biological diversity and its conservation. It will utilise a range of teaching methods to develop key theoretical knowledge and link this to practical skills. Skills in developing research methods will be developed through desk studies and a research project.

Indicative Content: Introduction to Biodiversity; Environmental and Biodiversity Policy; Introduction to Conservation Biology; Desk Studies; Data Handling; Taxonomy, Systematics and Identification Skills; Human Impacts with Biodiversity; Project Planning; Overseas Field Course; Impacts of Climate Change on Biodiversity; Practical Conservation Biology; Research Project: Dissertation.

Admission Requirements: At least a 2:1 Honours degree in a science subject that includes significant components of botany, zoology or a relevant life science. Candidates with relevant, and significant, experience as professional practitioners in Biodiversity management or policy may be accepted with lower qualifications.

Course Webpage: [shortened as] www.bit.ly/1raoOnr

Application: Apply online from course webpage.

A7 MSc in World Heritage Management and Conservation UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This multi-disciplinary course provides the theoretical knowledge and practical skills required by conservation managers, including comprehensive understanding of the World Heritage Convention and of the challenges facing site managers and policy-makers. It is unique in its emphasis on natural heritage, conservation biology, wildlife management and climate change. * Please note that the standard two year MSc will be adapted as a 16 month programme for Irish Aid Fellowship recipients.

Course Suitability: Managers responsible for World Heritage sites and equivalent protected areas and those involved in the conservation and management of natural habitats worldwide.

Indicative Content: Core - Heritage and Environmental Interpretation; International Strategies and the World Heritage Convention; Cultural Heritage; Project Development, Management and Marketing; Sustainable Development; Conflict Resolution and Conservation; End of course project. Options - Global Biodiversity and Heritage; Conservation Biology; Wildlife Management; Remote Sensing; Cultural Heritage and Conservation Practice; Landscape Management and Characterisation; Archaeology and World Heritage Management in Ireland; Climate Change.

Admission Requirements: Normally an Honours university degree as well as experience of conservation heritage issues.

Course Webpage: [shortened as] www.bit.ly/2c3BVaw

Application: Apply online from course webpage.

A8 MSc in Climate Change MU

Study Location: Maynooth University

Course Duration: 1 year

Course Outline: This course aims to provide graduates with the knowledge, skills and experience necessary to enable them to undertake analysis of both global and Irish related climate change science, impacts and policies.

Course Suitability: Professionals working in environmental management with an appropriate background who wish to upgrade their skills in these emerging areas.

Indicative Content: Core: Geographical Information Systems for Climate Change Analysis; Statistical Techniques for Climate Change Analysis; Impacts, Issues and Policy; Applied Climate Sciences; Field Course; Climate Data, Analysis and Modelling. Options: Hydrology, Variability and Change; Thematic Research Methods in Climate Change.

Admission Requirements: Minimum 2:1 Honours in Geography, Physics, Computer Science, Environmental Science, Engineering, Mathematics or a cognate subject.

Course Webpage: [shortened as] www.bit.ly/Z23kPd

Application: **PAC Code: MHN56**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

A9 MSc in Climate Change, Agriculture and Food Security NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: The programme provides students with the skills and tools for developing agricultural practices, policies and measures addressing the challenge that global warming poses for agriculture and food security worldwide. It will develop a balance of scientific, technical, analytical and crosscutting skills.

Course Suitability: Graduates seeking the necessary skills and capabilities to pursue a career in both climate change mitigation and adaptation for agriculture and food security.

Indicative Content: Climate Change, Agriculture & Global Food Security; Climate Change, Agriculture, Nutrition & Global Health; Policy & Scenarios for Climate Change Adaptation & Mitigation; Gender, Agriculture & Climate Justice; Low-Emissions Climate-Smart Agriculture & AgriFood Systems; Climate

Change Adaptation, Mitigation & Risk Management; Monitoring Climate Change: Past, Present, Future; Climate Change, Natural Resources & Livelihoods; AgriBiological Responses to Climate Change; CCAFS Science Communication: Techniques & Models; CCAFS Case Studies, Journal Club & Datasets; CCAFS Research Skills/Techniques; CCAFS Research Project.

Admissions Requirements: Minimum 2:1 honours degree or equivalent in an appropriate discipline.

Course Webpage: www.nuigalway.ie/ccafs

Application: **PAC Code: GYS00**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

A10 MA in Rural Sustainability NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: This course aims to equip future decision-makers with theoretically informed, critical and practical skills focused on the interrelationship between rural activities and the global economy. Students will gain a clear understanding of the processes, perspectives and practices shaping the contemporary and future rural world. There is a strong focus on the formulation of rural and agricultural development policies and strategies; the role of global actors; the nature and impact of rural-related governance from the WTO and EU to local institutions and grassroots organisations.

Course Suitability: Staff of national and international organisations and agencies with a rural development remit; staff of government departments and public sector organisations concerned with the rural sector.

Indicative Content: Conceptualising the Rural - Policy, Strategy and Governance; Rural Community and Field-based Learning; Rural Development and Communication for Rural Innovation; The Multifunctional Countryside; Research Methodologies; Practising Rural Geography; Dissertation (Research Paper).

Admission Requirements: A 2.1 Honours Degree in Geography or a related discipline, or equivalent (prior learning in terms of relevant work experience is also recognised).

Course Webpage: www.bit.ly/1scnXF6

Application: **PAC Code: GYA95**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

A11 MSc in Sustainable Energy and Green Technologies UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course focuses on the development and optimisation of crop production and renewable energy resource exploitation, the efficiency in renewable energy generation and utilisation pathways (including energy conservation) and the mitigation of environmental impacts.

Course Suitability: Graduates of engineering, science and related disciplines seeking to specialise in renewable energy systems technology development.

Indicative Content: Energy Systems and Sustainable Environments; Life Cycle Assessment (LCA); GIS and data management; Plant genetics and biotechnology; Research skills; Innovation and Technology Transfer; Root and Alternative crop production; Renewable energy projects evaluation and market analysis; Concepts and principles of Environmental Law, Energy systems integration; Major Research Project

Admission Requirements: An undergraduate degree in science or a related discipline (e.g. degrees in science, engineering and agricultural science).

Course Webpage: [shortened as] http://bit.ly/2ffOs7n

Application: Apply online from course webpage.

A12 MSc in Applied Coastal and Marine Management UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: The programme focuses on the science (including the social sciences) of Coastal and Marine management and policy-making today. It is designed to give students professional competency to make sound, scientifically-informed, strategic and operational decisions regarding the sustainable governance, use and protection of coastal and marine environments. It also provides training in applied practical skills, with an emphasis on geospatial techniques relevant to coastal and marine data capture, analysis, integration and visualisation. Students will also receive training in important transferrable skills including principles and practice of scientific research, effective communication and presentation techniques, and sound project management

Indicative Content: Marine Ecology and Conservation; Introduction to Geographical Information Systems; Introduction to Remote Sensing; Coastal and Marine Resource Use Practices; Coastal and Marine Governance; Coastal and Marine Processes; Practical Offshore Geological Exploration; Research Dissertation.

Admission Requirements: A primary degree to upper second class honours level (2.1 grade) or higher from a recognised third-level institution in Geography, Geology, Environmental Sciences, Biology, Oceanography, Physics, Mathematics, Engineering or a related discipline. Applications will also be considered from graduates in other disciplines, including those in the Arts and Social Sciences, who

have a demonstrable interest and/or experience in coastal and marine management, and who can offer sufficient numerical abilities. Applicants with a degree of at least lower second class honours (2.2 grade), or its equivalent, in one of the areas mentioned above, plus at least five years of work experience relevant to the field of applied coastal and marine management will also be considered. English Language Requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: [shortened as] http://bit.ly/2cX33GV

Application: **PAC Code: CKE39**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

A13 MSc in Marine Biology UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: The MSc Marine Biology aims to train graduates in multiple areas of marine biology and equip them with professional certificates in Sea Survival, Powerboat Handling, Marine Radio and First Aid as well as necessary field skills. The areas of marine biology covered in this master's course include fisheries and aquaculture, genetics, marine ecology and conservation, marine mammals and ecological aspects of Geographic Information System (GIS). In addition, the course has a significant field work component including ship work as well as survey and sampling techniques training. This course will provide an understanding of these various disciplines and skills needed in order to meet the growing demand for trained marine biologists at home and abroad.

Indicative Content: Characteristics of the Marine Environment; Marine Megafauna; Marine Fisheries and Aquaculture; Marine Fieldwork and Survey Techniques; Practical Marine Workplace Skills; Marine Ecology and Conservation; Ecological Application of Geographical Information Systems; Genetics and the Marine Environment; Marine Biology Research Project.

Admission Requirements: Second class honours (2.2 grade) or higher in any Biological Science or relevant equivalent area. In addition, NFQ Level 8 graduates with relevant professional qualifications or relevant experience but not the relevant degree classification may also

A candidate for the MSc in Marine Biology must have obtained at least a Second Class Honours, Grade II degree in any Biological Science or relevant equivalent area. In addition, NFQ Level 8 graduates with relevant professional qualifications or relevant experience but not the relevant degree classification may also apply for entry and each case will be judged on a case-by-case basis as to their suitability for the programme, subject to the approval of the College of Science, Engineering and Food Science.

Course Webpage: https://www.ucc.ie/en/ckr38/

Application: **PAC Code: CKR38**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

B

Pharmacy

B1 MSc in Advanced Chemical and Pharmaceutical Analysis DCU

Study Location: Dublin City University

Course Duration: 1 year

Course Outline: This programme aims to provide a fundamental training in the theory and practice of modern, advanced instrumental methods of analysis and, specifically, to provide a sound theoretical basis for analytical measurements, to develop understanding of the operation of modern analytical instrumentation and how it can be interfaced with computer hardware and software, to develop competence in the application of modern techniques of data analysis in analytical method and development and to develop analytical problem-solving skills.

Course Suitability: Graduates and scientists working in a laboratory environment, including analytical and development laboratories, food and pharmaceutical industries, and in government, semi-state and hospital laboratories.

Indicative Content: Core: Biomolecular Analysis of Nucleic Acids and Proteins; Advanced Spectroscopy; Advanced Separation Techniques for Chemical and Parmaceutical Analysis; Interfacial Techniques, Process and Monitoring; Molecular and Atomic Spectroscopy; Advanced Spectroscopic Workshop; Advanced Statistics and Chemometrics; Analytical Laboratory; Literature Survey; Chemical Sciences Project.

Admission Requirements: An Honours degree in chemistry or a related subject. IELTS 6.5 with min 6.0 in all components.

Course Webpage: [shortened as] www.bit.ly/V3G7SV

Application: **PAC Code: DC705**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

B2 MSc in Neuropharmacology NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: This course will equip students with the skills necessary to develop a career in important area of research, and aims to provide: a sound theoretical knowledge of neuropharmacology; laboratory-based skills in various neuropharmacological techniques; an appreciation of the regulatory issues associated with conducting neuropharmacological research; the application of experimental design and statistics to neuropharmacological research; a detailed understanding of a range of computer packages involved in data processing and presentation; a research project which will allow these skills to be further developed.

Indicative Content: Core: General Pharmacology Central transmitters and signalling mechanisms, (Neuroscience, Neuroanatomy, Neurophysiology), and Research Methodology. Practical, Computing, Experimental Design, and Laboratory Safety programmes will also be delivered. Semester 2 - Selected areas of Neuropharmacology are studied in depth, including receptor and behavioural pharmacology,

drugs of abuse, and the development of drugs to treat the main CNS diseases (anxiety, schizophrenia, depression, epilepsy, Alzheimer's Disease, Parkinson's Disease, and stroke). Semester 3 – Research Project.

Admission Requirements: Normally at least a Second Class Honours Level 8 degree from a diversity of undergraduate disciplines, ranging from Chemistry through Life Science subjects to Psychology. Students are also considered who have a Level 7 degree and three years relevant work experience. Overall IELTS score of 6.5+ must include a minimum of 5.5 in all components).

C**ourse Webpage:** [Shortened as] www.bit.ly/9ddKv5

Application: **PAC Code: GYS11**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

B3 MSc in Applied Science – Analysis of Pharmaceutical Compounds UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This programme consists of coursework and laboratory set experiments designed to provide skilled training in modern chemical methods of pharmaceutical analysis. While building on existing core analytical chemistry units, the emphasis will be on method selection, development and validation for pharmaceutical compounds, as required in quality control and trace drug analysis.

Indicative Content: Modern Analytical Techniques; Chemical Data Analysis and GLP; Separation Science, Sensors and Process Analytical Technology; Materials, Pharmaceutical and Bioanalysis Practice of Analytical Chemistry; Biopharmaceuticals; Formulation Design; Secondary Processing and Regulatory Compliance; Environmental Monitoring; Research Project and Dissertation.

Admission Requirements: Candidates must hold at least a Second Class Honours, Grade II primary degree or equivalent, with appropriate information systems or computing technology skills content. English Language Requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: [shortened as] www.bit.ly/YsMu9e

Application: **PAC Code: CKR02**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

B4 MSc in Pharmaceutical Sciences TCD

Study Location: Trinity College Dublin

Course Duration: 1 year

Course Outline: This course involves a comprehensive treatment of the science and technology of pharmaceutical analysis with particular emphasis on the regulatory environment in which the

pharmaceutical industry operates. The objective is to equip graduates with the appropriate analysis skills required by the pharmaceutical and veterinary manufacturing industries.

Course Suitability: Aimed at suitably qualified graduates currently working in or aspiring to work in the pharmaceutical industry - in particular non-pharmacy graduates employed in quality control or quality assurance roles requiring specialised training, retraining or upgrading of skills. The course may also be attractive to technical managers in regulatory affairs, product development and other related areas.

Indicative Content: Regulatory aspects of pharmaceutical analysis, statistics, GLP chromatographic analysis, spectroscopic and physical methods of analysis, pharmacopoeial methods of drug analysis, analysis of low level drug analysis, specialized pharmaceutical methods of analysis, biological and pharmacological methods and pharmaceutical formulation.

Admission Requirements: Applicants are accepted, subject to the availability of places, from holders of honours degrees in a relevant Science discipline (e.g. Pharmacy, Chemistry, Analytical Chemistry, Microbiology, Biochemistry, Pharmacology and other appropriate primary honours degrees e.g. I.T., Medicine or Veterinary). Equivalent primary and/or postgraduate qualifications are considered, particularly with relevant professional experience.

Course Webpage: [shortened as] http://bit.ly/1Pt0XZW

Application: Apply online from course webpage.

B5 MSc Pharmaceutical Quality Assurance and Biotechnology DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This programme is offered on a one year full—time basis followed by a 6 months industry-based dissertation. It is designed to provide a bridge for graduates with a degree in science or related disciplines to the specific requirements of the pharmaceutical sector. The programme offers a broad based curriculum covering aspects of quality assurance, auditing, manufacturing and pharmaceutical science and biotechnology.

Indicative Content: Q.A., Auditing and Inspection, GMP and Validation, Biotechnology, Pharmaceutical Technology, Pharmaceutical Facilities and Utilities, Pharmaceutical Manufacturing and Management, Chemical Analysis, Organic and Medicinal Chemistry, Biopharmaceutical Analysis, Pharmaceutical Microbiology, Physiology, Pharmacology and Toxicology, Validation of Biotechnology Pharmaceuticals.

Admission Requirements: Honours degree in science or related discipline at 2.2 grade or higher or equivalent qualification.

Course Webpage: [shortened as] http://bit.ly/2cQaAr4

Application: Apply via the 'Non-EU/International Applicants' button on the course webpage.

C

Food Science, Food Engineering, Bioresource Technology, and related studies

C1 MEngSc in Food Engineering — UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course provides comprehensive coverage of the engineering involved in bioprocess and food manufacturing systems. Students will acquire skills in the application of leading edge technologies to the agri-food and biotechnology industries, including novel food processing technology, food process automation, computer vision for food quality and food safety.

Course Suitability: Graduates in Engineering, Science and related disciplines who are interested in food and bioprocess engineering, risk assessment, process development, process control, advanced manufacturing systems and associated environmental issues.

Indicative Content: Bioprocess Engineering Principles; Waste Management; Advanced Food Refrigeration Systems; Engineering Design for Food Quality and Safety; Advanced Environmental Engineering; Quantitative Risk Assessment for Human and Animal Health; Unit Operations in Bioprocess Engineering; Advanced Food Process Engineering; Thesis.

Admission Requirements: An Honours degree in Engineering or a relevant subject from a recognised higher education institution.

Course Webpage: [shortened as] http://bit.ly/2dJEqiu

Application: Apply online from course webpage.

C2 MSc in Applied Science (Food Science) — UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course offers advanced modules in established and emerging areas of Food Science plus modules in research methods. Novel methods of teaching with emphases on project work and innovative forms of learning are used.

Indicative Content: Core - Scientific Training for Enhanced Postgraduate Studies; Library Project in Food Science; Research Project. Options - Novel Processing Technologies and Ingredients; Advances in Brewing and Beverage Science; Material Science for Food Systems; Advanced Topics in Dairy Biochemistry; Advances in the Science of Muscle Foods; Food and Biochemical Toxicology; Human Nutrition and Health; Functional Foods: New Frontiers for Food and Health; Food Business: Markets and Policy; Hygienic Production of Food

Admission Requirements: Normally an honours BSc degree, minimum grade of 2:2, from programmes in Food Science, Food Technology, Nutritional Sciences, Food Business, Microbiology or any discipline within Biological or Chemical Sciences.

Course Webpage: [shortened as] www.bit.ly/aKQbk5

Application: **PAC Code: CKR22**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above. *Additional application information is posted on the course webpage.*

C3 MSc in Applied Science (Food Microbiology) UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course aims to provide graduates with the knowledge and skills to enable them to contribute to the Irish and international food industries. Content will focus on the practical value of food microbiology in ensuring food quality and food safety and its importance of food microbiology in developing new, innovative and healthy foods. It covers both classical and modern food microbiology, including food safety and spoilage; food fermentation; food biotechnology; hygienic production of food; the impact of diet on health; the molecular mechanisms of infectious microbes and the role of the gut microbiota in human health.

Indicative Content: Core: Scientific Training for Enhanced Postgraduate Studies; Biotechniques; Library Project in Food Microbiology; Research Dissertation. Options: Food Fermentation and Mycology; Microbial Food Safety; Food Biotechnology; Hygienic production of Food; Functional Foods for Health; Food Markets and Policy

Admission Requirements: Minimum 2:2 Honours in any relevant primary degree.

Course Webpage: [shortened as] www.bit.ly/cH3iJY

Application: **PAC Code: CKR19**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above. *Additional application information is posted on the course webpage.*

C4 MSc in Food Safety Management DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This interdisciplinary, skills based MSc. programme focuses on the complex national and EU regulatory and management systems in place to ensure Food Safety and consumer protection, and reviews the many proposed future changes in Food Regulation. It is organised specifically to accommodate those working or wishing to work in the food industry.

Indicative Content: Food Regulatory Affairs; Food Safety, the Consumer and the Media; Food Law and Media Research; Food Hazards – Chemical; Food Hazards – Microbiological; Food Hazards Research; Food Safety Management Systems; Food Safety Management Risk Analysis; Food Safety Management Toolkit; Safety Aspects of Primary Production' Safety Aspects of Food Processing; Food Production – Research.

Admission Requirements: An honours bachelor degree (2.2 grade or higher) or equivalent in a discipline relevant to Food Safety Management. It is expected that participants will have significant work experience and fit the profile of a manager or technical professional.

Course Webpage: [shortened as] http://bit.ly/2dTHR6e

Application: Apply online via the course webpage.

D

Information and Communication Technology

D1 MSc in Applied Digital Media GCD

Study Location: Griffith College Dublin

Course Duration: 1 year

Course Outline: This course takes students through the skills needed to produce professional media work to the highest standards. The relevant professional applications will be taught in a 'learn by doing' format and students will leave the programme with a portfolio of their practical work.

Course suitability: Graduates working in or seeking to work in creative digital media and requiring high-level skills in digital media and E-Business.

Indicative Content: Research Methods, Digital Media and Society, Visual Communication, Internet Authoring. Business of Digital Media, interaction Design, Multimedia Programming; Dissertation / Dissertation by Practice.

Admission Requirements: 2.2 Level 8 honours degree in Computing, 2.2 Higher Diploma in Computing or related discipline or international equivalent and/or relevant work experience or extensive industry experience.

Course Webpage: www.gcd.ie/mscadm

Application: https://www.griffith.ie/apply-online

D2 MSc in Computing (Data Analytics) DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This course is designed to create 'hybrid technologists' to work in the area of data analytics - the science of extracting actionable insight from large amounts of raw data. Hybrid technologists are graduates equipped with deep technical skills (in data management, data mining, probability and statistics, and machine learning), but also with the softer skills (in communications, research and problem solving) required to work effectively within organisations.

Indicative Content: Core: Probability and Statistical Inference, Machine Learning, Data and Database Design for Data Analytics, Data Management, Data Mining, Visualisation; Problem Solving, Communication and Innovation, Case Studies in Computing, Research Writing and Scientific Literature, Research Methods and Proposal Writing. Options: Geographic Information Systems, Spatial Databases, Security, Ubiquitous Computing, Universal Design, Man and Machine, App Development and Commercialisation, Bioinformatics, Language Technology, Programming for Big Data.

Admission Requirements: A 2:2 BSc (Honours), or better, in Computer Science or a related discipline. Applicants with other qualifications at Honours 2.2 and relevant experience may also be considered.

Course Webpage: [shortened as] http://bit.ly/2a6jTA4

Application: Apply online via the course webpage.

D3 MSc in Computer Science (Networks and Distributed Systems) TCD

Study Location: Trinity College Dublin

Course Duration: 1 year

Course Outline: This course will equip students with the theoretical and practical background necessary to enable them to participate in the design of complex networked and distributed computing systems, as well as to undertake research in this area.

Indicative Content: Network Applications, Data Communications and Networks, Distributed Systems, Software Engineering for Concurrent and Distributed Systems, Security and Management of networks and Distributed Systems.

Admission Requirements: This course is open to graduates who have achieved the equivalent of at least an upper second-class honours degree, or better, in computing, information technology, or a related discipline. Well qualified candidates from disciplines such as engineering, mathematics, statistics, or physics who have sufficient knowledge of computing (including the ability to program) may also be accepted.

Course Webpage: [shortened as http://bit.ly/2eWNXns

Application: Apply online from course webpage.

D4 MEng in Electronic Systems DCU

Study Location: Dublin City University

Course Duration: 1 year

Course Outline: This programme offers advanced-level courses in the theory, analysis, design, modelling and manufacture of electronic systems. You have the option of specialising in one of two areas: Nanoelectronics and Photonics or Image Processing and Analysis.

Indicative Content: Options: OOP for Engineers; Web Application Development; DSP-Digital Filters and DFT; Communications Theory; Mechatronic System Simulation and Control; Wireless/Mobile Communications; Image Processing and Analysis with Project; Optical Communications System Design; Performance of Data Networks; DSP - Signal Modelling and Compression; Fundamentals of Photonic Devices; Entrepreneurship for Engineers; Data Network Protocol; Analysis and Simulation; Renewable Energy: Technology and Economics; Secure Sys Admin and Internetwork Security; HDL and High-Level Logic Synthesis; Nano and Microelectronic Device Manufacturing; Computer Vision; Characterisation Technology for Nanomaterials; Broadband Networks; Image and Video Compression; Advanced RF Circuit Modelling; Network Programming; 3-D Graphics and Visualisation; Plasma Process Technology; Semiconductor Manufacturing Equipment and Systems; Electronic Systems Project

Admission Requirements: Honours degree in Electronic/Electrical Engineering, Applied Physics, Computer Sciences or other Engineering disciplines. IELTS 6.5 with min 6.0 in all components.

Course Webpage: [shortened as] www.bit.ly/18uLUv9

Application: **PAC Code: DC800**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

D5 MSc in Information Systems Management NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: This programme is designed as a specialist course which assists students in blending their existing talents with the technological skills and business knowledge needed to design, develop, use and manage information systems within modern organisations. Students gain practical knowledge of business systems analysis and design; project management; database design; applications development; business information technologies; Internet and multimedia development; and the business context of IS development and management. Specialised aspects are also covered, such as: human-computer interaction, information systems security, enterprise systems, business analytics and decision support systems, electronic commerce, and IS innovation.

Course Suitability: Ideally suited for those with a number of year's technical background that need to develop people and business skills, but also to those with a low level of technical exposure who feel the need to expand their technical skills the course offers up to date IT and computing knowledge for use in a business or organizational context.

Indicative Content: Web Design and Development; Interactive Systems Design; Business Data Communications; Systems Development and Project Management; Database Systems; Business Applications Programming; Information Systems Management; Electronic Commerce Strategy; Enterprise Systems; Applied Systems Analysis; Project, Information Systems Innovation; Information Systems Security and Ethics; Decision Systems and Business Analytics; Advanced Applications Programming.

Admission Requirements: Normally a Second Class Honours Bachelors Degree (or equivalent). Successful applicants will come from a variety of academic and professional backgrounds with prior exposure to information technology and/or business.

Course Webpage: [shortened as] http://bit.ly/2bLE6jt

Application: **PAC Code: GYC24**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above

D6 MA in Information Systems for Business Performance UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course aims at providing students with a coherent set of skills essential in building, managing, and leveraging an effective and efficient Information Systems (IS) capability for the modern organisation. This means providing students with a clear understanding of how to manage information systems and leverage the potential of the latest Information Technologies (IT) to create value for the firm; reducing costs, solving organisational problems or providing better products and services to customers.

Indicative Content: Electronic Business Models and Systems, Data Modelling and Database Systems, Application Modelling and Design, Storage Technology, Business Continuity and IT Value, IT Organisation, In-sourcing and Out-sourcing, Enterprise Business Intelligence, Current Issues in IT and 4 month Collaborative Industry Research Project.

Admission Requirements: A Second Class Honours degree or higher, except graduates from degrees with high levels of software development content (e.g. business information systems, computer science, etc). English Language Requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: www.ucc.ie/en/ckl18

Application: **PAC Code: CKL18**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

D7 MSc in Computer Science (Interactive Media) UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This programme aims to equip students from a wide range of backgrounds with a thorough understanding of the technology and industry-standard tools used in the Digital Media sector. The creation of interactive digital media is a challenging and complex activity requiring a blend of creative and technical skills using a range of existing and emerging technologies. On successful completion of the programme students will have a thorough knowledge of the underlying concepts, technologies and practices of interactive digital media and be able to apply these to create interactive digital media products.

Indicative Content: Core: Authoring, Digital Publishing and Hypermedia Systems, Graphics and Graphic Design, Audio and Sound Engineering, Digital Video Capture and Packaging3D, Graphics and Modelling. Options: Future and Emerging Interaction Technologies, Animation Image Processing, Internet-based Applications, Digital Video Compression and Delivery, Human Computer Interaction Mobile Multimedia, Audio Processing, Speech Processing, Interactive Visualisation, Intelligent Media Systems.

Admission Requirements: Graduates of any discipline who have achieved at least a 2:2 Honours degree, or equivalent professional qualification, provided there is no significant overlap between their previous courses of study and the content of this course. English Language Requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: www.ucc.ie/en/ckr05

Application: **PAC Code: CKRO5**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

D8 MSc in Software Engineering AIT

Study Location: Athlone Institute of Technology

Course Duration: 1 year

Course Outline: The aim of this programme is to provide an opportunity for computer professionals and engineers to enhance their knowledge and expertise in areas of current active research and development in software engineering. Participants gain exposure to the various techniques for performing academic research. The course also aims to provide an environment in which the participant is exposed to new technological developments, to ethical and social issues affecting the computer industry, and to the requirement to uphold general professional standards.

Indicative Content: Software Engineering Project, Software Design and Programming, Distributed Systems, Service-oriented Architecture, Computer Graphics, Software Engineering Management and Practice, Advanced Database Technology, Computer Networks and Telecommunications, Internet and Multimedia Systems.

Admission Requirements: Honours (Grade 2.2) degree in an appropriate engineering, computing or cognate discipline, or an equivalent qualification. Experience may also be required depending upon the degree qualifications.

Course Webpage: [shortened as] www.bit.ly/15zMKbo

Application: Forms can be downloaded at: www.ait.ie/international/non-eustudents. For enquiries, contact Mary Simpson, AIT International Office - international@ait.ie or +353 - 90 - 6424562.

D9 MEng in Telecommunications Engineering DCU

Study Location: Dublin City University

Course Duration: 1 year

Course Outline: This programme is designed to enhance a student's knowledge, understanding and skills in Telecommunications Engineering. It offers advanced-level courses in the theory, analysis, design, modelling and manufacturing of telecommunications systems.

Indicative Content: OOP for Engineers, Web Application Development, DSP-Digital Filters and DFT, Communications Theory, Mechatronic System Simulation and Control, Wireless/Mobile Communications, Image Processing and Analysis with Project, Optical Communications System Design, Performance of Data Networks, DSP – Signal Modelling and Compression, Fundamentals of Photonic Devices, Entrepreneurship for Engineers, Data Network Protocol Analysis and Simulation, Renewable Energy: Technology and Economics, Secure Sys Admin and Internetwork Security, HDL and High-Level Logic Synthesis, Nano and microelectronic Device Manufacturing.

Admission Requirements: Honours degree in Electronic/Electrical Engineering, Applied Physics, Computer Sciences or other Engineering disciplines. IELTS 6.5 with min 6.0 in all components.

Course Webpage: [shortened as] www.bit.ly/1bcZZOi

Application: **PAC Code: DC804**

Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

D10 MSc in Electronic and Communications Engineering DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This programme aims to provide industry with engineers with a high level of in-depth knowledge and expertise in a selected range of advanced topics in Electronic and Communications Engineering. This course is delivered through lectures, practical work, assignments and tutorials.

Indicative Content: VLSI Design; Optical Communications Systems; Innovation and Technology; Wireless Systems; Simulation for Telecommunications; Advanced Digital Signal Processing; Communications Network Engineering; Microwave and RF Engineering; Microelectronic Materials and Devices and Dissertation

Admission Requirements: A minimum Second Class Honours Bachelor Degree (2.2 grade or higher) in Electronic, Computer or Communications Engineering or a related discipline. Applications from candidates with at least a second class honours degree in Applied Physics or other numerate degree, along with candidates with other 2.2 Honours Bachelor Degrees and suitable strong industrial experience may also be considered on a case-by-case basis

Course Webpage: [shortened as] http://bit.ly/2dAxdSQ

Application: Apply via course webpage. Course code: DT086

D11 MSc in Network and Information Security GCL

Study Location: Griffith College Limerick

Course Duration: 1 year

Course Outline: This programme prepares participants to embrace the many complex and integrated analytical, technical and design aspects of computing networks and communication systems security. Students are equipped with specialist skills to develop an interesting career to identify and solve problems, create efficient network security plans and learn how to adapt to industry challenges and innovations.

Indicative Content: Information and Network Security Technologies; Legal and Ethical Aspects of Information Security; IT Infrastructure Protection & Ethical Hacking; Cryptography; Computer Forensics; Managing Information Security; Telecommunication Networks and Services; Research Methods and Dissertation

Admission Requirements: Candidates applying for this course should have a 2.2 honours degree or above in Computing Science, or a 2.2 Higher Diploma in Computing or related discipline or international equivalent and/or relevant work experience.

Course Webpage: [shortened as] http://bit.ly/1KUuADr

Application: https://www.griffith.ie/apply-online

D12 MSc in Big Data Management and Analytics GCD

Study Location: Griffith College Dublin

Course Duration: 1 year

Course Outline: This course enables participants to become independent and critically-minded specialists capable of analysing industry trends and opportunities in the field of Big Data. Students are equipped to take intelligent advantage of those trends and opportunities in the field of Big Data via robust and efficient practical solutions to data storage and analysis. Participants are prepared to rigorously apply appropriate research, design and implementation strategies in the development of Big Data solutions.

Indicative Content: Big Data Analytics; Information Retrieval and Web Search; Concurrent and Parallel Programming; Cloud Computing; Big Data Management; Data Mining Algorithms and Techniques; Applied Data Science and Research Methods

Admission Requirements: Candidates applying for this course should have a 2.2 honours degree or above in a related discipline or international equivalent and/or relevant work experience.

Course Webpage: [shortened as] http://bit.ly/1LCGYZs

Application: https://www.griffith.ie/apply-online

D13 MSc in IT Enabled Innovation MU

Study Location: Maynooth University

Course Duration: 1 year

Course Outline: This course exposes students to the leading edge tool for assessing and managing IT, the IT-CMF. This is not a programme to develop stand-alone technical IT specialists. This course develops the capacity for participants to understand how IT operates both as a function and as a key interrelated resource within an organisational context. This involves understanding people, work processes, relationships, organisation structures, organisation strategies, and how all of these impact on and are impacted by Information Technology.

Indicative Content: Digital Business Leadership; Human Resources Management in its Strategic Context; IT Governance, Performance and Risk; IT Skills & Capabilities; Digital Enablement; Contemporary Issues in IT-Enabled Innovation; Financial Management; Strategy and Marketing; Research Methods and Project Management and Dissertation

Admission Requirements: Candidates should have a minimum 2.2 grade, honours (level 8) degree. In exceptional circumstances consideration will be given to candidates who do not hold a primary degree, but who do have significant relevant work experience at least 3 of which must be in a management position.

Course Webpage: [shortened as] http://bit.ly/1FyvjtD

Application: **PAC Code: MH84D**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie/ – using the PAC application code shown above.

D14 MSc in Computing (Advanced Software Development) DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This course aims to produce graduates with the knowledge and skills to develop the complex software solutions that organizations need to compete in the emerging global digital economy. Students will study advanced technical modules in programming, design, databases, architecture and web development to acquire the advanced technical skills needed to practice as software developers working on leading edge development projects. In addition students will be equipped with key professional, technical communications skills needed to practice as a professional in the computing industry.

Indicative Content: Core – Programming Paradigm: Principles & Practice; Software Design; Advanced Databases; Systems Architecture; Web Application Architectures; Secure Systems Development; Problem-Solving, Communication and Innovation; Case Studies in Computing; Research Writing & Scientific Literature; Research Methods and Proposal Writing. Options – Geographic Information Systems; Spatial Databases; Ubiquitous Computing; Universal Design; Man and Machine; Bioinformatics; Programming for Big Data.

Admission Requirements: Upper second class honours (2.1 grade) or higher degree, or a 2.2 second class honours degree with at least 2 years of relevant work experience, in Computer Science or a related discipline. English language requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: [shortened as] http://bit.ly/2dMrYvy

Application: Apply online via the course webpage.

D15 MSc in Computing (Security & Forensics) DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This course focuses on producing computing graduates that will possess the knowledge, skills, and experience to conduct complex, data-intensive forensics examinations involving multiple operating systems, file types, cloud, and mobile operating systems.

Indicative Content: Core – Forensics; Mobile Device Forensics; Penetration Testing and Vulnerability Analysis; Secure Systems Programming; ICT Law & Professional Issues; Problem Solving, Communication and Innovation; Case Studies in Computing; Research Writing & Scientific Literature; Research Methods and Proposal Writing. Options - Geographic Information Systems; Spatial Databases; Ubiquitous Computing; Universal Design; Man and Machine; Bioinformatics; Programming for Big Data.

Admission Requirements: Upper second class honours (2.1 grade) or higher degree, or a 2.2 second class honours degree with at least 2 years of relevant work experience, in Computer Science or a related discipline. English language requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: [shortened as] http://bit.ly/1U98jaH

Application: Apply online via the course webpage.

D16 MSc in Computing (Information Systems Processes) WIT

Study Location: Waterford Institute of Technology

Course Duration: 1 year

Course Outline: The MSc in Computing in Information Systems Processes combines the human, the organisational, and the technological to provide a broad perspective of modern information systems and their development. The human aspects of the programme explore issues such as human-computer interaction, psychology, computer ethics, and systems development in the human-centred tradition. The organisational aspects consider successful business processes and how these can be supported through information infrastructures such as supply-chain management systems. Finally, the technological aspects look to trends in information systems development, such as emerging methodologies, software development, and technological systems. The programme also includes a research project and dissertation, thus allowing students to investigate an individual area of personal interest.

Indicative Content: Psychology of Computer-Mediated Work; Human Computer Interaction and Usability; Emerging Systems Development Paradigms; Business Process Analysis and Design; Design Patterns; Ethics and e-Privacy; Usable Information Architectures; Human-Centred Systems Development; Innovation and Intrapreneurship; Supply Chain Integration Technologies; Agile Software Development.

Admission Requirements: An honours bachelor degree (2.2 grade or higher) in Computing, Information Systems, Information Technology or equivalent. Alternatively, an honours degree in Business Studies or Engineering where there is a strong computing component will also be acceptable. An interview process may be required in the student selection procedure, and there is a prerequisite that a student successfully completes a bridging module in Systems Analysis and Design if they have not taken an equivalent module already. This module in an intensive introduction to object oriented analysis and design techniques.

Course Webpage: [shortened as] http://bit.ly/2dmmzfS

Application: **PAC Code: WD516**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

D17 MSc in Global Financial Information Systems WIT

Study Location: Waterford Institute of Technology

Course Duration: 1 year

Course Outline: Developed in conjunction with a number of FS companies from Ireland and the UK, the objective of the MSc in GFIS is to enable high calibre graduates to rapidly develop quantitative, analytical, and ICT skills and experience, embedded in a comprehensive knowledge and understanding of Financial Services. The programme is delivered over a 12-month period whereby the first 9 months are spent on-campus at WIT, and the final 3 months comprise of a Professional Internship. The delivery method is innovative and challenging, consisting of lectures, ICT workshops and e-learning, group work, industry focused problem based learning, presentations, a seminar series with industry experts, and educational visits to the headquarters of Financial Services organisations.

Indicative Content: Data Modeling and Analysis; Econometrics; IS Project Management; Financial Derivatives; Business Intelligence; Global Banking Transaction & Payment Systems; Global Financial IS Security, Continuity & Ethics; Global Risk Management and Regulation; Corporate Financial Interpretation; Professional Internship OR Financial Information Systems Research Project.

Admission Requirements: An honours bachelor degree (2.2 grade or higher) in Business or Technology. Graduates from other degree programmes, including Science, Engineering, Health Sciences, Humanities, Social Sciences, etc., are also eligible to apply.

Course Webpage: [shortened as] http://bit.ly/2dmneOr

Application: **PAC Code: WD572**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

D18 MSc in Data Science and Analytics UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course provides an education in the key principles of the rapidly expanding area of data science and analytics. The combination of sophisticated computing and statistics modules will develop skills in database management, programming, summarisation, modelling and interpretation of data. The programme provides graduates with an opportunity, through development of a research project, to investigate the more applied elements of the disciplines.

Indicative Content: Core – Data Mining; Foundations of Statistical Data Analytics; Generalised Linear Modelling Techniques; Dissertation in Data Analytics. Options – Introduction to Relational Databases; Database Design and Administration; Database Technology; Information Storage and Retrieval; Optimisation; Analysis of Networks and Complex Systems; Internet Computing for Data Science; Stochastic Modelling Techniques; Multivariate Methods for Data Analysis; Operations Research; Stochastic Decision Science; Large-Scale Application Development and Integration; Programming in Python.

Admission Requirements: Second class honours (2.2 grade) or higher degree in computer science or mathematical sciences, or in a degree with a strong numerate content (e.g. engineering, finance, physics, biosciences or economics). Applicants who do not meet this standard will also be considered if they have an undergraduate degree and a minimum of 5 years verifiable relevant industrial experience. Applicants who do not have a primary degree will only be considered with a minimum of 10 years verifiable relevant industrial experience. English Language Requirements: IELTS 6.5 with no individual section lower than 6.0.

Course Webpage: https://www.ucc.ie/en/ckr49/#

Application: **PAC Code: CKR49**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

D19 MEngSc in Electrical & Electronic Engineering UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: The MEngSc (EEE) has three Streams which include coursework only, coursework with a research project, or coursework with an industrial placement. In all Streams, students take five core modules. Students following Stream 1 (Research Project) and Stream 2 (Industry Placement) carry out a Research Report. Following successful completion of the coursework and Research Report, students in Streams 1 and 2 carry out a research project or industry placement over the summer months. Students who choose the coursework-only option, Stream 3, take additional courses in lieu of the project or placement. These can be chosen from a range of electives

Indicative Content: Advanced Analogue and Mixed Signal Integrated Circuit Design; Advanced RF Integrated Circuit Design; Advanced VLSI Architectures; Intelligent Sensors and Wireless Sensor Networks; Wireless Communications; Robotics and Mechatronics; Advanced Power Electronics and Electric Drives; Optoelectronics; Adaptive Signal Processing and Advanced Control. Stream 3 additional courses: Computer Architecture; Biomedical Design; Microsystems; Nanoelectronics; Innovation; Commercialisation; Entrepreneurship.

Admission Requirements: Upper second class honours (2.1 grade) or higher degree in Electrical and/or Electronic Engineering, or equivalent engineering qualification.

Course Webpage: https://www.ucc.ie/en/ckr47/

Application: **PAC Code: CKR47**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

D20 MSc in Computing Science UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This MSc programme will provide you with the skills required to understand the entrepreneurship and innovation required for the software industry. Many national and multinational companies employ computer science graduates in areas such as software development and engineering, artificial intelligence, systems and networks, database and systems security as well as mobile multimedia, modelling, research and development. You will also get the chance to demonstrate the skills you have learned by completing a substantial research and development project.

Indicative Content: Core – Case Studies in Computing Entrepreneurship; Large-Scale Application Development and Integration; Database Technology; Information Storage and Retrieval; Project Development Skills; Dissertation in Computing Science. Options - Mobile Devices and Systems; Mobile Applications Design; Formal Methods for Distributed Systems; Model-Based Software Development; Optimisation; Services and Mobile Middleware; Multimedia Technology in Mobile Networks; Analysis of Networks and Complex Systems; Network Security; Datamining.

Admission Requirements: Second class honours (2.2 grade) or higher degree in Computer Science or a closely related discipline. Applications from other suitably qualified candidate, or from those with equivalent experience/qualifications, will be considered.

Course Webpage: http://www.ucc.ie/en/ckr40/

Application: **PAC Code: CKR40**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

E

Biotechnology

E1 MSc in Biomedical Science NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: The objective of this programme is to introduce students to an interdisciplinary approach to research, which utilises technologies and skills from a wide spectrum of scientific, engineering and clinical disciplines to address fundamental questions originating in biology and medicine.

Indicative Content: Material Science and Biomaterials, Tissue Engineering, Bioinformatics, Medical Imaging, Molecular Medicine, Product Development and Validation and Regulation, Optics and Lasers in Biomedicine, Introduction to Business.

Admission Requirements: Minimum Second Class Honours degree in a related subject area or a primary without honours but with three years relevant practical experience in the subject area.

Course Webpage: [shortened as] www.bit.ly/d5o1r5

Application: **PAC Code: GYS03**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above

E2 MSc in Biomedical Diagnostics DCU

Study Location: Dublin City University

Course Duration: 1 year

Course Outline: Biomedical diagnostics is the study of procedures that provide information to aid the screening, detection, diagnosis and monitoring of disease. The Biomedical Diagnostics Institute (BDI) (www.bdi.ie) at Dublin City University is a multidisciplinary research institute focused on the development of next generation biomedical diagnostic devices. As part of the BDI Education and Outreach programme the institute has developed a M.Sc. in Biomedical Diagnostics.

Indicative Content: Core: Introductory Biology, Chemistry and Physics, Principles of Diagnositc Technology 1, Advances in Diagnostic and Nanobiotechnology, Professional Skillls for Scientists, Literature Review, Project and Presentation, Issues in Contemporary Science, Principles of Diagnostic Technology 2, Practical Techniques and Mircrofluidics. Options: Gene Cloning and Gene Expression, Medicinal Chemistry.

Admission Requirements: Second class Honours degree 2.2 or equivalent in a science or engineering discipline. IELTS 6.5 with min 6.0 in all components.

Course Webpage: [shortened as] www.bit.ly/XZCuoD

Application: **PAC Code: DC727**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above

E3 MSc in Biopharmaceutical Engineering UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: The Master of Engineering Science (M.Eng.Sc.) in Biopharmaceutical Engineering is offered by the UCD School of Chemical and Bioprocess Engineering. This course provides an understanding of the principal scientific and engineering challenges involved in the design, operation and management of biopharmaceutical production facilities.

Course Suitability: This programme is suitable for Science and Engineering graduates wishing to obtain a qualification which is highly relevant to the Biopharmaceutical Industry.

Indicative Content: Biopharmaceutical Engineering; Transport Phenomena; Biochemist's Toolkit; Molecular Genetics and Biotechnology; Animal Cell Culture Technology; Microbial Cell Factory; Microbial Cell Factory; Bioreactor, Modelling and Control; Bio-separations; Bioprocessing Laboratory Practice; Regulatory Affairs Science for Biotechnology Products; Formulation and Delivery of Biopharmaceuticals; Facility Design and Operation; Biopharmaceutical Industry Regulation and Management; Bioprocess Scale-up and Technology Transfer; Research/Design project.

Admission Requirements: An Honours degree or equivalent in an engineering or science discipline is required for entry.

Course Webpage: [shortened as] www.bit.ly/1eJNrBP

Application: Apply online via the course webpage.

E4 MSc in Bioprocess Engineering DCU

Study Location: Dublin City University

Course Duration: 1 year

Course Outline: This course is an interactive and dynamic programme that will develop knowledge and appreciation of the conceptual and factual bases for bioprocess design and operation. It will also develop understanding of bioprocessing, particularly the structures, roles and experimental methods associated with biopharmaceuticals, their analysis, production methods and technology for monitoring and control of bioprocesses.

Indicative Content: Core: Fundamentals of Bioreaction Engineering, Bioseparations, Recombinant DNA Technology, Bioprocess Scale up and Technology Transfer, Animal Cell Culture Technology, Biopharmaceutical Industry Regulation and MGT, Bioreactor Design, Modelling and Monitoring, Regulatory Affairs SC. For Biotech Products, Formulation and delivery of Biopharmaceuticals, Biopharmaceutical facility Design and Operation. Options: Bioprocess Engineering Research Project and Bioprocess Engineering Design Project.

Admission Requirements: Minimum 2.2 Honours degree in Science or Engineering. IELTS 6.5 with min 6.0 in all components.

Course Webpage: http://bit.ly/2dJR5ls

Application: **PAC Code: DC735**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

E5 Masters in Applied Science - Biotechnology UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course is designed to provide highly motivated graduates with the appropriate theoretical and practical skills for leadership in the biopharmaceutical, agrochemical and biotechnology industries.

Course Suitability: Graduates with a second class honours degree or higher in Biotechnology, Biochemistry, Biology, Chemistry, Microbiology or similar science-based subjects.

Indicative Content: Biopharmaceuticals and Quality Assurance; Bioprocess Engineering, Analytical chemistry and Quality Control; Cell and Molecular Biology; Genetic Engineering Functional Foods for Health; Research Dissertation and Industry Placement.

Admission Requirements: Candidates must have obtained at least a Second Class Honours Grade 2 degree or equivalent in a subject(s) related to that of the MSc in Applied Science programme. Graduates with equivalent qualifications in related areas of science and technology, or with proven and relevant industrial experience can be considered for places following interview and assessment by the Director of the MSc in Applied Science (Biotechnology) Programme.

Course Webpage: www.ucc.ie/en/ckr01

Application: **PAC Code: CKR01**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

E6 MSc in Biotechnology UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This is a multi-disciplinary programme that will provide the theoretical background, practical training and ancillary workplace skills that will equip graduates with the essential tools for a successful career in the biopharmaceutical and biotechnology industry both in Ireland and abroad.

Indicative Content: Biomedical Diagnostics; Medical Device Technology; Microbial and Animal Cell Products; Pharmacology and Drug Development; Recombinant DNA Technology; Professional Career Development; Bioprocessing Laboratory; Drug Development and Clinical Trials; Environmental

Biotechnology; Facility Design; Food Biotechnology; Regulatory Affairs Science for Biotechnology Products

Admission Requirements: At least an upper Second Class Honours Grade or equivalent in a biology or chemistry primary degree. This includes a BSc in Biotechnology, Biochemistry, Microbiology, Genetics, Neuroscience, Physiology, Pharmacology, Medicinal Chemistry or an equivalent qualification.

Course Webpage: [shortened as] http://bit.ly/2dJOAzX

Application: Apply online via the course webpage.

E7 MSc in Biotechnology NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: This programme focuses on the adaptation and application of biological processes for commercial and industrial use and aims to provide participants with the skills, knowledge and experience required for work in this area.

Course Suitability: Graduates with a primary degree in the Biological Sciences who wish to extend their knowledge and skills for a career in the biotechnology sector for working in the pharmaceutical and food industries, and in diagnostic and research services.

Indicative Content: Introduction to Biotechnology, BioProcess Technology, Genetic Technology, Immunodiagnostics, Pharmacology, Protein Technology, Quality Management Systems, Introduction to Business, Research Project.

Admission Requirements: Minimum Second Class Honours primary degree in Science or a related subject, with a strong background in Biological Sciences. Candidates with a suitable primary degree without honours and three years relevant and appropriate practical experience may also be considered. IELTS score must be not less than 5.5 in any one component.

Course Webpage: [shortened as] www.bit.ly/avHELs

Application: **PAC Code: GYS04**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above

E8 MSc in Immunology TCD

Study Location: Trinity College Dublin

Course Duration: 1 year

Course Outline: This course includes study of immunological processes and mechanism, how they contribute to disease and how they might be manipulated therapeutically. By focusing on the molecules, cells, organs and genes of the immune system, their interaction and how they are activated

and regulated, students will develop a deep understanding of the pathological processes underpinning immune mediated disease and how they might be controlled. From a practical perspective the course involves in-depth instruction in modern methodologies used in immunology/biomedical research, including the fundamentals of molecular and cellular biology. Students will also be trained in experimental design, data handling and basic research skills. The course aims to provide students with a well-balanced and integrated theoretical and practical knowledge of Immunology, and to highlight the progress and intellectual challenges in this discipline.

Indicative Content: Core: Basic Immunology; Immunological Technologies; Communicating Science/Critical Analysis: How to read and evaluate scientific literature; Computational and Comparative Immunology; Genes and Immunity; Pathogen Detection and Evasion; Clinical Immunology: Immuno-technologies and diagnostics tests; Parasite Immunology; Tumour Immunology; Global Infectious Diseases; Immuno-therapeutics and product development; Dissertation.

Admission Requirements: Normally an Upper Second Class Honours degree (2.1) or higher in Medicine, Veterinary Science, Molecular Biology, Genetics, Immunology, Biochemistry or a related subject.

Course Webpage: [shortened as] www.bit.ly/MXvy4A

Application: Apply online from course webpage.

E9 MSc in Plant Biology – Future Crops UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course will cover diverse topics and approaches in plant biology research, including modern developments in genetics, cell biology, biotechnology and plant environment interactions. Lectures given by specialists in various areas of plant biology will aim to expose students to, up to the minute developments. The course will also consider how developments in plant biology can be brought to the marketplace.

Course Suitability: Suitable for the majority of life sciences graduates who wish to develop their skills in Plant Biology, particularly in recent developments in genetics, biotechnology, climate change, cell and molecular biology, physiology, biotic and abiotic stress responses.

Indicative Content: Core: Current Developments in Plant Biology, Entrepreneurship in Plant Biology' Options: A selection of elective modules that cover a range of topics in plant, cell and molecular biology.

Admission Requirements: A recognised BSc honours degree (or equivalent experience) in a related subject, such as biology, botany, ecology, zoology, geology, cellular/molecular biology, biochemistry, environmental biology or plant science. Prior knowledge in Plant Science is not a requirement.

Course Webpage: [shortened as] http://bit.ly/2eWU8rN

Application: Apply online at www.ucd.ie/apply

F

Management and Business

F1 MSc in Project Management UL

Study Location: University of Limerick

Course Duration: 1 year

Course Outline: This course aims develop knowledge and understanding of the theories and principles of modern approaches to managing projects. Learners will gain skills in critically analysing and engaging actively in the development and integration of project management as a way of work within organisations. Competencies to manage groups and teams and to interact effectively with project stakeholders will be developed and project management best practice in managing human, physical and financial resources throughout the project lifecycle will be studied. The concepts and theories of corporate and social responsibility will be introduced to provide a framework for planning and evaluating the actions and performance of a project in the context of sustainable and socially responsible activity.

Course Suitability: Professionals wishing to pursue a career in projects and wishing to develop skills and knowledge related to their chosen disciplinary field, such as engineering, science, health, public administration and education.

Indicative Content: Core - Project Management Science and Principles; People and Behaviour in Projects; Project Planning and Control; Decision Analysis and Judgement in Projects; Research in Projects and Organisations; Leadership, Sustainability and Governance; Strategy Formulation and Implementation; Commercial Management of Projects; International Project Management; Knowledge and Information Management in Project Environments; Project Management Simulation; Options: In Company Project; Confirmation Paper.

Admission Requirements: Minimum of 2:2 honours primary degree or equivalent in a project management related field, such as engineering, science, business, information technology, public administration, health and education. Candidates may be selected for interview to determine suitability.

Course webpage: www.ul.ie/graduateschool/course/project-management-msc

Application: Apply online via course webpage

F2 MSc in Project Management UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course provides an in-depth education in the basics of managing change and applying creative and innovative approaches to problem-solving. Students will develop the practical skills to plan, organise and control business projects and get a solid foundation in the theory and best practise or project management. The course favours hands-on experience, enabling students to experience the reality of project management and the skills and techniques required of the profession.

Course Suitability: Graduates with a background in business, economics, engineering, science or computer science who have an interest in developing their project management skills.

Indicative Content: Project and Organisational Dynamics; Projects and Organisational Dynamics; The Project Management Lifecycle; Project Scope and Feasibility; Project Management Tools and Techniques; Procurement and Contract Management; Project Risk Management; Research Report.

Admission Requirements: Minimum of a 2:2 Honours degree in Business, Commerce, Computer Science, Engineering, Social Science, Economics, Science, Physics, Architecture or a related discipline or an honours Graduate Diploma in Business Studies or a primary degree with a minimum of three years' work experience.

Course Webpage: [shortened as] www.bit.ly/1Ktk3ha

Application: Apply online via course webpage.

F3 MSc in Strategic Management DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This course aims to develop participants' understanding and expertise of strategy formulation and implementation and the role of the leader in this. Participants study a range of business modules and undertake group and individual assessments to develop the functional competencies, specialist knowledge, research skills, analytical skills, leadership and soft skills necessary for strategic management and leadership.

Course Suitability: Aspiring and experienced managers seeking to develop their capabilities in the field of strategic management.

Indicative Content: Core - Strategy an Leadership 1 and 2; Analytical tools for Business Management; Corporate Finance; Business Research Methods; Strategic Marketing; Project and Consultancy Management; Understanding and Leading Organisations. Option areas - Financial Services; Innovation; Retail Management; Marketing; Human Resources Management; Supply Chain Management

Admission Requirements: Graduates in business, economics (or an undergraduate programme where business subjects account for at least 50% of the subjects) who have achieved an Honours degree at grade 2:2 grade or higher.

Course Webpage: [shortened as] www.bit.ly/2cKaR1w

Application: Apply via the 'Non-EU/International Applicants' button on the course webpage.

F4 MA in Business Management UL

Study Location: University of Limerick

Course Duration: 1 year

Course Outline: This course covers the fundamental business disciplines: accounting, business communications, economics, human resource management, information management, knowledge management, management principles, marketing management, organisational behaviour and strategic management.

Course Suitability: Non-business graduates who wish to develop an understanding of major business disciplines and pursue business careers.

Indicative Content: Economics for Business; Management Principles; Information Management; Organisational Behaviour; Marketing Management; Financial Management and Decision Making; Knowledge Management; Business Communication; Human Resource Management; Strategic Management; Business Simulation; MA Confirmation Paper.

Admission Requirements: Minimum of a 2:2 Honours primary degree in any field other than Business or Commerce related fields, or equivalent.

Course Webpage: [shortened as] www.bit.ly/17TW06w

Application: Apply online from the course webpage

F5 Masters in Business Studies (MBS) – Management WIT

Study Location: Waterford Institute of Technology

Course Duration: 1 year

Course Outline: This programme aims to deliver a well-rounded knowledge of theories, practices and skills of management and business. It emphasises skills of critical thinking, analysis, debate, dealing with high levels of ambiguity, decision making and the simultaneous treatment of interdependent decisions in a more complex environment.

Course Suitability: Graduates with a degree in management or a general business degree with a management major/specialization and pursuing a career in management.

Indicative Content: Core - Knowledge Management; Managing Corporate Creativity; Management Skills Development; Managing Change; Entrepreneurship and Innovation Management; Business Development; Leadership and Coaching; Seminar Series; Business Simulation I and II; Research Methods; Dissertation. Options - Research Specialisation: Qualitative Research or Quantitative Research or In-Company Project.

Admission Requirements: Usually a 2:1 business management degree or a general business degree with a management major/specialism. Please note the English language requirements for admission given on the website (also see p3).

Course Webpage: [shortened as] www.bit.ly/1F4uRmT

Application: **Pac Code: WD510**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code above.

F6 MSc in Business Economics — UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course focuses on understanding firm performance and competitiveness in the global business environment with a theoretically grounded, evidence-based and application orientated approach. Team-working and the production of analyses, reports and presentations to a high professional standard are expected.

Course Suitability: Graduates with an Economics major seeking the key professional skills to work as business and strategic analysts.

Indicative Content: Economics of Business Strategy; Analysing General Business Conditions; Financial Economics and Business Strategy; Scenario Analysis and Forecasting for Business Development; Research Methods for Business Economics; Business Survey Methods; Research Workshops and Professional Development; Business Economics Report

Admission Requirements: A primary degree with a major in Economics or an appropriate Higher Diploma, and at least a 2:2 on the aggregate of all Economics courses in the degree or diploma award.

Course Webpages: www.ucc.ie/en/ckl06

Application: **PAC Code: CKL06**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

F7 MSc in Accounting — DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This programme is aimed at those wishing to further their studies in accounting and who may wish to prepare for a career as a professional accountant. The programme will also develop the skills and competencies required to undertake independent research in the areas of accounting and related areas.

Indicative Content: Core - Financial accounting/reporting; Management accounting; Finance; Thesis. Options: Strategic management; Business information systems; Taxation; Auditing.

Admission Requirements: An Honours degree (2:2 or higher) with accounting constituting a major part.

Course Webpage: [shortened as] www.bit.ly/2d8wFzl

Application: Apply via the 'Non-EU/International Applicants' button on the course webpage.

F8 MSc in International Business CIT

Study Location: Cork Institute of Technology

Course Duration: 1 year

Course Outline: This programme is geared at providing non-business graduates with the skills required to develop and promote products and services in an international environment while furthering their business skills and knowledge. Students build upon their own discipline (science, engineering, computing etc.) to develop a solid understanding of Business Development, Internationalisation and Innovation in an interesting educational environment. Students will expand their business knowledge and skills through simulation, guest speakers, and an international trip. Students will also undertake an industry consultancy project which will prepare them for opportunities in the workplace. The programme is an excellent opportunity for students who want to complement their degree with business skills.

Indicative Content: Core – Strategic Thinking; Global Marketing Management; International Selling & Business Development; Innovation Management & Creativity; Financial Management & Systems; International Business Field Trip; Sustainable Marketing Practice; Economics of Global Markets; Business Environment Simulation; Applied Consultancy Project. Options – Customer Experience Design; Technology Management in Global Business; People Management Strategies; Digital Environment.

Admission Requirements: Upper second class honours degree (2:1 grade) or higher in a non-cognate area (i.e. where the specialism is not Business, Marketing, Accounting/Finance or Business information systems. A personal statement must be provided by the applicant.

Course Webpage: www.cit.ie/course/CRBIBUS9

Application: Apply online via the course webpage.

F9 MA in Global Business Practice (Traditional Platform only) CIT

Study Location: Cork Institute of Technology

Course Duration: 1 year

Course Outline: The programme has three different strands and is geared at developing a graduate that will be ready to gain employment in roles where international business skills and knowledge can be put to immediate and practical usage. A graduate of this programme will have a deeper and broader understanding of the international business environment coupled with experience in that area, and they will have specific and deep knowledge around business development, importation, exportation, supply chain, operations, purchasing, account management, international selling and innovation. The final stage of the programme will provide students with the opportunity to apply their knowledge and skills to real world initiatives through placement in an international business or a business with a strong business orientation. This will be of significant duration and will be targeted at overseas partners though suitable placements may also be approved within Ireland.

Indicative Content: Global Competitive Strategies; Operations Strategy; Business Relationship Management; International Business Negotiation; Financial Interpretation; Innovation Practice; Purchasing and Logistics; International Study Trip; Business Simulation; Trade Regulation & Policy; Seminar Series.

Admission Requirements: Second class honours degree (2:2 grade) or higher in a business area. A personal statement must be provided by all applicants.

Course Webpage: www.cit.ie/course/CRBGLBP9

Application: Apply online via the course webpage.

F10 MSc in Supply Chain Management DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This programme allows graduates, often with limited practical experience, to gain an MSc in Supply Chain Management by following a structured programme of modules which address both the theoretical and applied aspects of the subject. It is aimed at the "high-flyers" who will be the world-class managers of the future. The aim of the programme is to develop these professionals - the leaders of change and business improvement in manufacturing, process, retail, transport and logistics service companies. It achieves this through broad-based vocational postgraduate education, providing the student with a thorough knowledge of and competence in the key elements of logistics and Supply Chain Management.

Indicative Content: Core – Introduction to Supply Chain Management; Understanding Customer Service; Manufacturing Strategy and Operations; Physical Distribution Management; Purchasing; Information Technology in the Supply Chain; International Supply Chain Design; Introduction to Business Strategy; Research Methods; Dissertation. Options – Managing People; Management of Information Systems.

Admission Requirements: Second class honours degree (2:2 grade) or higher in any discipline.

Course Webpage: [shortened as] http://bit.ly/2dK6vaL

Application: Apply online via the course webpage.

F11 MA in Human Resource Management CIT

Study Location: Cork Institute of Technology

Course Duration: 1 year

Course Outline: The programme is designed to expose students to current issues in the Human Resource Management domain at a strategic level. This Masters programme has been designed in consultation with industry to respond to changes that have taken place in the HR area. It is aimed at professionals in the HR discipline who wish to further their career and enhance their skillset.

Indicative Content: Research Methods; International Corporate Strategy; Human Resource Management in Context; Coaching and Mentoring; Sourcing and Testing; Professional Employment Law; Applied Corporate Strategy; Employee Engagement; Leading, Managing, Developing; Training, Knowledge Management; Reward & Incentive Management; Performance Management; Dissertation.

Admission Requirements: Second class honours degree (2:2 grade) or higher in Human Resource Management.

Course Webpage: www.cit.ie/course/CRBHRMN9Y5

Application: Apply online via the course webpage.

F12 MSc in Supply Chain Management UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: The course offers both a solid academic grounding in the concepts and practices of Supply Chain Management and direct contact with the experience and expertise of professionals from the field. Students will learn all about the profession, from supplier development and management, through to innovation generation, customer relationship management and sustainability. Students will acquire the skills and techniques required to succeed in the industry: strategy, management, leadership, critical thinking, negotiation and organisation. Finally, students will gain market-relevant experience and the benefit of professional know-how via a consulting project conducted with a leading MNC.

Indicative Content: Core – Supply Chain Analytics; Supply Chain Operations; Procurement and Supplier Management; Cases in Supply Chain Analytics; Negotiation Supply Chain Managers; Supply Chain Consulting; Consultancy Project. Options – Business Logistics; Project Management for Supply Chain Managers.

Admission Requirements: Second class honours (2.2 grade) or higher degree in any discipline, or a primary degree with a minimum of three years' work experience in Supply Chain Management.

Course Webpage: [shortened as] http://bit.ly/2d0qIq7

Application: Apply online via the course webpage.

F13 MSc in Finance UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course is especially suitable for graduates with an educational track record in business, economics, finance or any degree with a significant quantitative element. A wide-ranging curriculum develops and tests graduates' comprehension of management principles, market operations and functions, and the risks inherent in investment management, enabling them to

comprehend the entire management and strategic contexts in which financial decision-making is taken. Students learn about financial processes and procedures as well as the knowledge and skills (both professional and personal) necessary for a career in financial services, from investment and commercial banks through to insurance companies and trading houses. In the summer term, students can choose from some summer term modules, or a research project, or in a small number of cases, from a limited number of possible internships.

Indicative Content: Core – Financial Econometrics; Derivative Securities; Corporate Financial Management; Quantitative Methods; Capital Markets & Instruments; Financial Asset Valuation; Strategic Finance; Behavioural Finance; Empirical Finance; Portfolio & Risk Management. Options – Advanced Treasury Management; Management of Banking Institutions; Applied Investment Management; Research Project; Mergers & Acquisitions; Financial Modelling; Aircraft Finance.

Admission Requirements: Second class honours degree (2:2 grade) or higher in Business/Commerce (with quantitative subjects), Economics, Finance, Engineering, Mathematics, Physics or Finance-related area, or a primary degree with a minimum of three years' work experience in Finance.

Course Webpage: [shortened as] http://bit.ly/2dJtItT

Application: Apply online via the course webpage.

F14 MSc in Financial Economics UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This programme involves advanced study of the practices of investment, banking and risk management. The course also involves an applied research project, using cutting-edge techniques and software. The MSc Financial Economics is at the top end of graduate study in business/finance in Ireland and is designed for high achievers who wish to pursue high-end careers in financial markets

Indicative Content: Fund Management and Evaluation; Fixed Income Securities; Asset Pricing; Securities Valuation and Selection; International Finance; Treasury Risk Management; Financial Institutions and Money Markets; Derivative Securities; Macroeconomics for Financial Markets; Regulation and Compliance in Capital Markets; Applied Econometrics; Applied Time Series Analysis; Research Methods; Applied Research Project.

Admission Requirements: Upper second class honours degree (2:1 grade) or higher in a business subject, or in a related subject with a quantitative element such as mathematics, statistics, engineering, science, etc.

Course Webpage: https://www.ucc.ie/en/ckl19/

Application: **PAC Code: CKL19**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

F15 MSc in Food Business — UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This programme will provide you with the skills to analyse the key issues impacting on an evolving food chain such as changing consumer demand, the need for better value, the emerging food service markets, food supply chain management, food safety, food and health issues, product innovation, and the application of those skills to the food industry. The balance of business and computer skills and a European language on this programme reflects the global nature of the food industry.

Indicative Content: Core – Introduction to Food Marketing; Food Business Research Methods; Food Business Analysis; Food Business Project; Economics of the Agri-food System; Food Industry Centred Research Project; Dissertation. Options – Consumer Behaviour in Food Markets; Food Retail Marketing; Food Supply Chain Management; Global Food Policy Issues; Food Security and Sustainable Livelihoods in the Developing World; Co-operative Business and Food Supply; Food Choice and Innovation; German (Beginner – Intermediate); Spanish (Beginner – Improver).

Admission Requirements: Second class honours degree (2:2 grade) or higher. Relevant degrees include BComm, BA, BSc Food Science, BSc Food Technology and BSc Nutritional Sciences, BAgrSc, or equivalent.

Course Webpage: www.ucc.ie/en/ckr23/#

Application: **PAC Code: CKR23**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

F16 MSc in Food Marketing — UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This course will prepare you for a career in some of Ireland's most dynamic businesses. It will expand your knowledge of food, the food consumer, innovation in food and the decision-making processes in companies that develop, brand, distribute, and sell food products. Further opportunities will exist in market research and consultancy or in agencies supporting food companies both at home and abroad. Through practical applications, the course will improve your analytical, communication, and presentation skills which are required and valued by industry.

Indicative Content: Advanced Food Consumer Behaviour; Food Marketing Channel Theory; Food Marketing Channel Analysis; Food Research Management: Qualitative Research; Food Research Management: Quantitative Research; Strategic Food Marketing; Consumer Behaviour and Relationship Marketing; Quantitative Techniques and Analysis; Food Marketing Research Project.

Admission Requirements: Second class honours degree (2:2 grade) or higher in a business related area. Consideration may be given to applicants who do not meet this criteria but who have relevant professional experience.

Course Webpage: https://www.ucc.ie/en/ckl09/#

Application: **PAC Code: CKL09**
Apply online via The Postgraduate Applications Centre – (PAC) – www.pac.ie – using the PAC application code above.

G

Engineering & Sustainable Technology

G1 MSc in Engineering (Environmental / Structural and Geotechnical / Transport) TCD

Study Location: Trinity College Dublin

Course Duration: 1 year

Course Outline: This course provides students with specialist understanding in one of: Environmental Engineering, Structural Engineering or Transport Engineering. In addition, it offers students the opportunity to obtain knowledge in complimentary subject areas within Civil Engineering.

Course Suitability: Graduate engineers seeking advanced knowledge in various aspects of Civil Engineering.

Indicative Content: Core - Civil Engineering Management; Research Methodology; Dissertation. Environmental - Engineering Hydrology; Environmental Monitoring & Assessment; Environmental Processes & Technology; Environmental Engineering; Waste and Environmental Management; Water Quality and Hydrological Modelling; Water Resource Planning. Structural - Geotechnical Engineering; Advanced Structural Analysis; Wind and Earthquake Engineering; Bridge Engineering; Advanced Concrete Technology; Soil-Structure Interaction; A Unified Theory of Structures; Concrete Durability and Sustainability; Advanced Theory of Structures. Transport - Introduction to Transportation Engineering; Transport Modelling; Highway Engineering; Applied Transportation Analysis.

Admission Requirements: A minimum 2:1 Honours degree in Civil Engineering or a related discipline. Relevant industrial experience may be taken into account.

Course Webpage: www.tcd.ie/civileng/postgraduate/msc

Application: [shortened as] www.bit.ly/2dY8es5

G2 MEngSc Structural Engineering UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This course provides students with the opportunity to specialise in the area of Structural Engineering. Participants will be shown how to apply knowledge, understanding, and problem-solving abilities in new or unfamiliar environments. They will also have the ability to integrate knowledge and handle complexity, and formulate judgments with incomplete or limited information, and to reflect on wider disciplinary, scientific, professional issues and social and ethical responsibilities.

Course Suitability: Graduates of Engineering, or those already in employment, who wish to specialise in the area of Structural Engineering.

Indicative Content: Structural Dynamics; Advanced Structural Analysis & Design; Materials & Design; Construction Management; Realising Built Projects; Quantitative Methods for Engineers; Structural Design Buildings; Bridge Engineering; Soil Mechanics & Geotechnical Engineering; Soil-Structure Interaction; Professional Engineering Management; Structural Research Project.

Admission Requirements: Honours Bachelor's Degree in Engineering or equivalent (with a minimum of 2H2 honours level, or equivalent) and the appropriate prior learning.

Course Webpage: [shortened as] www.bit.ly/2ctjjzc

Application: Apply online via course webpage

G3 MSc in Sustainable Energy Engineering — WIT

Study Location: Waterford Institute of Technology

Course Duration: 1 year

Course Outline: This course will provide students with expertise in energy use, environmental performance and sustainability in the design and operation of buildings and their associated facilities and services systems. It will encourage the development of students' powers of analysis, synthesis and communication to develop a broader understanding of Low Energy Building Design and Management.

Course Suitability: Professionals practicing in the areas of building design, management and technology.

Indicative Content: Sustainability and the Environment; Personal Effectiveness; Advanced Dynamic Thermal Simulation – Services Systems; Statistical Analysis; Energy Auditing; Dynamic Thermal Simulation – Building Fabric; Building Pathology and Investigation; Building Services Systems; Facilities Management; Passive and Low Energy Building Design; Sustainable Energy Technology; Research Methods; Dissertation.

Course Webpage: [shortened as] www.bit.ly/1Qhjj07

Admission Requirements: Normally a second class honours degree in an engineering related and technical programme such as building services engineering, mechanical engineering, civil engineering, construction management, quantity surveying, architectural technology and architecture. Students from other associated engineering and science disciplines are welcome to apply.

Application: **PAC Code: WD554**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

G4 MEngSc Sustainable Energy — UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: This programme aims to equip students with the information base and skill set to actively participate in this growing global market where energy/environment policy and technological innovation meet. It will provide students with knowledge and understanding of: (i) energy trends, their impacts on the environment and the engineering solutions to mitigate the damage; (ii) engineering of individual renewable energy sources of wind, hydro, biomass, wave, solar and geothermal; (iii) energy

conversion processes for electrical, thermal and transport energy supply; (iv) the integration of intermittent renewable energy with the electricity network; (v) sustainable energy end use in building design, construction and management.

Indicative Content: Sustainable Energy; Solar and Geothermal Energy; Renewable Energy Systems; Electrical Power Systems Analysis; Energy in Buildings; Energy Systems in Buildings; Wind Energy; Energy Systems Modelling; Biomass Energy; Hydro and Ocean Energy.

Admission Requirements: Minimum 2:2 Honours BE or BEng Degree. Candidates with equivalent academic qualifications and suitable experience may be accepted.

Course Webpage: [shortened as] www.bit.ly/bCzVWR

Application: **PAC Code: CKR26**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

G5 MSc in Energy Management DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This course aims to enhance the effectiveness of engineers and scientists by providing an opportunity to study the theory and practice of current developments, laws, standards, technologies, management, economics and finance, associated with European energy and environmental issues.

Course Suitability: The programme is designed primarily for engineers, but will also be of interest to scientists, managers and multi-discipline professionals such as environment health officers, architects and planning officers.

Indicative Content: Business (Organisational Behaviour); Law (Business Law); Financial Decision Making; Energy Supply; Energy Conversion and Use; Energy Management Principles and Practice; Business (strategic Management); Law (Energy & Environment Law and Policy); Financial Management; Wind Energy for Electricity Supply; Advanced Energy Systems; Sustainable Building Design; Power System Analysis; Embedded Generation; Renewable Energy Technologies; Biomass Technology / Bio fuels for Transport; Energy Control Systems; Low Energy Lighting Design; Research Methodologies and Dissertation.

Admission Requirements: Standard applications: at least a 2.2 award in an Honours Bachelor of Engineering Degree. Applicants holding a qualification or combination of qualifications deemed by the Institute as being of equivalent standard to the above when taken in conjunction with relevant work experience may also be considered

Course Webpage: [shortened as] http://bit.ly/2dgb2gG

Application: Apply via the 'Non-EU/International Applicants' button on the course webpage.

G6 ME in Energy Systems Engineering NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: This course aims to advance students' engineering knowledge. It provides training in advanced technologies in energy systems engineering, transferrable skills for employment and/or a research career in the energy sector, and technology development through an energy systems engineering project.

Course Suitability: Graduates of Engineering related courses seeking to advance their engineering knowledge towards a career in industry or research based on energy systems applications

Indicative Content: Project Management; Environmental Economics; Engineering Finance; Engineering Research Methods; Technology Innovation & Entrepreneurship; Applied Statistics for Engineers; Advanced Applied Maths; Internet Programming; Database Development; Global Climate Change; Sustainable Energy & Buildings; Design of Sustainable Environmental Systems; Advanced Mechanical Analysis & Design; Technology Development Project.

Admission Requirements: Minimum of a Second Class Honours Degree in an Engineering programme.

Course Webpage: [shortened as] www.bit.ly/1F1D62N

Application: **PAC Code: GYE20**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie– using the PAC application code shown above.

G7 ME in Sustainable Electrical Energy Systems DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This course addresses the technology of sustainable electrical energy systems and the issues surrounding their integration into electrical power systems. The main themes covered are: electrical power systems analysis, renewable electrical energy technology, power electronics, distributed generation, energy markets and global issues surrounding the supply and demand of energy.

Course Suitability: Graduate engineers, especially those working in the electrical/electronic and related industries, who would like to move into an engineering role in the electrical energy systems area.

Indicative Content: Core - Research Methods; Entrepreneurship; Statistical Analysis; Innovation and Knowledge Management. Options - Power Electronic Energy Conversion Systems; DSP Platforms; Wind Energy for Electricity Supply; Renewable Energy Technologies; Embedded Generation; Power Systems Analysis 1 and 2; Energy Supply; Gas and Electricity Markets; Energy Conversion Systems.

Admission Requirements: A minimum Second Class Honours accredited degree (2.2 grade or higher) in Electrical or Electronic Engineering or a minimum Second Class Honours accredited degree (2.2 grade or higher) in a related engineering discipline e.g. mechanical, mechatronic or energy engineering.

Course Webpage: [shortened as] www.bit.ly/2d1jqBC

Application: Apply via the 'Non-EU/International Applicants' button on the course webpage.

G8 MSc in Environmental Technology UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: This programme provides an intensive treatment of environmental technologies with an emphasis on air, water and soil protection. Students will enhance their ability to work effectively as individuals, in teams and in multi-disciplinary settings.

Course Suitability: Science, engineering and technology graduates seeking additional skills to develop technology solutions for air, water and soil protection in existing and emerging sectors across industry (particularly agri-food and bioresources), consulting companies and regulatory authorities.

Indicative Content: Environmental Engineering, Risk Assessment, Air Pollution, Waste Management, Life Cycle Assessment, Buildings and Environment, Energy Systems and Sustainable Environment.

Admission Requirements: Minimum of a 2nd Class honours degree in Science, Engineering, Agricultural Science, Environmental Science or related discipline.

Course Webpage: [shortened as] www.bit.ly/14UK6XV

Application: Apply online via course webpage

G9 MEngSc in Water Waste and Environmental Engineering UCD

Study Location: University College Dublin

Course Duration: 1 year

Course Outline: Students in this programme will gain advanced theoretical and conceptual knowledge and understanding in the area of environmental engineering on topics such as engineering hydrology, environmental modelling, water and wastewater treatment, solid waste management, and environmental data analysis, among others.

Indicative Content: Core - Introduction to Water Resources Engineering 1; Science and Technology for Sustainable Development; Water Waste and Environmental Modelling; Environmental Impact Assessment; Quantitative Methods for Engineers; Environmental Research Project. Options - Systems and Geotechnics; Unit Treatment Process in Water Engineering; Hydraulic Engineering Design; Introduction to Water Resources Engineering 2; Integrated Municipal Solid Waste.

Admission Requirements: A recognised bachelor's degree (honours) in engineering (minimum 4-yr, 240 ECTS), preferably in civil engineering or environmental engineering, or equivalent.

Course Webpage: [shortened as] www.bit.ly/1607Ekt

Application: Apply online via course webpage

G10 MSc in Sustainable Resource Management: Policy and Practice NUIG/UL

Study Location: University of Limerick / NUI Galway (Joint programme)

Course Duration: 1 year

Course Outline: This programme, which is offered jointly by National University of Ireland, Galway and University of Limerick, brings together theory, policy and practice to provide participants with the skills, knowledge and experience that are needed to pursue successful careers in managing environmental resources sustainably. This new course combines scene setting lectures by experts (including guest seminars), site visits and experiential learning to encourage students to adopt an informed, creative, innovatory and entrepreneurial approach to problem solving. As the course is structured around research in both institutions that is strongly linked to decision makers in industry and government organisations, it will develop graduates with necessary skills in identifying and evaluating solutions for real world problems

Indicative Content: Semester 1 (Galway): Ecosystem Assessment; Biodiversity and Conservation; Environmental Problems and Solutions. Semester 2 (Limerick) Material and Energy Flows; Urban Form and Transport; Urban Household Sustainability; Sustainable Life-cycle Engineering.

Admission Requirements: At least a Second Class Honours primary degree (Level 8—National Qualifications Authority of Ireland) in an appropriate discipline, or a professional or other equivalent qualification recognised by both the University of Limerick and National University of Ireland, Galway.

Course Webpage: [shortened as] www.bit.ly/1qUpizh

Application: Apply online via University of Limerick course webpage.

G11 MSc in Water Resource Engineering NUIG

Study Location: NUI Galway

Course Duration: 1 year

Course Outline: Water security is one of the main threats facing humanity and engineers are the primary professionals responsible for addressing this problem. This new course will cover advanced water engineering topics in hydraulics and hydrology with an emphasis on engineering hydraulic design and hydrological analysis. The programme provides a focus on understanding and using modern hydrological/hydraulic modelling tools; the course will contain real world design projects using these models. Students, working in groups, complete several designs and submit detailed design reports including excel sheet calculations, drawings and design justifications. This programme will

provide engineers will the technical competences to provide solutions to deliver safe/clean water. The programme will also give opportunities to students to study economics and project management of large water engineering projects in developed and developing countries.

Course Suitability: Civil and environmental engineers and scientists with an appropriate earth science background.

Indicative Content: Core: Hydrology and Water Resources; Hydraulic Modelling; Design of Sustainable Environmental Systems; Hydropower; Water Quality Modelling; Water Resources in Developing Countries; Applied Field Hydrogeology; Numerical Analysis. Options**:** Environmental Impact Assessment; Global Climate Change; Introduction to Applied Field Hydrology; Computational Methods in Civil Engineering; Turbomachines and Advanced Fluid Dynamics; Environmental Economics; Engineering Finance; Project Management; Applied Statistics for Engineers; Computational Fluid Dynamics.

Admission Requirements: Minimum 2:1 Honours degree or equivalent or other degree or relevant qualifications, including professional qualifications, with at least three years' work experience in an environmental profession.

Course Webpage: [shortened as] www.bit.ly/1KnchlU

Application: **PAC Code: GYE23**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

G12 ME in Sustainable Development DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: The programme aims to provide graduates with the skills and ability to interpret principles of sustainable development and translate these into policy responses. The MSc Sustainable Development is structured to build on and deepen your knowledge and allow you apply the principles and practices of sustainable development in your own field of expertise or employment. The course also offers you the chance to deepen your knowledge in chosen areas of energy, environment, community development or planning.

Indicative Content: Core – Ecology; Climate Change and Policy Analysis; Society and Sustainable Development; Economy and Sustainable Development; Spatial Planning and Sustainable Communities; Transport and Urban Development; Environmental Law and Institutions; Sustainable Development & Public Policy in a European Context; Research Techniques; Dissertation; Progress and Placement. Options – Environmental Management Plans; Environmental Design & Management; EU Policy; Law and Local Development; Local Governance, Dev. & Innovation; Management Studies; Place-Making; Renewable Energy Technologies; Spatial Data Assessment/GIS; Sustainable Construction; Sustainable Tour-Policy & Practice; Urban Regeneration & Public Policy;

Admission Requirements: Second class honours degree (2:2 grade) or higher in any relevant discipline. Work/life experience may also be taken into account. Eligible candidates may be interviewed where work/career experience is being considered in lieu of academic qualifications.

Course Webpage: [shortened as] http://bit.ly/2dK9e4a

Application: Apply online via the course webpage.

G13 MEng in Mechanical Engineering CIT

Study Location: Cork Institute of Technology

Course Duration: 1 year

Course Outline: The programme has been developed to address the need for both new graduates and existing engineers to acquired advanced competencies in computational methods, analytical methods, and design. Specifically this programme of study is designed to progress your qualifications by deepening your technical knowledge, skills and competencies in the core field of Mechanical Engineering, by enhancing your knowledge and entrepreneurship through strategic business management and managing innovation and by enabling you to carry out in depth research in an industrially focused sector of Mechanical Engineering.

Indicative Content: Core – Computational Solid Modelling; Lean Sigma – Advanced Stats; Industrial Heat and Power; Integrated Design & Manufacture; Computational Fluid Dynamics; Modelling of Manufacturing Processes; Research Project. Options – Engineering Research Skills; Statistical Methods for Big Data; Sustainability in Engineering; Strategic Business Management; Automatic Process Control; Advanced PLC Programming; Control System Design; Engineering Project Management; Managing Innovation.

Admission Requirements: Second class honours degree (2:2 grade) or higher in Mechanical Engineering.

Course Webpage: www.cit.ie/course/CREMENG9

Application: Apply online via the course webpage.

G14 ME in Mechanical Engineering DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This programme is designed to provide mechanical engineering graduates, and graduates from closely-related engineering disciplines, with specialised skills and knowledge in mechanical engineering. The programme consists of 12 taught modules and a Research Project module, and focuses, in particular, on numerical simulation techniques for structural and fluid-flow analyses, renewable and sustainable energy technologies, and biomechanics. The programme award is a Master of Engineering (ME) Degree, with an option to exit the programme with a Postgraduate

Diploma (PgDip). Graduates of the programme will be ideally suited to engage in advanced mechanical engineering research, analysis, and design.

Indicative Content: Entrepreneurship for Engineers; Innovation and Knowledge Management; Research Methods; Statistical Analysis for Engineers; Applied Surface Engineering; Finite Element Analysis; Advanced Dynamics with Applied Computer Modelling; Computational Fluid Dynamics; Heat and Mass Transfer; Advanced Energy Engineering Economics; Renewable Energy Engineering; Biomechanics; Research Project.

Admission Requirements: Second class honours degree (2:2 grade) or higher in mechanical engineering or a closely-related engineering discipline (e.g. manufacturing, chemical, energy, etc.). Candidates will also be considered if they have any qualification(s) deemed by the DIT as being equivalent to the above, when taken in conjunction with relevant work experience.

Course Webpage: [shortened as] http://bit.ly/2cU8p7l

Application: Apply online via the course webpage.

G15 MEng in Electronic Engineering WIT

Study Location: Waterford Institute of Technology

Course Duration: 1 year

Course Outline: This programme provides tuition and practice in state of the art technology areas such as wireless communications, nanotechnology, and mixed-signal IC design. It will extend the student's capabilities in a number of established topic areas, e.g. semiconductor engineering and digital communication systems, while also enhancing the analytical skills of students and engineering management skills. The programme will also provide students with experience of carrying out post-graduate level research in selected topic areas. The Master's degree requires successful completion of ten compulsory modules and two out of four elective modules. The student must also complete an applied programme consisting of the design project plus dissertation, the mini-project and the workshop seminar series

Indicative Content: Core – Technology Management; Mathematical Modelling; Analogue IC Design; Embedded Systems Design; Advanced DSP; Semiconductor Process Engineering; HDL Digital Design; Semiconductor Device Engineering; Digital Communications; Wireless Communications; Design Project and Dissertation. Options – Mixed Signal IC Design; Nanotechnology; Optoelectronics; Communication Networks.

Admission Requirements: Second class honours degree (2:2 grade) or higher in Electronic Engineering.

Course Webpage: [shortened as] http://bit.ly/2d3hI3j

Application: **PAC Code: WD543**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

G16 MEng in Innovative Technology Engineering WIT

Study Location: Waterford Institute of Technology

Course Duration: 1 year

Course Outline: The student will embark on a programme that will assess and analyse a number of emerging technologies and the developing potential for the convergence of these technologies. The course aims to prepare students for a rewarding career in industry or academic research. In addition, the course will facilitate for them the development of a set of personal and professional attributes that will allow them greater flexibility in the development of their own career options. The programme is designed to develop the student's knowledge and skills in strategies for innovation management, product design and development and optimum routes to market. The student will also carry out post-graduate level research of industrial relevance in selected topic areas. The Master's degree requires successful completion of six mandatory modules and four out of eight elective modules. The student must also complete an applied programme consisting of a Research Dissertation and an Industrial Research seminar series.

Indicative Content: Core – Strategic Technological Innovation; Nanotechnology; Biomedical Science; Green Technology and Alternative Energy Sources; Convergent Technologies for Biomedical and Electro-Mechanical Applications; Novel Materials: Their Properties and Exploitation; Industrial Research; Dissertation. Options – Quality Management & Regulatory Affairs; Mechanics of Materials; Control Engineering; Technology Management; New Product Development Strategy; Product Design & Development; Cognitive Technologies; Entrepreneurship.

Admission Requirements: Second class honours degree (2:2 grade) or higher in Innovative Technology Engineering or a cognate discipline.

Course Webpage: [shortened as] http://bit.ly/2cSAhc5

Application: **PAC Code: WD555**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

G17 MSc in Marine Renewable Energy UCC

Study Location: University College Cork

Course Duration: 1 year

Course Outline: The programme covers a range of engineering and non-engineering topics relevant to the marine renewable energy industry. A key aspect of the programme is the provision of specially-developed advanced modules in marine renewable energy which are not available in any other master's course. This is an all-Ireland programme, hosted by UCC, delivered in partnership with the following academic institutions: Cork Institute of Technology, Dublin Institute of Technology, National University of Ireland, Maynooth, Queen's University Belfast, University College Dublin and the University of Limerick.

Indicative Content: Core – Environmental Hydrodynamics; Wind Energy; Ocean Energy; Advanced Topics in Marine Renewable Energy; Tidal Energy; Marine Renewable Energy Research Project.

Options - Innovation Finance; Sustainable Energy; Harbour & Coastal Engineering; Finite Element Analysis; Power Electronics, Drives & Energy Conversion; Electrical Power Systems; Environmental Impact Assessments; Practical Offshore Geological Exploration; Technology Business Planning; Intellectual Property Law for High-Tech Entrepreneurs; Energy Systems Modelling; Control Systems; Maintenance & Reliability.

Admission Requirements: Second class honours degree (2:2 grade) or higher in an engineering discipline. Candidates with equivalent academic qualifications and suitable experience may also be considered. Candidates, for whom English is not their primary language, should possess an IELTS of 6.5 (or TOEFL equivalent) with no less than 6.0 in each individual category.

Course Webpage: https://www.ucc.ie/en/ckr51/

Application: **PAC Code: CKR51**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

H

Other Courses

H1 MA in Journalism with New Media CIT

Study Location: Cork Institute of Technology

Course Duration: 1 year

Course Outline: This innovative MA programme offers the opportunity to gain a strategic and systematic understanding of the theory and practice of Journalism. It aims to equip graduates with the knowledge, skills and competencies required to effectively function as a professional journalist in the fast-growing professional communications sector. The course pays particular attention to the growing importance of digital and interactive media on the practice of Journalism and its manifold impacts on the mass media industry. By developing students' research, planning, and multimedia skills the course aims to produce graduates who can display leadership and the capacity for innovation within the dynamic and fast-evolving professional communications industry. The programme stresses a balance of academic and practical modules and offers a solid grounding in the tools and practices of print, broadcast and online journalism.

Indicative Content: Core – Audio-Visual Broadcasting; News Writing and Editing; Media History & Structure; Research Methods and Practice; Multimedia Production; New Media Workplace; Features and Web Writing; Media Law, Ethics & Professional Practice; Cybercultures; New Media Production; Journalism Master Project. Options – Free Choice Module; Studio Technology.

Admission Requirements: Second class honours degree (2:2 grade) or higher in any discipline. Admissions will be on the basis of interview.

Course Webpage: http://www.cit.ie/course/CRHJWNM9

Application: Apply online via the course webpage.

H2 MA in Public Relations with New Media CIT

Study Location: Cork Institute of Technology

Course Duration: 1 year

Course Outline: This course aims to provide students with a strategic and systematic understanding of the theory and practice of public relations. It aims to equip graduates with the knowledge, skills and competencies required to effectively function as a public relations professional. The course pays particular attention to the growing importance of digital and interactive media on the practice of public relations and its manifold impacts on the mass media industry. By developing student's research, planning, managerial and multimedia skills the course aims to produce graduates who can display leadership and the capacity for innovation within the dynamic and fast-evolving professional communications industry.

Indicative Content: Core – PR Theory & Application; Ethics & Social Responsibility; Multimedia Production; Media Writing; Research Methods and Practice; PR and New Media; New Media Production; Cybercultures; Business Communications & Online Writing; Public Relations Campaigns; PR Master Project. Options – Strategic Digital Marketing; Strategy Analysis; Media Law, Ethics & Professional Practice; Event & Project Management; The Business Environment.

Admission Requirements: Second class honours degree (2:2 grade) or higher in any discipline. Admissions will be on the basis of interview.

Course Webpage: http://www.cit.ie/course/CRBPRNM9

Application: Apply online via the course webpage.

H3 MSc in Tourism Management DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: The programme is aimed at both professionals currently employed within the tourism industry and those from complementary backgrounds who wish to enter the tourism field. In this context it may be of particular interest to people coming from a heritage, languages, geography, marketing or business background. This programme aims to equip participants with the necessary expertise to manage, co-ordinate and develop tourism businesses and projects in Ireland and abroad. It is aimed at both professionals currently employed within the tourism industry and those from related fields. This dynamic programme encourages interaction between academics and industry practitioners from the national and international tourism sector.

Indicative Content: International Tourism Trends, Markets & Products; Tourism Destination Planning & Management; Managerial Finance & Entrepreneurialism; The Effective Manager; Emerging Industry Issues; Strategic Marketing & Digital Commerce; Dissertation (including Research Methods).

Admission Requirements: Second class honours degree (2:2 grade) or higher in any discipline.

Course Webpage: [shortened as] http://bit.ly/2dgF8zW

Application: Apply online via the course webpage.

H4 MSc in Hospitality Management DIT

Study Location: Dublin Institute of Technology

Course Duration: 1 year

Course Outline: This globally recognised hospitality programme is one of DIT's most sought after programmes. It is the first and only programme of its kind in the Republic of Ireland and provides participants with a top-level educational package that is delivered by leading academics and experts from the national and international hospitality sector. The programme covers all aspects of the hospitality industry with a business based curriculum that is designed to equip participants with the management skills and analytic capabilities necessary to obtain careers in a wide range of organisational settings.

Indicative Content: International Hospitality Operations Management; Strategic Revenue Management Solutions; Managerial Finance & Entrepreneurialism; The Effective Manager; Emerging Industry Issues; Strategic Marketing & Digital Commerce; Dissertation (including Research Methods).

Admission Requirements: Second class honours degree (2:2 grade) or higher in any discipline.

Course Webpage: [shortened as] http://bit.ly/2dMzHc7

Application: Apply online via the course webpage.