Irish Aid

Government of Ireland
Rialtas na hÉireann

Irish Aid IDEAS Programme Strand II

**Directory of Postgraduate Courses suitable for
Fellowship Awards 2014
(for 2014-2015 Entry)**

Application by invitation only

VIETNAM

Compiled by:

ICOS
Irish Council for International Students

41 Morehampton Road, Dublin 4, Ireland
Tel: +353 - 1 - 660 5233   Fax: +353 - 1 - 668 2320
Email: office@icosirl.ie   Web: www.icosirl.ie

Important Information for Irish Aid IDEAS II Applicants

Application Process

The deadline for applications for the Irish Aid IDEAS II Programme is **31st December**. The application form, available from the embassy of Ireland, includes detailed information on the application process and you are advised to read this carefully.

You should identify the specific postgraduate course(s) you are interested in undertaking **in advance** of submitting your fellowship application and include course codes and details on your form.

Applicants going forward to the final selection round will be notified in **April 2014**. Information on making a course application will be provided. Fellowship applicants are advised not to apply for courses before this time. Please note that application fees will be paid by Irish Aid for *shortlisted candidates only*.

Course Applications

For study in Ireland, you must submit your course application directly to the college or academic department in question and not to Irish Aid or ICOS. Please be sure to note the following points:
* To comply with the requirements of the fellowship, your course application and supporting information must be submitted no later than **10th May**. However, some courses will have *earlier* submission deadlines that you must meet. You should confirm the deadline on the institution's website;
* Most colleges in Ireland only accept **online** applications. When applying, be sure to select the **correct course code** and ensure that it matches a **full-time** programme. Failure to do so may result in your application being misdirected;
* Incomplete course applications will take longer to process and may result in you missing the course application deadline;
* When submitting course applications, it is essential that you provide original transcripts of exam results or degree certificates or *certified* photocopies. Uncertified photocopies are not accepted;
* Regardless of when you apply, decisions on course applications may not be notified by universities or colleges until June or early July.

English Language Proficiency

To fulfil Irish Aid Fellowship requirements, **all candidates for study in Ireland** will be required to hold an IELTS certificate - www.ielts.org **-** with a minimum score of 6.5 (or the TOEFL - www.toefl.org – equivalent). Irish Aid will cover the cost of an IELTS exam for shortlisted applicants who do not hold a certificate or have not undertaken such a test in the preceding two years.

Please note that **some courses in Ireland may specify a higher IELTS requirement** than above for admission. Where possible, this is indicated in the listings by drawing attention to the course webpage.

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
KDSC	Kimmage Development Studies Centre	Dublin	www.kimmagedsc.ie
LIT	Limerick Institute of Technology	Limerick	www.lit.ie
NCI	National College of Ireland	Dublin	www.ncirl.ie
NUIG	National University of Ireland, Galway	Galway	www.nuigalway.ie
NUIM	National University of Ireland, Maynooth	near Dublin	www.nuim.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
WIT	Waterford Institute of Technology	Waterford	www.wit.ie

NOTES ON COURSE LISTINGS

IRELAND LISTINGS

The courses included here have been identified as appropriate for applicants to the Irish Aid Fellowship Training Programme. Every care has been taken in compiling this listing; however information for 2014-2015 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 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.

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 p3)

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M27	MSc in Web Technologies	NCI
M28	MSc in Software Engineering and Entrepreneurship	UL
M29	Msc in Multi Lingual Computing and Localisation	UL
M30	MA/MSc in Interactive Media	UL

A

Applied Linguistics

A1 MA in Applied Linguistics   UCC

French Department	Course Director:	Dr Martin Howard
University College Cork	Tel:	+ 353 - 21 - 490 2552
Cork	Email:	m.howard@ucc.ie

Course Duration: 1 year

Course Outline: The program offers a general introduction to applied areas of language teaching and learning, including aspects of Second Language Acquisition, Pedagogical Grammar, Morphology and Syntax, Sociolinguistics, Phonetics and Phonology and Learning and Teaching Vocabulary. It also offers a wide range of courses in various specialised areas of Applied Linguistics, including Language Learning and Teaching, Literacy, Literature in Language Teaching, Language and Gender, Historical Linguistics, Discourse in the Media, and Aptitude in Second and Foreign Language Learning.

Course Suitability: A wide range of people, including present and future language teachers and those interested in language studies, linguistics and communications.

Indicative Content: Aspects of Applied Linguistics; Aspects of Linguistic Theory; Areas of Specialisation in Applied Linguistics; Research Dissertation.

Admission Requirements: A minimum 2nd Class BA Hons degree which includes a language subject, or another equivalent degree.

Course Webpage: www.ucc.ie/en/cke01

Application: **PAC Code: CKE01**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

A2 MPhil in Applied Linguistics   TCD

School of Languages, Literature and Cultural Studies	Course Director:	Dr Breffni O'Rourke
	Tel:	+ 353 - 1 - 896 1560
Trinity College Dublin	Email:	breffni.orourke@tcd.ie
Dublin 2		

Course Duration: 1 year

Course Outline: The aim of this course is to introduce students to techniques of linguistic description and central concepts in applied linguistics to proceed from this basis to more advanced study of central topics in theoretical/applied linguistics via the dissertation component to introduce students to research in theoretical/applied linguistics.

Course Suitability: Students need not have any background in linguistics or applied linguistics. Normally only graduates with language teaching experience are admitted to the course in Applied Linguistics

Indicative Content: Core: Describing Grammar; Language Acquisition; Second Language Curriculum Planning and Implementation;   Language Testing. Options: Technology, Language, and Communication; Language Variation and Change; Corpus Linguistics; History and Globalisation of English; Bilingualism and the Maintenance of Irish; Lexicology; Linguistic Pragmatics.

Admission Requirements: Applicants must complete the Personal Statement section of the application form and explain their motivation in applying for their chosen course(s).

Course Webpage: [shortened as] www.bit.ly/Sq1v7P

Application: Apply online from course webpage.

A3 MA in T.E.S.O.L   UCD

School of Languages and Literature	Course Director:	Jenny Doyle
University College Dublin	Tel:	+353 - 1 - 716 7900
Dublin	Email:	jenny.doyle@ucd.ie

Course Duration: 1 year

Course Outline: This course will extend students' knowledge of key concepts in TESOL and enhance existing abilities in the practice of English language teaching to speakers of other languages. Participants will learn how to develop a successful career in English language education and acquire research skills to plan further programmes of study in the field of TESOL.

Course Suitability: Teachers of English as a second, foreign or additional language who have an appropriate initial teaching qualification and a minimum of two years' relevant teaching experience. Applicants should be native or near-native speakers of English.

Indicative Content: Language in use; Methodological principles; Methodological applications; Fieldwork & observation; Teaching practice; Discourse Analyses; Research Methods; Specialist Fields.

Admission Requirements: Applicants should hold a primary degree (at least 2nd class honours or equivalent, in any discipline), have an appropriate initial training qualification in TESOL, and have a minimum of two years' relevant teaching experience in Ireland or overseas.

Course Webpage: [shortened as] www.bit.ly/1bIhA39

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

A4 MA in Second Language Studies   UCD

School of Languages and Literature	Course Director:	Lydia Capitano
University College Dublin	Tel:	+353 1 716 8309
Dublin	Email:	lydia.capitano@ucd.ie

Course Duration: 1 year

Course Outline: This course is loosely clustered around the theme of 'learning and acquisition'and investigates the current debate in this area, focusing on questions concerning the applicability certain theoretical approaches, the teachability and learnability of languages.

Course Suitability: Those seeking to extend their knowledge of Second Language Acquisition Theories and their application to the practice of Second Language Teaching. It may be viewed as an end in itself or as a portal for those seeking to undertake higher research.

Indicative Content: Second Language Acquisition; General Linguistics; Research Skills; Linguistic Relativism; Sociolinguistics; Translation Theory; Second Language Teaching and Learning.

Admission Requirements: Normally, an honours BA degree with a 2:2 or higher in a language subject or cognate area.

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

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

A5 MSc in Translation Technology	DCU

School of Communications	Course Director:	Dr Minako O'Hagan
Dublin City University	Tel:	+ 353 1 700 5435
Dublin	Email:	minako.ohagan@dcu.ie

Course Duration: 1 year

Course Outline: The MSc in Translation Technology focuses on technology and accommodates candidates with language combinations other than those covered by the MA in Translation Studies, with English as a common language.

Indicative Content: Core: Translation Theory, Research Methods, Translation Technology, Computerised Terminology, Localisation, Audiovisual Translation, Corpus Linguistics for Translators; Introduction to Computer Programming. Options: Translation as a Profession; Language-specific Translation Practice modules in French, German, Spanish or Japanese

Admission Requirements: A Second Class Honours degree in language/linguistics/computational linguistics (applicants should have knowledge of a 2nd language : Non-native speakers should have a degree in English / maybe interview. IELTS 7.0 / TOEFL IBT 100.

Course Webpage: [shortened as] www.bitly.com/QH1YiL

Application: **PAC Code: DC700**
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

School of Chemical Sciences	Course Director:	Dr Peter Kenny	
Dublin City University	Tel:	+ 353 - 1 - 700 5689	
Dublin 9	Email:	peter.kenny@dcu.ie	

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 / TOEFL IBT 92.

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

College of Science	Course Director:	Dr. John Kelly	
National University of Ireland	Tel:	+353 - 91 - 493 268	
Galway	Email:	john.kelly@nuigalway.ie	

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 Compunds	UCC

College of Science, Engineering and Food Science	Course Director:	Prof. Jeremy Glennon
University College Cork	Tel:	+353 - 21 - 490 2669
Cork	Email:	j.glennon@ucc.ie

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 or TOEFL equivalent

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 Analysis   TCD

School of Pharmacy and Pharmaceutical Sciences	Course Director:	Dr John F GIlmer
	Tel:	+ 353 - 1 - 896 2795
Trinity College Dublin	Email:	gilmerjf@tcd.ie
Dublin 2		

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 honors degrees in a relevant Science discipline (e.g. Pharmacy, Chemistry, Analytical Chemistry, Microbiology, Biochemistry, Pharmacology and other appropriate primary honors 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] www.bitly.com/Sq1v7P

Application: Apply online from course webpage.

B5 MEng in Pharmaceutical Process Control and Automation   DIT

College of Engineering and Built Environment	Course Director:	Gavin Duffy
School of Electrical Engineering Systems	Tel:	+ 353 - 1 - 402 2839
DIT Kevin Street	Email:	gavin.duffy@dit.ie
Dublin 8		

Course Duration: 1 year

Course Outline: The aim of this course is to give knowledge and understanding of the instrumentation used in the industry, how control systems work, how to tune a control loop, and how PLCs, SCADA systems and a DCS are used to monitor and control a highly automated process plant. Knowledge of the process itself and some process engineering are also required along with an understanding of how the industry is regulated and validated. All these issues are covered here.

Course Suitability: Graduate engineers who would like to continue their studies and learn about automation and control systems engineering and how they are applied to the process industries, scientists and engineers

working in the pharmaceutical and related industries and who would like to move into a control and automation engineering role.

Indicative Content: Core: Research Methods, Process Instrumentation, GMP and Validation, Process Automation Engineering, Process Control Engineering, Pharmaceutical Processeses, heat Transfer and Fluid Flow, Reactor Design and Separation Processes I, Advanced Control Engineering, and select from: Entrepreneurship, Statistical Analysis, Innovation and Knowledge Management.   Options: Separation Processes II, Material Handling and Drying, Mass Transfer Applications, Process Analystical Technology, Faciltity Design and Operation, Computer Systsems Validation, Advanced Automation Engineering.

Admission Requirements: A minimum of an honours degree at second class honours, lower division (2.2) in an accredited engineering degree.

Course Webpage: [shortened as] www.bit.ly/V3NolJ

Application:
Applications should be submitted only on www.dit.applytostudy.com

B6 MSc Pharmaceutical Quality Assurance and Biotechnology		DIT

Chemical and Pharmaceutical Sciences	Course Director:	Dr Anne Greene
DIT Kevin Street	Tel:	+ 353 - 1 - 402 4909
Dublin 8	Email:	anne.greene@dit.ie

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] www.bit.ly/10NKpE4

Application:
Applications should be submitted only on www.dit.applytostudy.com

C

Biotechnology

C1 MSc Bioengineering   UCD

School of Mechanical and Materials Eng	Course Director:	Prof. David Fitzpatrick
University College Dublin	Tel:	+353 - 1 - 716 1829
Dublin	Email:	david.fitzpatrick@ucd.ie

Course Duration: 1 year

Course Outline: Bioengineering is the application of the principles of engineering to healthcare and medicine. It is an interdisciplinary field requiring knowledge of both engineering and clinical environments. The course is delivered in collaboration between the Royal College of Surgeons Ireland, TCD and UCD.

Course Suitability: Particularly suited to graduates with a mechanical or electrical/electonic engineering background, but accessible by students from an Engineering, Life Science or Clinical background who are mathematically able and who are interested in developing their skills in the field.

Indicative Content: Biomechanics and Implant Design, Basic Medical Sciences, Cell and Tissue Engineering, Biomaterials, Rehabilitation Engineering, Bioinstrumentation, Research Methods.

Admission Requirements: You will need to hold a good honours 4-year Bachelors Degree (typically 2:1 minimum) in Engineering or an allied field. Applications from graduates with a Science/Life Science background are also accepted on a case by case basis. As part of the application process, you will need to submit a supporting statement that clearly outlines your interest and motivation in the field.

Course Webpage: [shortened as] www.bit.ly/16C695c

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

C2 MSc in Biomedical Science   NUIG

College of Science	Course Director: Dr Ralf Zwacka
National University of Ireland	Tel: +353 - 91 - 495 323
Galway	Email: ralf.zwacka@nuigalway.ie

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

C3 MSc in Biomedical Diagnostics   DCU

School of Biotechnology	Course Director:	Dr Tatyana Devine
Dublin City University	Tel:	+ 353 - 1 - 700 6446
Dublin	Email:	tatyana.devine@dcu.ie

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 / TOEFL IBT 92.

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

C4 MSc in Biopharmaceutical Engineering   UCD

School of Mechanical and Materials Eng	Course Director:	Susan McDonnell
University College Dublin	Tel:	+353 - 1 - 716 1893
Dublin	Email:	biopharma@ucd.ie

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 at www.ucd.ie/apply

C5 MSc in Bioprocess Engineering   DCU

School of Biotechnology	Course Director:	Dr Jenny Lawlar
Dublin City University	Tel:	+ 353 - 1 - 700 5394
Dublin	Email:	jenny.lawlar@dcu.ie

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 delivary of Biopharmaceuticals, Biopharmaceutical facility Design and Operation. Options: Bioprocess Engineering Research Project and Bioprocess Engineering Design Project.

Admission Requirements: Min 2.2 Honours degree in Science or Engineering. IELTS 6.5 with min 6.0 in all components / TOEFL IBT 92.

Course Webpage: www.dcu.ie/prospective/deginfo.php?classname=MSBE

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

C6 Masters in Applied Science - Biotechnology   UCC

College of Science, Engineering and Food	Course Director:	Dr. Justin V. McCarthy
ScienceUniversity College Cork	Tel:	+353 - 21 - 490 1340
Cork	Email:	jv.mccarthy@ucc.ie

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 sceince-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.

C7 MSc in Biotechnology	UCD

School of Biomolecular and Biomedical Science	Course Director:	Jacquie Jago
University College Dublin	Tel:	+353 - 1 - 716 6455
Dublin	Email:	biotech@ucd.ie

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] www.bit.ly/1beJxjV

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

C8 MSc in Biotechnology   NUIG

College of Science	Course Director: Dr. Aoife Boyd
National University of Ireland	Tel: +353 - 91 - 492 404
Galway	Email: aoife.boyd@nuigalway.ie

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

C9 MSc in Immunology   TCD

School of Medicine	Course Director: Prof. Cliona O'Farrelly
Trinity College Dublin	Tel: + 353 - 1 - 896 2450
College Green, Dublin 2	Email: ofarrecl@tcd.ie

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.

C10 MSc in NanoBio Science   UCD

UCD College of Science	Course Director:	Brian Vohnsen
University College Dublin	Tel:	+353 - 1 - 716 2217
Dublin	Email:	brian.vohnsen@ucd.ie

Course Duration: 1 year

Course Outline: This course will explore nanomaterials, statistical mechanics, computational methods, nanofluidics, nanooptics and biophotonics, scanning probe microscopy and nanoelectronics with a view to solving problems and creating technologies for the NanoBio Sciences.

Course Suitability: Graduates from a range of disciplines, including Physics, Theoretical Physics, Chemical Engineering, Mathematics, Biological Sciences and Medicine.

Indicative Content: Nanooptics and Biophotonics; Physics of Nanomaterials; Spectroscopy and Lasers for BioNanoScience; Nanomechanics - from single molecules to single cells; Atomic Force Microscopy for BioNanoScience; Programming and Interfacing Miniprojects; Computational Biophysics and Nanoscale Simulations; Biophysics at the Nanoscale and Nanodevices; Biomimicry - learning from nature; Conference; Biological fluid mechanics at the micro and nanoscale; Innovation and knowledge transfer; Journal Club and Presentation skills; Research project.

Admission Requirements: A primary degree in a related area including physics, chemistry, life sciences, computer sciences, or similar. Applications can be submitted online. Fluency in English is a requirement.

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

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

C11 MSc in Plant Biology – Future Crops   UCD

UCD College of Science	Course Director:	Paul McCabe
University College Dublin	Tel:	+353 - 1 - 716 2251
Dublin	Email:	futurecrops@ucd.ie

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] www.bit.ly/12DT7F3

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

F

**Social Policy,
Social Research,
Community Development,
Sociology
and related studies**

F1 MA in Public Advocacy and Activism NUIG

Huston School of Film and Digital Media	Course Coordinator:	Dr Fiona Bateman
National University of Ireland, Galway	Tel:	+353 - 91 - 495 918
Galway	Email:	fiona.bateman@nuigalway.ie

Course Duration: 1 year

Course Outline: This course focuses on the issues and skills central to organisations seeking to shift attitudes and understandings in order to initiate change. It will facilitate students' critical reflection and practice, including on the global context in which advocacy takes place. Discussion of issues such as cross-cultural communication and social justice will be encouraged. Relevant professional skills and media training will be central to the programme and students will work with teams from the MA in Production and Direction to realise short film projects. During the summer period students will undertake a work placement.

Course Suitability: Experienced advocates for social change working in international or local advocacy; including community organization, development, labour, rights, health, and environment.

Indicative Content: How to Argue with an Economist; Social and Political Context; Organisation, Advocacy and Activism; Introduction to Human Rights for Advocates; Towards an Economy of the Media; Globalization; Cross Cultural Communication; Film and Change; Communication, Media, and Marketing; Production Projects I and II; Research Methods.

Admission Requirements: For the MA, an Honours primary degree (at least Second Class Honours in one subject) or equivalent. Applicants with substantial and relevant professional experience are also welcome to apply and may be considered for exemption from the Honours requirement, subject to arrangements such as a qualifying examination. Such students will be registered initially for a Postgraduate Diploma.

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

Application: PAC Code: GYA64

Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above. To supplement your online application you should include a short essay on an aspect of advocacy or an area in which you have particular interest or experience (no more than 1,000 words).

F2 MSocSc in Social Policy UCC

College of Arts, Celtic Studies and	Course Director:	Ms Eluska Fernandez
Social Sciences	Tel:	+353 - 21 - 490 2228
University College Cork	Email:	e.fernandez@ucc.ie
Cork		

Course Duration: 1 year

Course outline: This course provides students with an opportunity to engage in social policy analysis of major issues confronting Ireland, Europe and the wider world. Key themes interrogated on the course relate to Citizenship, the future of the Welfare State, the impact of Globalisation, processes of Social Exclusion, Gender, Ethnicity and Sustainable Development.

Indicative Content: <u>Core</u> - Theorising Social Policy; Applied Social Research; Contemporary Social Policy Issues; Social Policy Seminar Series; Practice Assignment

Admission Requirements: Normally either a BSocSc, BSW or BSocSc (Youth and Community Work) Degree at Second Class Honours level or the equivalent. Applicants with other relevant degrees and/or relevant experience (e.g. Sociology, Politics, and Government) will also be considered.

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

Application: **PAC Code: CKE62**
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.*

F3 MSocSc in Sociology	UCD

UCD School of Sociology	Course Director:	Dr Michael Punch
University College Dublin	Tel:	+353 - 1 - 716 8506
Belfield	Email:	michael.punch@ucd.ie
Dublin 4.		

Course Duration: 1 year

Course Outline: The core modules of this course look at some of the most prominent contemporary social theorists and their work in order to find out how they have tried to understand, explain and conceptualise the modern social world. They also explore the underlying issues that sociological researchers face in their everyday practice and aim to equip students with the knowledge and skills necessary to carry out a qualitative or quantitative research project. Students take a further three optional modules, allowing specialisation in chosen policy areas, and complete a minor dissertation of at least 15,000 words.

Course Suitability: Graduates with a primary degree in Sociology or Social Science or a closely related discipline (such as psychology, philosophy, human geography, history, politics, and economics) who want to develop their social analysis skills.

Indicative Content: <u>Core</u> - Contemporary Sociological Theory and its Critique; Sociological Research: Theoretical and Applied Issues; Research Methodologies: Qualitative OR Quantitative. <u>Options</u> - Cultural Theory and Analysis; Economic Globalisation and Social Change; Crime and Social Control; Social Networks and Agent Based Simulation; Sociology of Migration; Health, Illness and Society; Race, Ethnicity and Society; Contested Urban Environments; Understanding Media Audiences; Researching Issues in Health and Illness; Qualitative Data Research; Sociology of Markets

Admission Requirements: A primary degree in sociology or a closely cognate discipline, with at least a 2:2 Honours grade or equivalent. Applicants with a joint Honours primary degree should normally have attained a standard of at least 2:2 Honours in their final degree.

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

Application: Apply through UCD's online applications system - www.ucd.ie/apply

F4 MSocSc in Social Science (Rights and Social Policy)   **NUIM**

Department of Applied Social Studies	Course Directors:	Seamus Taylor
National University of Ireland, Maynooth	Tel:	+353 - 1 - 708 3743
Maynooth	Email:	appliedsocialstudies@nuim.ie
County Kildare		

Course Duration: 1 year

Course Outline: This course provides students with an opportunity for critical study in the application of social policy theory and techniques to policy and practice. It aims to produce students with advanced critical, analytical and research skills in relation to many of the complex social policy issues in contemporary Ireland and beyond. In particular the emphasis is on themes of rights, recognition and redistribution, and associated governance, equality, ageing and justice issues.

Course Suitability: Professionals pursuing careers in policy analysis and social research in government and third sector organisations.

Indicative Content: Critical Social Policy Theory, Studies and Perspectives; Advanced Social Policy Analysis; Research Methods for Social Policy; Realising Rights: Case Studies, Conferences and Seminars; Advanced Criminal Justice Studies; Social Gerontology Policy and Practice; Participative governance and policy making; Equality, Rights and Recognition; Dissertation

Admission Requirements: An overall mark of at least 55% in an Honours degree in a related discipline.

Course Webpage: [shortened as] www.bit.ly/19ROlqP

Application: **PAC Code: MHB56**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

F5 MSc in Applied Social Research   **TCD**

TCD School of Social Work and Social Policy	Course Director:	Dr Paula Mayock
Trinity College	Tel:	+353 - 1 - 896 2636
Dublin 2	Email:	pmaycock@tcd.ie

Course Duration: 1 year

Course Outline: This course will train graduates to (i) design and conduct primary research using both quantitative and qualitative research methods; (ii) analyse the research data collected using a variety of techniques, including training in the use of SPSS (Statistical Package for the Social Sciences); (iii) write and present research reports.

Course Suitability: Graduates in social science or related disciplines who want to develop their research skills

Indicative Content: Qualitative Research Methods; Quantitative Research Methods; Accessing Resources, Research Design and Research Ethics; Work Placement; Research Dissertation.

Admission Requirements: Normally a 2:1 Honours degree in one of the Social Sciences. Applications from graduates in other disciplines who have relevant experience will be considered.

Course Webpage: [shortened as] www.bit.ly/9HF578

Application: Apply online via www.tcd.ie/courses/postgraduate/how-to-apply

F6 MA in Child and Youthcare		**AIT**

Athlone Institute of Technology	Course Contact:	Owen Ross
Dublin Road	Tel:	+353 - 90 - 647 1895
Athlone	Email:	oross@ait.ie
Co. Westmeath		

Course Duration: 1 year

Course Outline: Child and youth care workers work with children who are at risk of not reaching their developmental potential, or who already have experienced difficulties in development, as a result of social disadvantage. This course aims to equip highly competent and motivated child and youth care workers with the skills necessary to become leaders in the profession and to advance the field to internationally accepted standards of best practice. Graduates of the programme will have specialised knowledge of child development, risk and resilience; will appreciate and advocate the rights approach to the care of children and youth; and will be in a position to develop empirically-based intervention programmes for children and young people. The programme will promote a holistic and multidisciplinary approach to the care of the young, and will make a significant contribution to the move from crisis-based approaches to early intervention and prevention of problems.

Indicative Content: Models of Care; Child and Youth Law; Resilience and Interventions; Children's Rights; Management in Child and Youth Care; Research Methods; Research Dissertation

Admission Requirements: Minimum of a 2:2 Honours Bachelor degree in Applied Social Studies in Social Care or an approved equivalent qualification.

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

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.

F7 MA in Child, Family and Community Studies		**DIT**

DIT Department of Social Sciences	Course Director:	Dr Brian Mc Carthy
Mountjoy Square	Tel:	+353 - 1 - 402 4217
Dublin 1	Email:	brian.mccarthy@dit.ie

Course Duration: 1 year

Course Outline: This course aims to examine how human capacity can be enhanced across the lifespan in the socio-educational sector. It will provide participants with a critical understanding of concepts and approaches to enabling individuals and groups to realise their potential as human persons and participative communities. Students will be educated to high levels of contemporary theoretical awareness in fields central to social services provision and to create an atmosphere of rigorous academic enquiry and writing.

Course suitabilty: Professionals in the broad social services delivery area (for example, social work, youth work, teaching, community work, early education, family support work).

Indicative Content: <u>Core</u> - Perspectives on Family and Community; Cultural Diversity in Early Childhood Education and Social Care; Transitions across the lifespan; Management practice and theory; Research Methods; Dissertation. <u>Options</u> - Interventions in child and adolescent mental health; Contemporary issues in the early years; Youth Offending and Youth Justice Perspectives; Risk, vulnerability and the protection of children and vulnerable adults; Victimology; Perspectives on ageing

Admission Requirements: Applicants must normally hold a minimum 2:2 honours degree in the area of social care, early education, social sciences, psychology, sociology, youth and community studies or cognate discipline. Applicants who do not meet the minimum academic requirements, but who have significant professional or vocational experience in child, family and community services shall also be considered.

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

Application: Apply online at www.dit.applytostudy.com – course code **DT576**.

F8 MSc in Disability Studies	TCD

TCD School of Social Work and Social Policy	Course Director:	Dr Edurne Garcia Iriarte
Trinity College	Tel:	+353 - 1 - 896 2200
Dublin 2	Email:	iriartee@tcd.ie

Course Duration: 1 year

Course Outline: The programme provides students with deep understanding of disability in broad international, cultural, and historical contexts and with the skills to take on leadership positions in the disability field nationally and internationally.

Course Suitability: Government and state agency employees, legislators, advocacy organizations, mid-level and senior professionals from the disability service provision sector, community agencies' members.

Indicative Content: Disability Studies Theory; Disability Policy; Disability Systems Change; Research Methods, Dissertation. Options: Contemporary Issues in Intellectual Disabilities Studies; Empowerment and Enablement for People with Intellectual Disabilities; Cultural representations of disability: Disability Culture, Service delivery and professional practice; Marginalised Groups and the Economy Disability and the Law: Disability, Law and Ethics

Admission Requirements: Normally a 2:1 Honours degree in humanities, social sciences, sciences, rehabilitation, education, policy. Applicants with qualifications below this level or those holding professional qualifications will be required to submit a portfolio detailing their prior learning both in formal and experiential settings. This portfolio should be submitted as part of the online application process.

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

Application: Apply online via www.tcd.ie/courses/postgraduate/how-to-apply

M

Information
and Communication
Technology

M1 MSc in Advanced Software Engineering UCD

School of Computer Science and Informatics	Course Director:	Dr. Mel O Cinneide
University College Dublin	Tel:	+353 - 1 - 716 2482
Dublin	Email:	mel.ocinneide@ucd.ie

Course Duration: 1 year

Course Outline: This programme aims to provide the industrial software engineer with the foundational skills necessary to apply these new developments in their own work.

Course Suitability: Especially geared to industry-based software engineers; not suitable for new graduates.

Indicative Content: Performance of Distributed Systems; Design Patterns; Managing Software in Production; Mobile Application Development; Mobile Application Development using CocoaTouch.

Admission Requirements: At least a 2.1 honours bachelor's degree in Computer Science (or a cognate discipline), and a *subsequent two or more years of industrial experience in software development*. Prerequisite skills include a high degree of proficiency in object-oriented programming, a working knowledge of object-oriented design using e.g. UML, and experience in software development as part of a team. Each application will however be assessed on a case-by-case basis, and exceptions to these rules may be made.

Course Webpage: [shortened as] www.bit.ly/dL9Wek

Application: Apply on-line at www.ucd.ie/apply

M2 MSc in Applied Computing for Technologists DIT

College of Engineering and Built Environment	Course Director:	Dr Barry Duignan
DIT Bolton Street,	Tel:	+ 353 - 1 - 402 3881
Dublin 1	Email:	barry.duigan@dit.ie

Course Duration: 1 year

Course Outline: This course will provide engineers and technologists with a strategic understanding of applied computing and a high level of applied computing skills. It will equip the successful graduate be able to apply and develop these technologies successfully in their own professional areas , including careers as computing specialists in engineering, technology or the computing industry.

Course Suitability: Specifically aimed at candidates holding a professional qualification or equivalent in Technological or related disciplines. The course is aimed at providing graduates with a high level of applied computing skills.

Indicative Content: Operating Systems, Networks, Database Systems, Artifical Intelligence, Image Processing, Image and Video Compression, Graphics and Computer Modelling, Advanced rendering and Animation, Programming in Java, Algorithms and Data Structures, Software Engineering, Software Management, Introduction to Numerical Methods, Numerical Methods for ODEs and PDEs, Engineering Systems and Simulation.

Admission Requirements: A minimum Second Class Honours degree (2.2 grade or higher) in engineering or a related discipline.

Course Webpage: [shortened as] www.bit.ly/10NOVlW

Application:
Applications should be submitted only on www.dit.applytostudy.com

M3 Masters in Science – Applied Digital Media   GCD

Computing Department	Course Director: Dr. M-Waseem Akhtar
Griffith College	Tel: +353 1 416 3363
Dublin	Email: waseem.akhtar@gcd.ie

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:
Apply online via the college webpage. More information application is available from www.gcd.ie/apply

M4 MA in Business Information Systems   UCC

Business Information Systems,	Course Director: Brian O'Flaherty
University College Cork	Tel: +353 - 21 - 490 3335
Cork	Email: b.oflaherty@ucc.ie

Course Duration: 1 year

Course Outline: This programme provides students with a coherent portfolio of business, management and consultancy skills, as well as enhancing their knowledge of information systems concepts and core technical skills. Modules are oriented around three themes: Information Systems; Professional and Consulting Skills; and Innovation and Software Development. Students learn to focus on business deliverables and business interactions through an integrated project which runs across multiple modules of the programme. In addition, students work on a group project to develop an innovative software idea into a prototype and draw up a viable business plan. Mentoring input from specifically selected industry practitioners is provided.

Indicative Content: Strategic Planning for Information Systems; IS Consulting Process; Information Systems Development Skills; Enterprise Business Processes and Applications; Innovation and Software; Professional Business Analyst Skills; Information Systems Project Management; Parametric Business and IS Performance and finally the project namely: Innovative Software Enterprise Project.

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 - or TOEFL equivalent

Course Webpage: www.ucc.ie/en/ckl01

Application: **PAC Code**: CKL01

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

M5 MSc in Computing	**DKIT**

Department of Mathematics and Computing	Course Director:	Dr Ronan Mc Ruairi
Dundalk Institute of Technology	Tel:	+ 353 - 42 - 9370399
Dundalk, Co. Louth	Email:	ronan.mcruairi@dkit.ie

Course Duration: 1 year

Course Outline: This programme aims to produce graduates with an advanced level of theoretical knowledge and practice, with highly developed research capability, innovation and entrepreneurial skills to enable their professional development in the IT industry.

Course Suitability: Graduates wishing to extend their breadth and depth of knowledge in both the technical and managerial aspects of software development, and their ability to instigate and manage research projects, are suitable candidates for this programme. The programme offers an up-skilling opportunity for practicing software developers who have worked in industry for a number of years and now wish to broaden or update their technical knowledge and formalise their management skills.

Indicative Content: Mandatory Modules: Software Process Management, Software Design, Distributed Computing, Human Computer Interaction, Entrepreneurship and Intrapreneurship, Research Methods and Professional Practice, Research Project. Elective Modules: Document Engineering, Mobile Computing, Visualisations, High Performance Computing, Project Management, Scalable Technology Solutions, The Business of Software

Admission Requirements: Hold an honours degree, at a minimum level of 2.2 in Computer Science or a related area such as Computing or Software Engineering. Additionally, it is desirable that applicants have experience of working as Software Developers/Engineers. Also, students will be consider if they demonstrate an equivalent capacity to succeed, based on experiential learning acquired through extensive industrial experience.

Course Webpage: www.dkit.ie/programmes/master-science-computing-taught-programme

Application: Apply online from course webpage.

M6 MSc in Computing	**GCD**

Computing Department	Course Director:	Dr. M-Waseem Akhtar
Griffith College	Tel:	+353 - 1 - 416 3363
Dublin	Email:	waseem.akhtar@gcd.ie

Course Duration: 1 year

Course Outline: This course will assist students in advancing technological innovation. The programme will extend knowledge and skills and offer preparation for an active and leading role in the dynamic and evolving computing industry. It is designed with major input from industry and is therefore up-to-date and highly relevant.

Course Suitability: Graduates working in or seeking work as technical applications developers and consultants, systems analysts, database administrators, network managers and other leading computing science roles, in academia and also in industry research and development roles.

Indicative Content: Computational Paradigms, Telecommunication and Network Sevices, Research Methods, Algorithm Design and Analysis, Concurrent and Parallel Programming, Communication Security, Information Retrieval and Web Search, Collaborative Distributed Systems, 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/msccomputing

Application:
Apply online via the course webpage. More information application is available from www.gcd.ie/apply

M7 MSc in Computing	DCU

School of Computing	Course Contact:	Irene McEvoy
Dublin City University	Tel:	+ 353 - 1 - 700 6857
Dublin	Email:	irene.mcevoy@dcu.ie

Course Duration: 1 year

Course Outline: Students will acquire up-to-date programming and specification techniques, covering formal and informal, theoretical and practical aspects. They will familiarise themselves with advanced algorithms and how to deploy these in practical situations, and will be well prepared to undertake work within defined software processes, using the best techniques currently available. Additionally, they will be introduced to professional issues surrounding the development and implementation of software systems.

Indicative Content: Students take five core modules in their chosen sub-discipline (Major) to gain the necessary specialised expertise. Three elective modules from non-Major area of interest, may also be chosen from a range offered.

Admission Requirements: 2.1 or higher in computer science or related discipline. IELTS 6.5 with min 6.0 in all components / TOEFL IBT 92

Course Webpage: [shortened as] www.bit.ly/1eM1jeN

Application: **PAC Code: DC836**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

M8 MSc in Computing (Advanced Software Development)   DIT

School of Computing	Course Director:	Dr Brian Mac Namee
College of Sciences and Health	Tel:	+ 353 - 1 - 402 4728
DIT Kevin Street, Dublin 8	Email:	cspg@dit.ie

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.

Course Suitability: The target audience is those with an undergraduate qualification in computer science or software development.

Indicative Content: Specialist Core Modules: Programming Paradigms: Principles and Practice, Software Design, Advanced Databases, Systems Architectures, Web Application Architectures,   Secure Systems Development. Critical Skills Core Modules common to all MSc in Computing specialisms: Problem Solving, Communication and Innovation, Case Studies in Computing, Research Writing and Scientific Literature, Research Methods and Proposal Writing. Option Modules (Two required): 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: www.dit.ie/catalogue/Programmes/Details/DT230A

Application: Applications should be submitted only on www.dit.applytostudy.com.

M9 MSc in Computing (Data Analytics)   DIT

School of Computing	Course Director:	Dr Brian Mac Namee
College of Sciences and Health	Tel:	+ 353 - 1 - 402 4728
DIT Kevin Street, Dublin 8	Email:	cspg@dit.ie

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] www.bit.ly/1bh0GJP

Application: Applications should be submitted only on www.dit.applytostudy.com.

M10 MSc in Computer Science	**UCC**

College of Science, Engineering and Food Science	Course Director:	Dr Marc Van Dongen
University College Cork	Tel:	+353 – 21 - 4205903
Cork	Email:	m.vandongen@cs.ucc.ie

Course Duration: 1 year

Course Outline: Recent years have seen tremendous developments in the design and implementation of software and systems in both industrial and research settings. This MSc programme provides students with the skills required to appreciate the entrepreneurship and innovation required in the software industry.

Indicative Content: Core - Advanced Information Storage and Retrieval, Case studies in Computing Entrepreneurship, Large Scale Commercial and Research Application Development, Project Development skills. Additional options - Mobile Networks and Devices, Network Security, Virtualisation Technologies, Mobile Multimedia, Datamining.

Admission Requirements: Candidates must normally have obtained at least a Second Class Honours degree or equivalent in Computer Science or a closely related discipline. English Language Requirements: IELTS 6.5 with no individual section lower than 6.0 or TOEFL equivalent

Course Webpage: 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 shown above

M11 MSc in Computer Science (Negotiated Learning)	**UCD**

School of Computer Science and Informatics	Course Director:	Dr Lorraine McGinty
University College Dublin	Tel:	+353 - 1 - 716 2856
Dublin	Email:	lorraine.mcginty@ucd.ie

Course Duration: 1 year

Course Outline: This is a flexible, innovative programme which is customised to individual student needs and their prior learning experiences from the established portfolio of Computer Science and Informatics graduate taught courses. Students have the opportunity to select modules, from a suite of diverse module offerings, that best align with their own individual needs and career goals.

Course Suitability: Industrial workers coming from related computer science and IT disciplines, and/or national and international students with relevant computer science undergraduate degree qualifications, who have specific workplace needs or requirements for continuing professional development.

Indicative Content: See www.csi.ucd.ie/content/module-offerings

Admission Requirements: A minimum second-class honours degree in computer science or related area or an honours Higher Diploma in Computer Science or ICT or a primary degree with a minimum of three years' work experience in a computer science specialist area.

Course Webpage: [shortened as] www.bit.ly/14Ol8wr

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

M12 MSc in Computer Science (Networks and Distributed Systems)	TCD

School of Computer Science and Statistics	Course Director:	Dr Siobhan Clarke
Trinity College Dublin	Tel:	+ 353 - 1 - 893 3094
College Green, Dublin 2	Email:	postgraduate@scss.tcd.ie

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 honors 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] www.bit.ly/V64gIF

Application: Apply online from course webpage.

M13 MSc in Digital Investigation and Forensic Computing	UCD

School of Computer Science andInformatics	Course Director:	Dr. Pavel Gladyshev
University College Dublin	Tel:	+353 - 1 - 716 2917
Dublin	Email:	pavel.gladyshev@ucd.ie

Course Duration: 1 year

Course Outline: This course is an international MSc programme which introduces the concepts, principles, and professional practice in digital investigation. The programme is delivered in cooperation with leading Irish experts in the field. The training is delivered at UCD and is simultaneously made available online. Annual

examination sessions are held at University College Dublin but the programme can largely be followed as distance learning.

Course Suitability: Aimed at information technology specialists who need to acquire skills for investigation of computer-related incidents.

Indicative Content: Computer Forensic Foundations; Law for IT Investigators; Application Forensics; Investigative Techniques; Corporate Investigations; Information Security; Digital Investigation Project; Individual research project.

Admission Requirements: Applicants to the MSc Digital Investigation and Forensic Computing normally have a bachelor's degree in computer science or equivalent work experience. However, all applicants are assessed on a case by case basis.

Course Webpage: [shortened as] www.bit.ly/15Zfgl0

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

M14 MSc in Electronic Commerce (Technical)	DCU

School of Computing	Course Contact:	Irene McEvoy
Dublin City University	Tel:	+ 353 - 1 - 700 6857
Dublin	Email:	irene.mcevoy@dcu.ie

Course Duration: 1 year

Course Outline: This course aims to provide graduates with the multi-faceted skills required to operate successfully in the dynamic e-commerce, mobile technology and other hi-tech industries.

Indicative Content: Cryptography and Numbers Theory; Public Key Cryptography and Security Protocols; Systems Software; Web Design and Implementation; E-Commerce Infrastructure; Marketing in a High-Tech Environment; Risk Managment and Regulation in E-Commerce; Business Modelling and Process Innovation; E-Commerce and Entrepreneurship; Information Access.

Admission Requirements: Honours degree in Electronic/Electrical Engineering, Applied Physics, Computer Sciences or other Engineering disciplines. IELTS 6.5 with minimum 6.0 in all components / TOEFL IBT 92

Course Webpage: [shortened as] www.bit.ly/16FiNAv

Application: **PAC Code: DC821**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

M15 MEng in Electronic Systems   DCU

School of Computing	Course Contact:	Irene McEvoy
Dublin City University	Tel:	+ 353 - 1 - 700 6857
Dublin	Email:	irene.mcevoy@dcu.ie

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 / TOEFL IBT 92.

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.

M16 MSc in Information Studies   UCD

School of Information and Library Studies	Course Director:	Claire Nolan
University College Dublin	Tel:	+353 - 1 - 716 7055
Dublin	Email:	sils@ucd.ie

Course Duration: 1 year

Course Outline: This course will enable students to develop their understanding of Information Studies and to acquire important intellectual, cognitive and transferable skills in relation to communication, IT, academic writing, and research.

Course Suitability: Graduates of Information Studies, and also those from cognate disciplines, who wish to extend their knowledge of Information Studies beyond their primary degree.

Indicative Content: The programme provides opportunities for a broader and deeper understanding of the discipline of Information Studies. Students undertake a thesis in one of the four core areas: information behaviour; information and society; information management and digital libraries; or information sharing and collaboration.

Admission Requirements: A primary degree in Information Studies, or cognate discipline (Second class honours or higher)

Course Webpage: [shortened as] www.bit.ly/1h8ySoa

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

M17 MSc in Information Systems   UCD

School of Information and Library Studies	Course Director:	Claire Nolan
University College Dublin	Tel:	+353 - 1 - 716 7055
Dublin	Email:	sils@ucd.ie

Course Duration: 1 year

Course Outline: Students will learn how to effectively design IT as well as gain project management skills. Elements of the programme include problem-based learning in the classroom and labs, independent projects, collaborative group work, and interaction with experienced professionals. Students will gain practical experience through a 30-credit Capstone Project working with businesses or non - profit organisations.

Course Suitability: Individuals pursuing careers managing information across a broad range of employment sectors including public service, NGO's, businesses and government agencies.

Indicative Content: Core: Information Architecture: Designing the Web; Research Methods I and II; Management for Information Professionals; System Analysis and Design; Capstone Project. Options: Web Publishing; Creating and Publishing Digital Media Content; Current Trends in Social Computing; People, Information and Communication; Contemporary Issues in Professional Practice; Organisation of Information, Metadata and Cataloguing; Digital Libraries; Human Computer Interaction; Introduction to Java I and I; Mobile Application Development

Admission Requirements: An undergraduate degree.

Course Webpage: www.ucd.ie/sils/graduatestudents/mscinformationsystems

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

M18 MSc in Information Systems Management   NUIG

College of Business, Public Policy, and Law	Course Director:	Ms. Nuala McCarthy
National University of Ireland	Tel:	+ 353 - 91 - 492 308
Galway	Email:	nuala.mccarthy@nuigalway.ie

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] www.ly/9tjjTR

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

M19 MA in Information Systems for Business Performance	**UCC**

Business Information Systems, University College Cork	Course Director:	Dr Karen Neville
	Tel:	+353 - 21 - 490 3668
	Email:	kneville@afis.ucc.ie

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 or TOEFL equivalent

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.

M20 Masters of Information Technology   NUIG

College of Engineering and Informatics	Course Director:	Dr. Owen Molloy
National University of Ireland	Tel:	+ 353 - 91 - 493 330
Galway	Email:	owen.molloy@nuigalway.ie

Course Duration: 1 year

Course Outline: This course combines modules from three distinct subject areas: Information Technology, Business and Behavioural Science, with the major themes of e-Business Marketing, User Centred Design, and Strategic Management. It aims to produce graduates who have core technical knowledge combined with a strong understanding of business environments and of how people behave in a workplace context. With these skills.

Course Suitability: Graduates of any discipline seeking to work directly in the IT sector or to bring the specialist skills they have gained from this programme to another area. Graduates are well placed to make significant contributions to organisations across technical and business boundaries, and to increase their potential to advance in consulting and management roles.

Indicative Content: Programming, Databases, IT Strategy, Software Engineering, Financial Management, Industrial Sociology and Change Management.

Admission Requirements: A 2:1 Bachelor's degree (any discipline) or a 2:2 with relevant experience.

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

Application: **PAC Code: GYE05**
Apply online via The Postgraduate Applications Centre (PAC) – www.pac.ie – using the PAC application code shown above.

M21 MSc in Interactive Media   UCC

College of Science, Engineering and Food	Course Director:	Dave Murphy
Science	Tel:	+353 - 21 - 420 5908
University College Cork	Email:	d.murphy@cs.ucc.ie
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 or TOEFL equivalent

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

Application: **PAC Code: CKL01**

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

M22 MSc in Security and Forensic Computing	DCU

School of Computing	Course Contact:	Irene McEvoy
Dublin City University	Tel:	+ 353 - 1 - 700 6857
Dublin	Email:	irene.mcevoy@dcu.ie

Course Duration: 1 year

Course Outline: This course blends the practical examination of computer crime with the principles underlying its prevention. It adopts a holistic approach to the study of forensic computing and provides students with an understanding of the legal, technical, information management and ethical issues impacting on the discipline. Graduates will be thoroughly prepared to undertake their work in a structured manner consistent with evidential requirements.

Indicative Content: Cryptography and Number Theory, System Software, Secure Programming, Professional and Research Practice, P-Key Cryptography and Security Protocols, Biometrics, Network Security and Forensic Computing.

Admission Requirements: A 2:2 Honours degree in Computer Science, Computing, Computer Applications or a discipline with a strong Computing content. Candidates with significant experience in the software development or security sectors, in addition to an Honours primary degree in some other discipline, may also be considered for entry. IELTS 6.5 with min 6.0 in all components / TOEFL IBT 92.

Course Webpage: [shortened as] www.bit.ly/1dNZCe2

Application: **PAC Code: DC823**

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

M23 MSc in Applied Science – Software and Systems for Mobile Networks	UCC

College of Science, Engineering and Food Science	Course Director:	Dr Marc Van Dongen
	Tel:	+353 21 4205903
University College Cork	Email:	m.vandongen@cs.ucc.ie
Cork		

Course Duration: 1 year

Course Outline: The aim of this programme is to provide the graduates with the knowledge and skills required to work as mobile software developers, mobile network designers and next-generation researchers.

It will provide students with a firm grounding in mobile technologies and modern networks such as 3G/4G, WiFi, WiMax, Bluetooth, mesh and sensor networks. The emphasis is on software and systems, specifically services and protocols, middleware, security and mobile applications.

Course Suitability: Candidates holding a strong undergraduate degree in Computer Science and with a passion for mobile technology and software development.

Indicative Content: <u>Core:</u> Mobile Network Protocols; Mobile Devices and Systems; Services and Mobile Middleware; Mobile Applications Design; Research Methods; Research Project. <u>Options:</u> Mobile Systems Security; Formal Methods for Distributed Systems; Model-Based Software Development; Optimisation; Analysis of Networks and Complex Systems; Special Topics in Mobility; Network Security; Networks and Data Communications; Case Studies in Computing Entrepreneurship

Admission Requirements: Candidates must have obtained at least a Second Class Honours degree or equivalent in Computer Science or a closely related technical discipline. The MSc is targeted at candidates holding a strong undergraduate degree in Computer Science and with a passion for mobile technology and software development. English Language Requirements: IELTS 6.5 with no individual section lower than 6.0 or TOEFL equivalent.

Course Webpage: www.ucc.ie/en/ckr07

Application: **PAC Code: CKR07**

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

M24 MSc in Software Engineering	AIT

College of Engineering	Course Director:	Anthony Commins
Athlone Institute of Technology	Tel:	+ 353 - 90 - 647 1889
Westmeath	Email:	acommins@ait.ie

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.

M25 MEng in Telecommunications Engineering		**DCU**

School of Computing	Course Contact:	Irene McEvoy
Dublin City University	Tel:	+ 353 - 1 - 700 6857
Dublin	Email:	irene.mcevoy@dcu.ie

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 / TOEFL IBT 92.

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.

M26 MSc in Web Technologies		**NCI**

School of Computing	Course Director:	Dr Pramod Pathak
National College of Ireland	Tel:	+ 353 - 1- 4498611
Dublin	Email:	ppathak@ncirl.ie

Course Duration: 1 year

Course Outline: This course is practical in nature and will provide an understanding of how to create enterprise web applications distributed across the latest platforms to include cloud computing and incorporating the latest trends in web technologies. The programme will encourage an entrepreneurial culture of innovative product development. With a focus on Web Entrepreneurship, User Experience, and Web Security, students will combine the business know-how with advanced technological expertise. Students will examine real-world case studies to learn what works, what doesn't, and why. A start-up simulation game will further develop business awareness and skills.

Indicative Content: Deployment; Enterprise Frameworks; Usability Testing and Implementation; Web Application Frameworks; Advance Client Side Scripting; Advanced   Rich   Internet   Application;   Cloud Computing; Enterprise Game; Technology Entrepreneurship; Project

Admission Requirements: An honours primary degree in a cognate area with a 2.2 award or higher.

Course Webpage: [shortened as] www.bit.ly/14OV0S4

Application: See www.ncirl.ie/InternationalStudents/Howtoapply.aspx for required documents. The International Student application form is available at www.bit.ly/16weGxy and your submission should be made to the International Office, National College of Ireland, Mayor Street, IFSC, Dublin 1, Ireland.

Your form should clearly state that application is being made under the Irish Aid Fellowship.

M27 MSc in Cloud Computing	NCI

School of Computing	Course Director:	Dr Pramod Pathak
National College of Ireland	Tel:	+ 353 - 1- 4498611
Dublin	Email:	ppathak@ncirl.ie

Course Duration: 1 year

Course Outline: This programme provides the latest knowledge and competencies required by this fast growing global industry. It is practical in nature and offers specialisations in software as a service and management of underlying infrastructure components (inclusive in the role of the system administrator). Learners engaging with the programme will gain experience with the latest principles, models and technologies in cloud computing delivered by faculty and industry experts.

Indicative Content: Core: Cloud Architecture; Cloud Security; Research and Development in Computing I and I; Research and Development in Computing II; Business Strategies for Cloud Computing; Research Dissertation or Industry Dissertation. Options: Cloud Infrastructure Management; Cloud Application Development; Data Storage and Management; Virtualisation; Advanced Client Side Development and User Experience; Cloud Application Services.

Admission Requirements: An honours primary degree in a cognate area with a 2.2 award or higher.

Course Webpage: [shortened as] www.bit.ly/15Zn1HJ

Application: See www.ncirl.ie/InternationalStudents/Howtoapply.aspx for required documents. The International Student application form is available at www.bit.ly/16weGxy and your submission should be made to the International Office, National College of Ireland, Mayor Street, IFSC, Dublin 1, Ireland.

Your form should clearly state that application is being made under the Irish Aid Fellowship.

M28 MSc in Software Engineering and Entrepreneurship   UL

Faculty of Science and Engineering	Course Director:	Dr Briga Hynes
University of Limerick	Tel:	+ 353 - 61- 202619
Limerick	Email:	briga.hynes@ul.ie
	Course Director:	Dr Ita Richardson
	Tel:	+ 353 - 61- 202765
	Email:	ita.richardson@lero.ie

Course Duration: 1 year

Course Outline: This course aims to provide students with a blend of entrepreneurial business and knowledge, complemented by a proficiency in software engineering. Students will obtain an advanced understanding of software engineering principles and the ability to integrate these principles with entrepreneurship to create innovative internationally focussed small firms. Additionally, students will be educated on the contemporary tools and methods for product design, development and commercialisation and the completion of an investor ready comprehensive business plan.

Indicative Content: Core: Entrepreneurial Marketing and Research Methods; Software Design; Software Engineering Requirements; Establishing New Ventures; Managing Innovation and Intrapreneurship; Software Architecture; Managing International Business Growth; Dissertation 1 and 2. Options: Human Computer Interaction; Software Quality; Internationalising Entrepreneurial Ventures; International Small Business Consulting.

Admission Requirements: Normally a minimum 2:2 Honours degree in a suitable discipline, such as Computer Systems, Computer Science, Computer Applications, Applied Mathematics but applicants with a lesser qualification with relevant work experience may be considered.

Course Webpage: [shortened as] www.bit.ly/15yPnF0

Application: Apply online via course webpage

M29 Msc in Multi Lingual Computing and Localisation   UL

Faculty of Science and Engineering	Course Director:	Reinhard Schaler
University of Limerick	Tel:	+ 353 - 61- 213176
Limerick	Email:	reinhard.schaler@ul.ie

Course Duration: 1 year

Course Outline: This course is centred around the technical aspects of localisation whilst recognising the need for localisation professionals to have a good understanding of international business organisation. It emphasises Internationalisation requirements and their implementation; the critical analysis and research of translation technologies; the automation of the localisation process in what has been called the Localisation Factory and business organisation and international business practices.

Course Suitability: This course is aimed specifically at students who already have a background in either localisation, computing, language technology, translation or related disciplines.

Indicative Content: Localisation Project Management; Advanced Language Engineering, Principal Issues in Localisation; Directed Study: Localisation Standards and Best Practice; Localisation Process Automation, Translation Technology, Best Practice Internationalisation; Directed Study: Applied Research Methods; Masters Thesis.

Admission Requirements: A 2:1 Honours primary degree in Localisation Technology, computing, Language Technology or related disciplines.

Course Webpage: [shortened as] www.bit.ly/1dO0WgM

Application: Apply online via course webpage

M30 MA/MSc in Interactive Media	UL

Department of Computer Science and Information Systems University of Limerick Limerick	Course Director: Tel: Email:	Dr Cristiano Storni + 353 - 61- 202632 cristiano.storni@ul.ie

Course Duration: 1 year

Course Outline: This course offers students an in-depth exploration of the technological avenues available today and backs this up with a thorough examination of the associated aesthetic developments and potential pitfalls.

Course Suitability: Art and design graduates who are interested in pursuing studies which combine technological competence with design/artistic endeavour.

Indicative Content: Core: Foundations of Interactive Media Design; Interactive Media in Society; Interactive Media Project/Workshop 1 and 2; Principles of Interactive Media Design; Professional Issues in Interactive Media, Research Project. Options: Acoustics and Psychoacoustics; Programming Protocols for Musical Systems; Programming Music Systems; Contemporary Art in the Public Realm; Mobile Application Design; Physical Computing: Musical Interfaces.

Admission Requirements: A primary degree in any subject area, with first or second class honours plus portfolio examination.

Course Webpage: www.csis.ul.ie/course/LM345

Application: Apply online via course webpage