

2019



RÉAMHEOLAIRE FOCHÉIME  
UNDERGRADUATE PROSPECTUS

#TUDublin



## AG CRUTHÚ OLLSCOIL TEICNEOLAÍOCHTA

I mí Iúil 2018, d'fhógair an Taoiseach go raibh ITBÁC, IT Bhaile Bhlainséir agus IT Thamhlachta ag teacht le chéile chun an chéad Ollscoil Teicneolaíochta (OT) in Éirinn a bhunú. Tíocfaidh an Ollscoil nua i bhfeidhm i mí Eanáir 2019 agus seolfar an Ollscoil go foirmiúil i mí Feabhra 2019.

Seo forbairt nua chorrathach in ardoideachas in Éirinn. Mar mhac léinn ionchais atá ag beartú dul ar aghaidh go dtí an tríú leibhéal i mí Mheán Fómhair 2019, d'fhéadfá a bheith i measc chéad chéimithe an OT. Beidh trí phríomhchampas ag an Ollscoil Teicneolaíochta nua - Baile Bhlainséir, Gráinseach Ghormáin agus Tamhlacht, chomh maith le campais reatha ITBÁC atá lonnaithe i Sráid Chaoimhín, Sráid Aungier, Ráth Maonais, Sráid Chathail Brugha agus Sráid Bolton.

Táimid ag súil go mór le buailleadh leat ag Higher Options, cuairteanna scoile agus ag ár Laethanta Oscailte agus le haon cheist atá agat a fhreagairt maidir le roghnú Ollscoil Teicneolaíochta Bhaile Átha Cliath!

## CREATING A TECHNOLOGICAL UNIVERSITY

In July 2018, An Taoiseach announced that DIT, IT Blanchardstown and IT Tallaght are joining together to form Ireland's first Technological University (TU). The new university will come into being in January 2019 and will be formally launched in February 2019.

This is an exciting new development in Irish higher education. As a prospective student planning to go on to third level in September 2019, you could be among the first graduates of the new TU which will have three main campus locations – Blanchardstown, Grangegorman and Tallaght – as well as the current DIT campus locations at Kevin Street, Aungier Street, Rathmines, Cathal Brugha Street and Bolton Street.

We look forward to meeting you at Higher Options, school visits and our Open Days and to answering any questions you may have about choosing TU Dublin!

IT TALLAGHT

# IT TALLAGHT

PROSPECTUS FULL TIME COURSES  
2019/2020



**[www.it-tallaght.ie](http://www.it-tallaght.ie)**

**Tallaght**

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# President's Welcome



**Thomas Stone**  
*President, IT Tallaght Uachtarán, IT, Tamhlacht*

## 2018 has been a very exciting year for IT Tallaght.

### Technological University Dublin

In July 2018 An Taoiseach Leo Varadkar TD announced that the alliance comprising of the Institute of Technology Tallaght, Dublin Institute of Technology and the Institute of Technology Blanchardstown is set to become the first Technological University (TU Dublin) in Ireland in 2019. The historic announcement of the establishment of this new University in Ireland is the culmination of seven years of hard work and commitment to achieving a long term strategic goal on the part of my colleagues and our students in the three Institutes. This success follows confirmation of the alliance satisfying the most challenging academic and institutional statutory requirements, through an externally assessed and validated review by a panel of international and world leading experts in the provision and standards required for the delivery of University level education, research and an excellent student experience.

The Technological University Dublin will serve a diverse population across the Greater Dublin region, Ireland and internationally, and is committed to making a positive and significant difference in the lives of all its students and graduates.

In this context, the Tallaght campus of the University will continue to be an important centre of high quality education, research and training in our region, where inclusive and differentiated learning experience pathways to graduation, from

apprenticeship to PhD level, is available to all students.

TU Dublin is positioned at the convergence of the arts, business, science and technology, and will strengthen the Greater Dublin Region and its prominence as a location, that encourages and supports knowledge advancement, sustainable development and inclusive education. TU Dublin will continue to provide career focused, enterprise informed, relevant higher education programmes and research to prepare our graduates for the workplace in their chosen disciplines. As graduates, they will also have the skills to adapt and grow in their careers and to succeed in an ever changing and developing environment.

I want to offer you the challenge and the opportunity to join with me and the IT Tallaght community at the most exciting time in University level education in Ireland. We want to work with you to achieve with us a level of personal success and fulfilment that meets your life ambition as a student and as a graduate of Technological University Dublin.

### Campus Development

The Tallaght campus will continue to expand its academic programmes and research activity, as well as community and enterprise supports as a priority in the South Dublin County Region as part of Technological University Dublin. Two new building projects are currently in progress on the 41 acre campus with planned completion dates in 2021. The

first is a 5,200 m2 multi-disciplinary building as part of the Government's Public Private Partnership programme, combining teaching space, hospitality and culinary arts as well as engineering and apprenticeship activities. The second building is a Sports Science, Health and Recreation building including outdoor sporting facilities.

This new capital investment in teaching, learning and research facilities in IT Tallaght further supports our commitment to the South Dublin County region.

### Office for Business & Industry

In collaboration with the Dublin Regional Skills Forum (DRSF), in June 2018 the Institute launched the new Office for Business & Industry (OBI). OBI represents a significant investment by the Institute in response to the fast-changing needs of the economy and of employers in the South Dublin region and beyond. Importantly, it creates a "one-stop-shop" through which employers can identify and access Institute-based expertise, education and research capabilities.

The first graduates of the Technological University Dublin (TU Dublin) will receive awards from the new University in 2019, and if you choose to join us as a student, you will have participated in the building of a new University in Ireland that will revolutionise higher education in this country.

**We invite you to join us and make history!**

# Fáilte ón Uachtarán

## Bliain spreagúil ab ea 2018 d'IT, Tamhlacht.

### Ollscoil Teicneolaíochta Bhaile Átha Cliath

I mí Iúil 2018 d'fhógair an Taoiseach Leo Varadkar TD go bhfuiltear chun an chéad Ollscoil Teicneolaíochta (OT Bhaile Átha Cliath) in Éirinn a chur ar bun in 2019 de chomhghuallaíocht na dtrí Institiúid Teicneolaíochta seo: Tamhlacht, Baile Átha Cliath agus Baile Bhlainséir. Toradh na hoibre crua agus an tiomantais atá á gcur isteach ag mo chomhghleacaithe agus ár gcuid macléinn san trí Institiúid le seacht mbliana anuas chun sprioc fhadtéarmach straitéiseach a bhaint amach is ea an fógra stairiúil go mbunófar an Ollscoil nua seo in Éirinn. Baineadh an sprioc seo amach tar éis dearbhú a fháil go gcomhlíonann an chomhghuallaíocht na riachtanais reachtúla acadúla agus institiúideacha is déine trí athbhreithniú atá measta agus bailíochtaithe ag painéal seachtrach saineolaithe idirnáisiúnta atá chun tosaigh ag leibhéal domhanda maidir le soláthar agus caighdeán atá riachtanach chun oideachas, taighde agus eispéireas den scoth don mhacléinn ag leibhéal Ollscoile a sheachadadh.

Tabharfaidh Ollscoil Teicneolaíochta Bhaile Átha Cliath seirbhís do phobal a bhfuil éagsúlacht iontach ag baint leis, ar fud mórcheantar Bhaile Átha Cliath, na hÉireann agus go hidirnáisiúnta. Lena chois sin geallann sí difríocht dhearfach shuntasach a dhéanamh i saol a cuid macléinn agus a cuid céimithe uile.

Sa chomhthéacs seo leanfaidh campas Thamhlachta de bheith ina lárionad tábhachtach oideachais, taighde agus oiliúna den scoth inár réigiún, áit a bhfuil bealaí eispéireas foghlama cuimsitheacha difreáilte ar fáil chuig céimeanna, idir phrintiseacht agus

leibhéal dochtúireachta, do réimse macléinn fíor-éagsúil.

Tá OT Bhaile Átha Cliath suite san áit ina bhfuil na healaíona, gnó, eolaíocht agus teicneolaíocht ag teacht le chéile agus neartóidh sé mórcheantar Bhaile Átha Cliath mar aon lena shuntasacht mar shuíomh a spreagann cur chun cinn eolais, forbairt inmharthana agus oideachas cuimsitheach agus a thacaíonn leo seo. Leanfaidh OT Bhaile Átha Cliath uirthi ag cur ar fáil cláir ardoideachais agus taighde atá dírithe ar ghairmréim, a bhfuil fiontar mar bhonn eolais acu agus a bhaineann le hábhar d'fhonn ár gcuid céimithe a ullmhú don áit oibre sna disciplíní is rogha leo. Lena chois sin beidh na scileanna acu, mar chéimithe, iad féin a oiriúnú agus fás ina ngairmréimeanna, agus rath a bhaint amach i dtimpeallacht a athraíonn agus a fhorbraíonn de shíor.

Ba mhaith liom an dúshlán agus an deis a thairiscint duit a bheith liom agus le pobal IT, Tamhlacht, ag an am is spreagúla i gcúrsaí oideachais ag leibhéal Ollscoile in Éirinn. Ba mhaith linn obair in éineacht leat chun leibhéal ratha agus lánsástachta duit féin a bhaint amach atá ag teacht le d'uailmhian bheatha mar mhacléinn agus mar chéimí Ollscoil Teicneolaíochta Bhaile Átha Cliath.

### Forbairt an Champais

I gcampas Thamhlachta leanfaimid orainn ag leathnú ár gcuid clár acadúil agus ár gcuid gníomhaíochtaí taighde agus cuirfimid le tacaíochtaí pobail agus fiontar i Réigiún Chontae Bhaile Átha Cliath Theas mar thosaíocht. Déanfaimid é seo mar chuid d'Ollscoil Teicneolaíochta Bhaile Átha Cliath. Tá dhá thogra tógála nua idir lámha againn faoi láthair ar an gcampas 41 acra. Tá sé i gceist iad seo a chríochnú in 2021. Foirgneamh ildisciplíneach is ea

an chéad cheann. Tá achar urláir 5,200 m<sup>2</sup> ann agus tógtar mar chuid de chlár Comhpháirtíochta Príobháidí-Poiblí de chuid an Rialtais é. Is ann a sholáthrófar spás don teagasc, ealaíona fáilteachais agus cócaireachta chomh maith le gníomhaíochtaí innealtóireachta agus printiseachta. Foirgneamh Eolaíocht Spóirt, Sláinte agus Fóillíochta is ea an dara foirgneamh. Tá áiseanna spóirt faoin spéir ag gabháil leis.

Tugann an infheistíocht chaipitil nua seo in áiseanna teagaisc, foghlama agus taighde in IT, Tamhlacht tacaíocht bhreise dár ndílseacht do réigiún Chontae Bhaile Átha Cliath Theas.

### Oifig do Ghnó & Tionscal

I gcomhar le Fóram Scileanna Réigiúnach Bhaile Átha Cliath (DRSF) sheol an Institiúid an Oifig nua do Ghnó & Tionscal (OBI) i mí Mheithimh 2018. Infheistíocht shuntasach is ea an infheistíocht atá déanta ag an Institiúid san OBI mar fhreagairt do riachtanais an gheilleagair agus na bhfostóirí i réigiún Bhaile Átha Cliath Theas agus níos faide anonn - riachtanais atá ag athrú go mear. Is tábhachtach an rud é go bhfuil sí ina "hionad ilfhreastail" a chabhraíonn le fostóirí rochtain a dhéanamh ar shaineolas, oideachas agus inniúlachtaí taighde atá ar fáil san Institiúid.

Sa bhliain 2019 a bhronnfaidh an Ollscoil nua dámhachtainí ar an chéad grúpa céimithe Ollscoil Teicneolaíochta Bhaile Átha Cliath (OT Bhaile Átha Cliath). Má roghnóidh tú a bheith linn mar mhacléinn beidh tú tar éis cur le hOllscoil nua a thógáil in Éirinn a chuirfidh athrú ó bhun ar an ardoideachas sa tír seo.

**Tá fáilte romhat teacht ar bord agus gaisce a dhéanamh!**

# TU Dublin FAQs

## **Q. What is the name of the new University?**

The new university will be called Technological University Dublin and known as TU Dublin.

(Ollscoil Teicneolaíochta Baile Átha Cliath / OT Baile Átha Cliath)

## **Q. What is a TU?**

We like to describe TU Dublin as the place where arts, business, science and technology converge. Technological Universities are already an established feature in many international education systems, particularly in Europe, Australia and Canada. Whilst they may vary in their characteristics, they generally share a focus on the preparation of students for the world of work with a particular focus on the role of technology in all its aspects.

## **Q. When will TU Dublin actually come into being?**

Based on the announcement by An Taoiseach Leo Varadkar TD on July 17th 2018, we expect to be officially designated in early 2019.

## **Q. I am a student in IT Tallaght, will I have to move campus?**

TU Dublin will be developed on three campus locations - Grangegorman, Blanchardstown and Tallaght.

Students at IT Tallaght will not have to move campus and will be automatically registered as students of TU Dublin upon designation.

## **Q. I want to study Business in IT Tallaght to start in September 2019, how will I apply?**

For entry in September 2019, IT Tallaght courses will appear in the CAO under the usual TA code on the IT Tallaght page in the CAO handbook and on the CAO website. Prospective students should apply in the usual way through the CAO for the IT Tallaght course that they are interested in and if successful an offer will be made through the CAO.

## **Q. If I apply to study Creative Digital Media in IT Tallaght will I have to move around to other campuses?**

It will always be clear, at the point of application, to which campus students are applying to.

Students at IT Tallaght will not have to move campus.

## **Q. I'm a Guidance Counsellor- how do I book a school visit with IT Tallaght?**

Contact our School Liaison Office on [schoolsliasonoffice@it-tallaght.ie](mailto:schoolsliasonoffice@it-tallaght.ie) or call 01 4042-522 to book your school visit.



# Institute Mission

**The Institute is a key driver in the development of the region and works closely with regional and national partners for that purpose. The role of the Institute in the region is to:**

- Provide learners with higher education opportunities from Level 6 to Level 10 on the National Qualifications Framework (NQF)
- Widen participation in higher education
- Create career ready graduates for business, industry and society
- Provide comprehensive lifelong learning opportunities for the region
- Provide educational supports to business, industry and society
- Engage in research, innovation and enterprise development
- Contribute to social, cultural and economic development
- Enhance internationalisation and integration within the region

Since October 2011, the Institute has been on a path of transformation into a new Technological University with our partners, DIT and ITB. In July 2018, An Taoiseach Leo Varadkar TD announced that the Institute of Technology Tallaght, Dublin Institute of Technology and the Institute of Technology Blanchardstown will be designated as the first Technological University in Ireland in 2019. Technological Universities are envisaged as a new type of higher

education in the Irish landscape. The Technological University Dublin (TU Dublin) will offer innovative pathways for students by providing flexible, practice-led research and education opportunities that meet the needs of a diverse population of learners. Graduates of the Technological University will develop attributes that prepare them for life and for fulfilling careers in a rapidly changing knowledge economy.





**Why**

## Quality Courses & Student Support

At IT Tallaght, we offer a wide range of career-focused Degree and Certificate courses which are designed to suit a variety of educational backgrounds and career aspirations.

We prioritise the student experience, where we assist students in reaching their true potential both academically and socially, so that they can build rewarding careers and experience interesting and fulfilling lives.

If you decide that IT Tallaght is right for you, then you will benefit from courses which have a practical and professional emphasis; a student supportive environment; smaller group sizes; and excellent levels of lecturer access and support. Work Placements and/or industry projects form a key part of our courses, helping you to become work-ready, and to begin your journey to rewarding employment.

## University Award

Graduates of the Technological University Dublin (TU Dublin) will receive awards from the new University commencing in 2019.

# Study At IT Tallaght?

## Job Prospects

The main focus of all IT Tallaght courses is to prepare the students for the world of work. We pride ourselves on delivering high quality education, and developing enterprise and employment skills for all of our learners. For instance, in a recent IT Tallaght Graduate Survey in 2016, 93% of respondents were either in employment or pursuing further study.

## International

Our courses have an international focus, and for those who wish to further internationalise their educational experience, IT Tallaght has numerous Study Abroad opportunities in exchange partner institutes in Europe and North America. In many cases, the student will have a choice to learn in the host language or through English.

## Sports Clubs and Societies

Being a member of clubs and societies gives students an opportunity to expand their social circle and develop their talents and interests. IT Tallaght has a vast array of Clubs and Societies to suit most interests, and our sporting societies are particularly successful against various 3rd level Institutes and Universities in regional and national tournaments.

## College Experience

The atmosphere for students is supportive, friendly and informal. There is a vibrant social scene in the college which is launched each year by the Student Union with Freshers' Week; a week of social events aimed at welcoming the 1st year students to college. After that, there are regular socials throughout the year to ensure that students meet their fellow students and enjoy their time in the college.

# How to get to Tallaght

## Dublin Bus

### Dublin Bus Services

IT Tallaght is easily accessible by bus with the following scheduled services stopping at our entrances.

- 49: Pearse Street to the Square
- 76: Chapelizod to Tallaght
- 76a: Blanchardstown to Tallaght
- 75: Dun Laoghaire to the Square
- 54A: Pearse St to the Square
- 56A: Ringsend to the Square
- 65: Hawkins Street to Blessington
- 65B: Hawkins Street to Citywest
- 77A: Ringsend to the Square

## LUAS

### LUAS Services

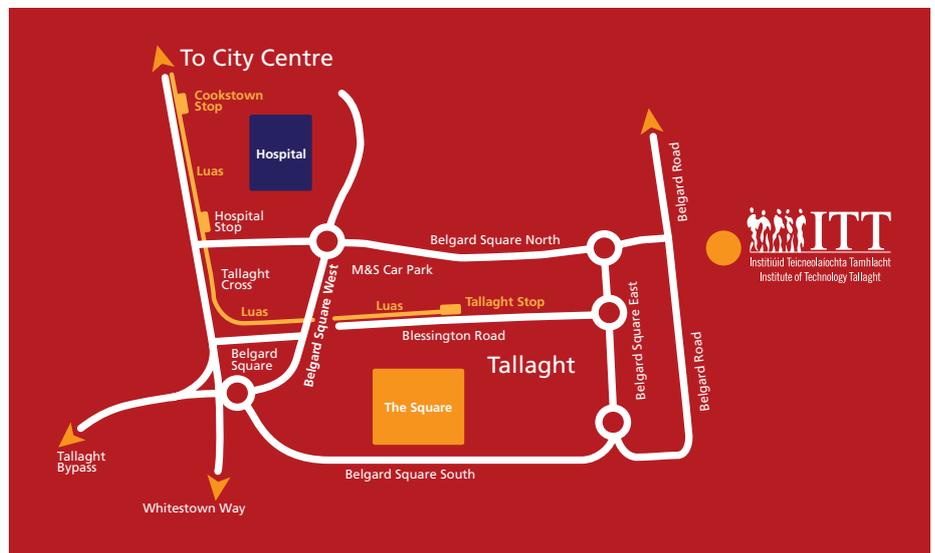
The LUAS (Red Line) runs between Connolly in the City Centre and the Square in Tallaght. It stops within a couple of minutes' walk of IT Tallaght.

The total journey time for the red line from Tallaght to Connolly is estimated at 46 minutes.



## IT Tallaght offers realtime travel information for Luas and Dublin Bus on campus

Tallaght is Ireland's largest urban centre after Dublin and Cork, with a population of more than 100,000. IT Tallaght enjoys the benefits of its unique position at the hub of the national roads system. It is very well serviced with public transport through Bus Éireann, Dublin Bus and LUAS. Dublin Airport, Dublin Ports and some of Ireland's leading sports, arts and cultural facilities are easily accessible from IT Tallaght.



## Student and Public Bus Routes

Connecting IT Tallaght with Kildare and Maynooth.  
Buses leave IT Tallaght every evening at 5:10pm.



# Tallaght

**Tallaght is a vibrant suburb southwest of Dublin City in the foothills of the Dublin Mountains. With a population of over 100,000 it is one of Ireland's largest urban centres.**

Tallaght's Civic Square or 'town centre' holds offices of local and central government entities, including South Dublin County Council, Revenue Commissioners, Department of Social & Family Affairs, Health Service Executive (Eastern Region) and Dublin and Dun Laoghaire Education and Training Board. The Civic Square also contains a very modern well-equipped Library Facility, Rua Red – the county's Arts Centre, the Civic Theatre, along with bars, restaurants. Tallaght is home to The Square, one of Ireland's largest shopping centres. Its tenants include many prominent high street stores.

The Adelaide and Meath Hospital incorporating the National Children's Hospital – commonly known as Tallaght Hospital is also located nearby. This hospital is a major national centre of medical care and research.

South Dublin Chamber of Commerce, the voice of business in South Dublin County was established and is located in Tallaght.

Shamrock Rovers Football Club, Gaelic Athletic Association Clubs, National Basketball Arena, Tallaght Swim Team, Glenanne Sports Club, and other sports facilities, thriving local libraries and arts groups and are also located here.

There are two parks in Tallaght, the Sean Walsh Park and Tymon Park covering an area of over 300 acres.

Institute of Technology Tallaght, St Mary's Priory and Saint Maelruain's Church are located in the historic quarter of Tallaght village which dates back at least to the 17th century.



# Tamhlacht

**Bruachbhaile fuinniúil ar an taobh thiar-theas de Bhaile Átha Cliath is ea Tamhlacht, i mbunchnoic sléibhte Bhaile Átha Cliath. Tá daonra os cionn 100,000 ann, agus dá bhrí sin tá sé ar ceann de na lárionaid uirbeacha is mó in Éirinn.**

Sa Chearnóg nó 'lár bhaile' Thamhlachta tá oifigí de chuid aonáin an rialtais áitiúil agus an rialtais láir lena n-áirítear Comhairle Chontae Bhaile Átha Cliath Theas, na Coimisinéirí Ioncaim, an Roinn Gnóthaí Sóisialacha agus Teaghlaigh, Feidhmeannacht na Seirbhíse Sláinte (Réigiún an Oirthir) agus Bord Oideachais agus Oiliúna Bhaile Átha Cliath agus Dhún Laoghaire. De bhreis air seo tá áis Leabharlainne dheathreallmhaithe, Rua Red, is é sin, Lárionad Ealaíon na contae, Amharclann an Phobail agus beáir agus bialanna sa Chearnóg. Tá An Chearnóg, ceann de na Lárionaid siopadóireachta is mó in Éirinn, i dTamhlacht. Ar na tionóntaí áirítear a lán de na siopaí iomráiteacha mórshráide.

Tá Ospidéal Adelaide agus na Mí a chuimsíonn Ospidéal Náisiúnta na Leanaí ar a nglaothar Ospidéal Thamhlachta leis, suite in aice láimhe. Is lárionad tábhachtach cúram leighis agus taighde é an t-ospidéal seo.

Is i dTamhlacht a bunaíodh Cumann Tráchtála Bhaile Átha Cliath Theas. Guth an earnáil ghnó i gContae Bhaile Átha Cliath is ea é agus tá sé suite ann.

Tá Club Peile na Shamrock Rovers, Clubanna de chuid Chumann Lúthchleas Gael, an Láthair Náisiúnta Cispheile, Foireann Snámh Thamhlachta, Club Spóirt Gleann Anna agus áiseanna spóirt eile suite i dTamhlachta, chomh maith le leabharlanna agus grúpaí ealaíon áitiúla faoi bhláth.

Tá dhá pháirc i dTamhlacht: Páirc Seán Walsh agus Páirc Thigh Motháin. Tá achar breis is 300 acra iontu le chéile.

Tá Institiúid Teicneolaíochta, Tamhlacht, Prióireacht Naomh Mhuire agus Eaglais Naomh Maelruain suite i gceathrú stairiúil sráidbhaile Thamhlachta, áit a théann siar chuig an 17ú céad ar a laghad.

Tá Tamhlacht i mball uathúil ag mol córas na mbóithre náisiúnta - an M50, N81, N7 agus N4. Is maith a fhreastalaíonn iompar poiblí air le Bus Éireann, Bus Áth Cliath agus Líne Dhearg chóras iarnróid éadroim LUAS. Tá teacht éasca ó Thamhlacht ar Aerfort Bhaile Átha Cliath agus ar Chalafoirt Bhaile Átha Cliath.



# Schools Liaison Office

**The Schools Liaison Office is the link for Guidance Counsellors with IT Tallaght. The services provided by the Schools Liaison Office include:**

## **School Visits:**

We can provide you with either a General School Visit that gives students an overview of the Institute, its facilities and a brief summary of all our courses or a Specialised School Visit which can offer students an introduction to courses and careers in a specified subject area.

## **Parent Evenings:**

We speak at a number of Parent Evenings. From students in 3rd year and Transition year on advising them in making subject choices for Leaving Cert or for senior students, we can give parents information on the courses provided by IT Tallaght and the possible careers these qualifications can provide their sons and daughters.

## **Parent/Teacher Meetings:**

We can provide an information stand at Parent/Teacher Meetings for senior classes. This provides parents an opportunity to speak to staff in the Institute on a one to one basis and answer any queries they may have. This also is a useful and productive method of filling in the waiting time parents may have at Parent Teacher Meetings.

## **Careers Exhibitions:**

IT Tallaght participates in many career exhibitions within the region and nationally throughout the academic year.

## **Liaison:**

The Schools Liaison Officer organises meetings between Guidance Counsellors, Principals and IT Tallaght management and staff to provide updates of programmes, course development and campus development.

## **Campus Visits:**

IT Tallaght welcomes student visits throughout the year. If you would like to bring students for a campus visit, contact the School Liaison Officer.

## **Open Day/Evenings:**

IT Tallaght holds an Open Day and a number of Open Evenings each year. This is an occasion for prospective students to visit the Institute and immerse themselves in campus life, programmes and facilities. They can meet with Lecturers and current students.

**For further information, please contact:**

**Adrian Payne,**

*Marketing and Communications Manager*

☎ 01 404 2886

✉ [adrian.payne@it-tallaght.ie](mailto:adrian.payne@it-tallaght.ie)



# Supporting Students



## Careers Service

As a full time student, if you need help choosing or changing course, deciding on your future career, building your CV to make you more employable or improving your job application skills, you can get plenty of information and advice from the Careers Service in IT Tallaght. Our website also has some additional resources to help you prepare for the next step of your career! You can book online for guidance appointments, search for jobs through our IT Tallaght Careers & Opportunities facebook page and see what volunteering opportunities exist on [www.studentvolunteer.ie](http://www.studentvolunteer.ie)

### Marie KIELTY

Careers & Appointments Officer

 [www.it-tallaght.ie/careers](http://www.it-tallaght.ie/careers)

 IT Tallaght Careers & Opportunities

 @careerstallaght

## Disability Service

The Disability Service provides supports to a wide range of students with disabilities who enter IT Tallaght. We work with students on a one-to-one basis to establish the best supports we can provide to enable them to become independent learners. We also provide learning support which assists students to acquire learning techniques that makes best use of their personal strengths academically. If you are considering studying with us please do not hesitate to contact us for an appointment to provide you with further information.

### Garry Toner

Disability Officer

 [www.it-tallaght.ie/disability\\_office](http://www.it-tallaght.ie/disability_office)

 [garry.toner@it-tallaght.ie](mailto:garry.toner@it-tallaght.ie)

 353-1 4042606



## Student Engagement

285 students availed of the opportunity to meet a guidance counsellor for a 1:1 meeting in 2017/2018

27 class room presentations were delivered by the Careers Officer – engaging 553 students



## Employer Engagement

37 Employers attended Careers related talks / events on site in IT Tallaght – engaging 1,897 students overall

IT Tallaght Careers Service promoted and shared just under 600 jobs in 2017/2018

IT Tallaght Careers Service added 160 employers to our database in 2017/2018



## Key Data for Careers Service 2017/2018

1,897 students accessed / used the Careers Service

91% of IT Tallaght graduates went into employment / further studies after graduation in 2017

*The Institute has a well established tradition of student welfare and involvement and is committed to all aspects of student life – academic, personal, social, cultural and sporting.*

## Access Office

The Access Office supports the participation of students who enter full-time undergraduate programmes at the college from a local DEIS school or by the mature access route. Our Access Officer is available to students who fall into either category for confidential one-to-one advice. We also offer a range of post-entry supports including a book scheme and a laptop loan programme.

For students who have participated on the ACE Programme (West Tallaght), CHEAP (Clondalkin) or Aspire2 (Ballyfermot) we reserve 3 places for each of the respective schools across all of our full-time undergraduate programmes.

### Holly Foley

Access Officer

 [it-tallaght.ie/access](http://it-tallaght.ie/access) and  
[it.tallaght.ie/mature](http://it.tallaght.ie/mature)

 [Holly.Foley@it-tallaght.ie](mailto:Holly.Foley@it-tallaght.ie)

 353-1 4042173

## Our Student Health Centre

Our Nursing Officers are experienced professionals who are committed to providing student-centred health care, encompassing physical, emotional and psychological health and wellbeing.

**Student Services administers and co-ordinates a comprehensive range of student-centred services:**

- **Careers & Appointments**
- **Sports & Recreation**
- **Health Centre**
- **Counselling**
- **Chaplaincy**
- **Access, Disability**

If you need help or advice on any aspect of health or indeed feel upset or anxious during your time in College, please feel free to call anytime.

In addition, a local GP practice provides regular surgeries at the Student Health Centre, for full-time students. The Nurse operates on a triage basis and arranges appointment based clinics, with the College doctor.

As part of our aim for a Healthy Campus, Health Education and Wellbeing events are held regularly throughout the year. These are organised to raise awareness for your life long wellness. You are most welcome to come along and get involved.

 [www.it-tallaght.ie/healthcentre](http://www.it-tallaght.ie/healthcentre)

 [www.facebook.com/ITTDStudentHealthCentre/](https://www.facebook.com/ITTDStudentHealthCentre/)

 353 -1-4042613

## Student Counselling Service

Like anyone, students can experience personal difficulties: settling into college, personal relationships, family issues, low mood, anxiety, academic pressures etc. may worry you. The Student Counselling Service provides individual counselling so that students can explore these difficulties in a safe and supportive environment.

### Aisling O'Brien

Student Counsellor

 [www.it-tallaght.ie/student\\_counselling](http://www.it-tallaght.ie/student_counselling)

 [counselling@it-tallaght.ie](mailto:counselling@it-tallaght.ie)

 353 1 4042635

## Chaplaincy Service

Chaplaincy in IT Tallaght provides pastoral care, emotional support and spiritual care to all students. It is a confidential service open to all. The

Chaplaincy provides pastoral care for students of all faiths and none. The Chaplain is easily contactable and runs 'out of hours' service.

Pastoral Care is embodied in the following ways:

- One-to-One Support
- Welcome and hospitality
- Responds and intervenes at times of crisis, grief and in times of success.
- Promoting the use of the Quiet Room/ Multi-Faith Prayer Room as a space where students can relax and meditate
- Bereavement support
- Volunteering Opportunities – [www.studentvolunteer.ie](http://www.studentvolunteer.ie)
- Mindfulness Sessions

### Sr. Bernadette Purcell

Chaplain

 [www.it-tallaght.ie/chaplaincy](http://www.it-tallaght.ie/chaplaincy)

 353-1-4042615

 086 102 2698



# Sports & Recreation



## Sport

Participating in sporting activities helps you to:

- Express and develop your talents from learning a new activity to competing at the Elite level
- Avail of top class coaching across a broad spectrum of sports
- Represent your Institute at National and International level
- Develop your team spirit and be part of fun and competitive teams
- Contribute to team spirit
- Make friends for life
- Improve and maintain your fitness
- Keep healthy
- Have fun in a safe and professional environment
- Visit other Institutes/Colleges for competitions
- Enjoy opportunities for away days, finals weekends and international trips

Clubs and Societies are financially supported to give you the best experience possible during your time in the Institute.

## Clubs and Societies

Joining Clubs and Societies:

- Gives you a voice
- Develops your talents
- Extends your interests
- Stimulates your political and social sensitivity
- Fosters your sense of leadership
- Helps you to develop expertise and learn from your peers in areas of interest like film, photography, radio, drama, art, music, debating, charity work, hill-walking, yoga, pilates, doing martial arts and many other interesting hobbies and activities
- Gives you an opportunity to expand your social circle outside of the classroom
- Gives you an opportunity to develop teamwork skills that will benefit your CV
- Gives you an opportunity for trips away and fun activities like paintball, gaming and Karting
- Gives you an opportunity to meet with experts nationally and internationally

## GAA at IT Tallaght

We have a vibrant Gaelic games association (GAA) at IT Tallaght which include ladies football, camogie, handball, senior and fresher's men's football and hurling teams. We encourage everyone to get involved.

We are looking for people to be active and participate in a number of ways including as players, supporters or in administration. The GAA

Development Office is situated on campus and our door is always open for you to come in and discuss Gaelic Games within the College!

**Tim O'Connor**

*Sports Officer*

☎ 01 4042550

✉ sports@it-tallaght.ie

🌐 www.it-tallaght.ie/sports

📘 IT Tallaght Clubs and Societies

# Sports, Arts & Culture Scholarships

**Over the last number of years IT Tallaght has provided financial assistance for students who have displayed an exceptional talent in their chosen activity, and represented the Institute on the National and International stage.**

**Tim O'Connor**

*Sports Officer*

☎ +353 1 404 2550.

✉ sports@it-tallaght.ie



These are awarded for the Sporting Elite, Arts and Cultural activities. Application forms and further information is available from the Sports and Recreation Officer. Closing date for applications: October 31st.

These Awards are co-funded by Student contribution fees and a very generous sponsorship from South Dublin County Council. IT Tallaght welcomes this partnership with South Dublin County Council in promoting sport, arts and culture in the community.

In addition to the above Scholarships, the GAA Club has a limited number of Bursaries available from the Leinster Branch. Applicants must be first year students at the time of applying and application forms are available from the GAA Officer.

## Sports, Arts & Culture Scholarships Criteria:

1. Awards for the support of full time students of high sporting, artistic and cultural potential are available.
2. Sports, Arts & Culture Scholarships will only be awarded to students when, in the opinion of the Scholarship Committee, they have reached or have the potential to reach a high level of performance.

3. Successful applicants must be registered as full-time students at Institute of Technology Tallaght.
4. Scholarships are awarded for a period of one year but may be awarded for up to a maximum of 5 years.
5. The recipient of a Sport Scholarship must always make themselves available for training and selection on Institute of Technology Tallaght Teams.
6. The recipients of an Arts or Cultural Bursary must be an active member in his/her respective College Society and aid in the promotion and development of the Society within the College. At least two Bursaries are reserved for Arts and Culture activities and are not awarded to first year students.
7. Recipients will be required to maintain a satisfactory academic standard and an appropriate level of commitment to his/her club/society throughout the duration of the Scholarship, and to display at all times an appropriate standard of conduct and professionalism.
8. Recipients must make themselves available for photo sessions and other promotional events, to be determined at the discretion of the Institute.
9. Failure to meet the above requirements may lead to the withdrawal or partial withdrawal of the Award.



# Centre for Learning and Teaching

**The transition to higher education can be challenging as students are expected to take greater responsibility for their own learning.**

The Centre for Learning and Teaching (CeLT) provides academic and learning technology supports to students, particularly first year students, to help with these challenges. It supports students through provision of drop-in clinics for Mathematics, Academic English and Report Writing as well as one-to-one support for students as required.

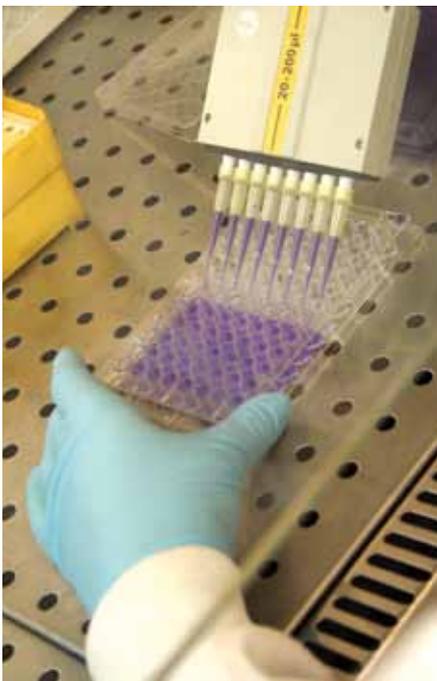
CeLT links in with academic staff also to provide any additional supports to student groups in study skills and other academic support areas such as the additional module in 'Volunteering' students can take for extra credits.

With the personal freedom that makes third level different to second level comes the personal responsibility of

making the best of the support on offer to you. CeLT looks forward to assisting you to develop your academic skills for higher education.

## **Student Services Available:**

- Induction IT workshops and activities at the start of the academic year
- Scheduled Maths 'drop-in' clinics
- Scheduled Academic Writing 'drop-in' clinics
- Study skills advice and guidance – individual and group
- Learning Technology workshops, training and support
- Assistive Technology training and support
- Revision clinics and support



# The Library

## Your partner in learning



The library is at the heart of IT Tallaght, providing a quality learning environment for all students and researchers. Through its learning resources and knowledge, it gives individuals the life skills necessary to play an active role in society and the workplace.

The library works closely with the academic departments to ensure students achieve high levels of literacy, reading, learning, critical thinking, problem solving and ICT skills. Our librarians also contribute to effective and appropriate information use through their understanding of copyright and plagiarism issues.

Librarians further assist students by providing subject-specific support across each of the disciplines and disseminating high-quality learning materials. Each librarian acts as a subject liaison assigned to an academic department, advising students on the library materials that are available, providing information skills training and helping them with subject and research queries.

The physical library building offers a comfortable and vibrant learning environment conducive to learning and study.

### Facilities include:

- Group-study rooms, which facilitate group learning and discussion
- Quiet study spaces and individual study carrels with sockets

- A computer lab with data projection facilities (for training purposes)
- IT and computing facilities, including networked PCs, notebooks and wireless internet access
- an extensive collection of books, DVDs and journals
- online journals and databases
- newspapers
- past exam papers

The library service at IT Tallaght extends the learning environment beyond the physical building, offering flexible services and resources to students and staff at times that suit them. Students can access a range of services 24 hours a day via the library website and online library catalogue. These include:

- online articles and books
- exam papers
- a personalised portal
- booking service for book loans and study rooms
- Online tutorials
- 'Ask a librarian' facility

Through our interlibrary loan service and reciprocal borrowing agreements with other Institutes of Technology, the library further increases the quality and availability of learning resources.

### Opening hours

Library opening hours are in line with the academic year, with extended opening hours prior to and during exam periods.



**For more information about the library, please consult the library website at**

 <http://library.it-tallaght.ie>

# Our Awards

**It is a system that combines the flexibility to exit to the world of work at two points and at the same time an opportunity to gain three excellent qualifications.**



## The Higher Certificate

The Higher Certificate is a two-year programme. It is an award that provides a path into employment. It is knowledge skills-driven. It certifies that you have competence and skills in one of the following areas: computer applications, language, business, audio-visual communication and engineering. Students with a Higher Certificate have gone on to be part of local businesses or joined one of the many multinationals located in Ireland. Some now manage their own businesses.

## The Bachelor Degree

With the Higher Certificate award you may decide to enter the world of work. Or you may take the next step on the ladder of progression. This is the one-year add-on Bachelor Degree. It's another layer that links into what you've already done at Higher Certificate level. It's a step up on the ladder of opportunity and qualification. This award certifies you as having an extra layer of knowledge and proficiency. It entitles you to apply for jobs that require more expertise and some management skills.

## The Honours Bachelor Degree

Having achieved the Bachelor Degree award you may decide to join the world of work. Or you may decide, as many students do, to progress to the follow-on Honours Bachelor Degree. This is normally completed in one year of extra study. It is very worthwhile. An Honours graduate is fully-fledged with a wide range of employment possibilities. With your Honours Bachelor Degree a management role with managerial responsibilities will certainly be within your grasp. You may be asked to lead a team or to manage a project. You are on track for a bright future with your Honours Bachelor Degree.

## Post Graduate Study

Having achieved their honours award most students exit to the world of work and opportunity. Many opportunities are available for students to pursue Post-Graduate study. At IT Tallaght both Masters and Doctoral awards are on offer. These post-graduate qualifications are usually driven by involvement in a research project of high standing, often with international collaborations.

## Progression with flexibility

The ladder of progression from Higher Certificate to Bachelor Degree to Honours Bachelor Degree offers students three qualifications. Each qualification is self-contained. Each qualification opens its own doors to employment. At the same time each qualification is part of a ladder of academic progression from Higher Cert right through to Honours Bachelor Degree. It is a system that combines the flexibility to exit to the world of work at two points (at Higher Certificate and at Bachelor Degree) and at the same time an opportunity to gain three excellent qualifications. Naturally, the higher the qualification the greater the employment opportunities and prospects.



*Each qualification is part of a ladder of academic progression from Higher Cert right through to Honours Bachelor Degree*

### **Bachelor Degrees – Direct Entry**

We offer direct Leaving Cert access to a range of Bachelor Degree Programmes. The ladder of opportunity in this case provides Leaving Cert students with direct access to Bachelor Degree programmes. These Bachelor Degree Programmes are selected in the CAO priority list in the ordinary way. The Bachelor Degree is completed in three years from start to finish. The ladder of progression allows students with their Bachelor Degree award to progress to the follow-on Honours Bachelor Degree programme. This is normally completed in one year. Further progress is possible for students who excel in the Honours Bachelor Degree programme. They may be invited to participate in a cutting edge research programme that meets the requirements for a doctorate award.

### **Exit Awards**

For students who are registered on some Degree programmes and who wish to take up other career opportunities IT Tallaght has embedded exit awards at Higher Certificate – Level 6 and Bachelor Degree – Level 7 which meet the standards required for the National Framework of Qualifications.

### **Honours Bachelor Degrees – Direct Entry**

We also offer 'ab initio' (direct entry from Leaving Cert) Honours Bachelor Degree programmes which are completed in 4 years. These programmes are direct Leaving Cert entry Honours Bachelor Degree Programmes. Ideal for students who feel ready to immerse themselves in an Honours Programme from day one.

# **A Year with 2 Semesters**

## **At IT Tallaght programmes are provided on a semester system.**

The system is very student friendly and takes the pressure off students who don't like the idea of a single examination measuring the entire year's work.

At IT Tallaght programmes are provided on a semester system. There are two semesters in the academic year.

This has proven very popular with students.

It means that at the end of the Winter Semester – September to January you are awarded credits on the results of continuous assessments and exams.

Each module becomes the focus for the continuous assessment, project work and written assignments.

Then it's on to the Summer Semester – February to May, again measured by continuous assessments and exams. That completes the year.

## Research Vision:

IT Tallaght aims to be a leader in research and scholarly activity in the region, to act as a Centre of Excellence for targeted research which can act as a regional and national resource for industry and other stakeholders, and contribute in a unique way to the success of fourth level education in Ireland.

## A Research Institute

The primary focus of research activity at IT Tallaght is towards applied research and development. This is strengthened by our strategic partnerships with other universities and colleges, nationally and internationally, and with industry partners. Our strategic partnerships in the greater Dublin region facilitate access to a variety of specialist facilities and taught modules to further enrich the postgraduate student learning experience.

### Key areas of research include

- Microsensors for clinical research and analysis (MiCRA) including biomedical sensor devices for disease diagnosis and the wider application of these technologies to, for example, environmental and food analysis. As a Technology Gateway, MiCRA works closely with, and supports Irish industry in their R&D activities on chemical sensing technologies.
- Microbial host interactions – seeking to understand the molecular interactions leading infections with a view to identifying and developing novel targets for therapeutic intervention and/or vaccine development for prevention of infection
- Pharmaceutical research and development including drug discovery, molecular characterization, toxicity studies, and characterization of pharmaceutical products to aid process development and optimization
- Biomechanical engineering focused on orthopedics (design and testing of orthopedic implants and materials

used in bone re-construction/repair), biomechanics, design, FEA and CFD analysis, and rapid prototyping

- Computing and software development focused on ontologies to model orthogonal aspects of e-learning and enterprise software technologies
- Social Media Research looking at a variety projects ranging from the theoretical foundations of Social Media to demonstration of novel applications of the technologies.
- Organizational behaviour, the use of social media/technology by public and private sector organizations, and on motivation.
- Franco Irish studies examining the historical, literary, spiritual, cultural and other links between France and Ireland

For students interested in pursuing research as a career path beyond their primary degree, the Institute provides advice and support on funded research programme at Masters and PhD levels, and scholarships including the colleges own Presidents Research Award scheme.

### Postgraduate Studies by Research at IT Tallaght

Postgraduate students can undertake research studies in either full-time or part-time mode leading to Masters and PhD. Research degrees involve undertaking a course of independent research that is original in content and ultimately adds to our overall understanding of the world around us. Structured PhD programmes are



*Postgraduate students can undertake research studies in either full-time or part-time mode leading to Masters and PhD.*

provided which combine both original research and the development of the students advanced knowledge and skills. These programmes are run in conjunction with other partner institutions and provide the candidates opportunities to network with other like-minded researchers across Dublin.

Currently, IT Tallaght is working with its Dublin Technological University Alliance partners at Dublin Institute of Technology (DIT) and Institute of Technology Blanchardstown (ITB) to provide a unified Structured PhD programme that can be tailored to meet the specific needs of the individual student. The DTU Alliance is also progressing towards the formation of a single Graduate Research School that will operate across the three DTU partner colleges and add significantly to the strength, depth and range of opportunities available to its postgraduate research students. The DTU also operates a joint open access

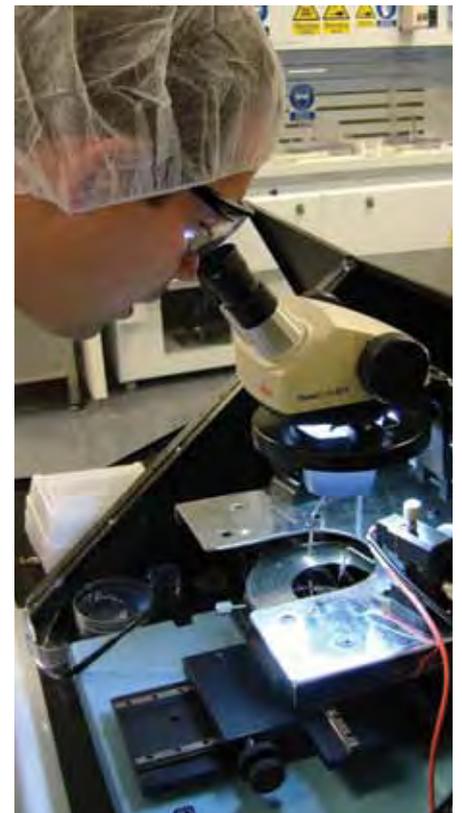
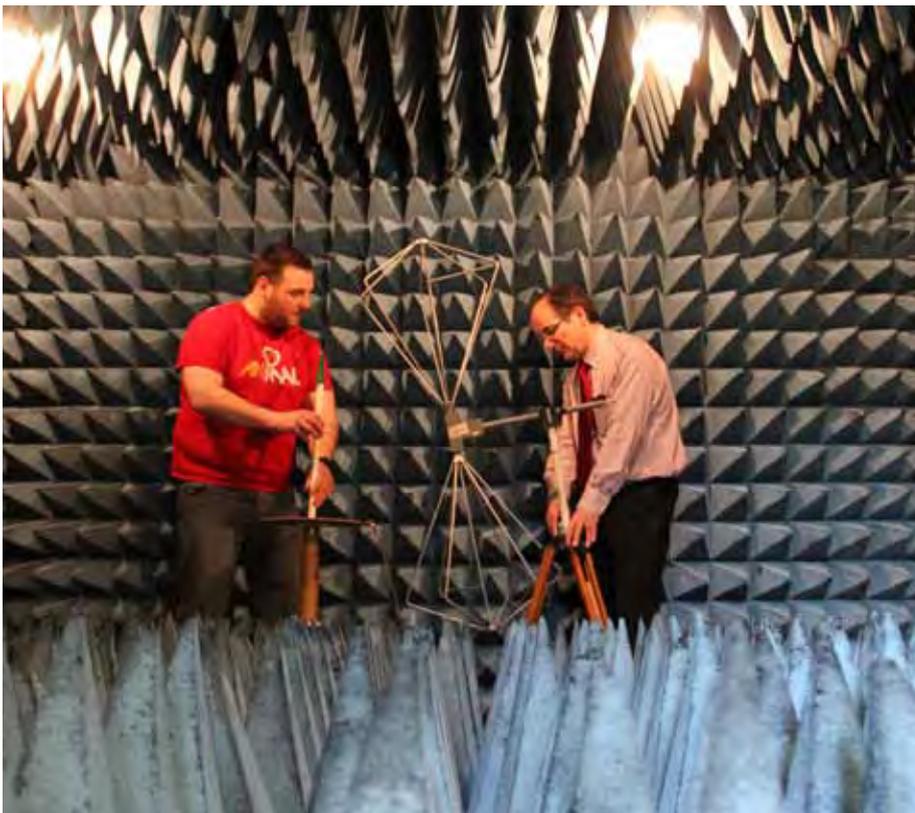
repository for all of its research and other publications (ARROW@DIT.ie).

Postgraduate research studies in the specialist area concerned are carried out under the supervision and guidance of a suitably qualified Academic staff member, or in some cases, a team of Academics where the research project has been designed by a Research Centre or Group. Through Structured PhD programmes, access can also be gained to other researchers and facilities to enrich the individual student learning experience. Academic supervision is central to the successful completion of postgraduate research work. Supervisors play a key role in designing the research project, guiding the postgraduate student in their work, maintaining the general direction of the research, setting and maintaining appropriate targets & academic standards, along with preparing the student for submission of their final thesis for examination.

Current research activity at IT Tallaght is focused in a number of areas of expertise involving collaboration internally and externally between groups of researchers within and across a number of disciplines. Full details on research taking place at the Institute along with postgraduate research opportunities can be obtained on the Institute website at: [www.it-tallaght.ie/ResearchatITTDublin/](http://www.it-tallaght.ie/ResearchatITTDublin/)

**The current areas of recognized research expertise in IT Tallaght are:**

**School of Science & Computing:** School of Science & Computing: Health Science, Nanotechnology, Sensor Technology, Microbial Pathogenesis, Antimicrobial Agents, Peptide Synthesis, Pharmaceutical Science, Process Analytical Technology (PAT), Supramolecular Chemistry, Molecular Modelling, NMR Spectroscopy,



**Current research activity at IT Tallaght is focused in a number of areas of expertise involving collaboration internally and externally between groups of researchers within and across a number of disciplines.**



Interoperable Systems and Complex Emergent Systems.

**School of Engineering:**

Bio-Engineering, Medical Devices, Wireless and RF Technology, Control, Vision & Learning Systems, Thin Film and Sensor Technologies, Communications Technology, Integrated Manufacturing Design and Production, Rapid Prototyping, Energy and Environment

**School of Business & Humanities:**

Creative Digital Media (Radio, Photography, Multimedia and Digital TV), Continental Languages & European Socio-cultural Studies, Social Sciences, Education, Management Research

**Research Centres located at IT Tallaght**

**Centre of Applied Science for Health (CASH)**

The Centre of Applied Science for Health (C.A.S.H.) aims to generate new scientific knowledge in the areas of Strategies for Combating Difficult and Antimicrobial Resistant Pathogens,

Biomedical Devices, and, Pharmaceutical Development and Analysis. Established in 2007 with funding of €10.6M from the Programme for Research in Third Level Institutions Cycle 4 and co-funded by the European Regional Development Fund, the centre works through collaboration with other researchers and industrial partners to generate new scientific knowledge and the creation of innovative technologies for improved diagnostics and therapeutics. The Centre is housed in a dedicated research building providing laboratories equipped to a high standard including Microbiology, Biochemistry, Tissue culture, Confocal microscopy, Synthetic Chemistry, Materials & Surface Analysis, Analytical Instrumentation and Biomechanical engineering.

It also includes three multipurpose labs re-configurable to suit a variety of uses and designed to attract and support co-location of industry-academic collaborative research. As well as supporting R&D, the Centre underpins educational aspects of undergraduate programme as final year students



*Our strategic partnerships in the greater Dublin region facilitate access to a variety of specialist facilities and taught modules to further enrich the postgraduate student learning experience.*

regularly undertake projects linked to the Centre's research activity. Outputs from research inform the ongoing development of taught programmes ensuring they retain currency and relevance to the market place. CASH aims to provide research outcomes that make a positive contribution to public well-being whilst also providing competitive advantages to Irish industry. We aim to respond to scientific, commercial, and societal challenges for the creation of new knowledge, technologies, provide supports to industry, and to produce well qualified M.Sc. and Ph.D. level graduates for the Irish knowledge economy.

**For more information on CASH please contact Dr Mary Deasy, CASH Centre Manager**

 01-4042803

 mary.deasy@it-tallaght.ie

### **Microsensors for Clinical Research & Analysis Centre (MiCRA)**

The technological focus of MiCRA lies in the development of electrochemical sensor technologies for detection of a variety of medical / veterinary / environmental / food related molecules based on point-of-care / point-of-use concepts. The centre places a significant emphasis on the support of industry R&D programmes focused on development of electrochemical sensors.

The centre, now a designated Technology Gateway funded by Expertise Ireland, works closely with industry, providing expertise and research capability to design and develop next generation products, and aid in the development and optimization of current technologies and products. In parallel, the centre carries out its own research aimed at the generation of ever faster and more sensitive

methods of detecting trace molecules, creating intellectual property (IP) and the subsequent exploitation of this IP through patents and licenced.

MiCRA have a range of advanced level capabilities including leading edge capabilities for micro and nano fabrication of high quality designed structures using cheap, non-labour intensive methodologies and their subsequent characterization. They also have advanced materials and surface analysis capabilities including scanning electron microscopes, atomic force microscopy, and drop shape analyzers and others to support the development of bio-components for bio-sensors. MiCRA have strong national and international linkages with research groups across the world.

**For further details contact**

 [www.micra.ie/](http://www.micra.ie/)

 01-404-2083

### **Centre of Microbial Host Interactions (CMHI)**

The CMHI is a research centre focused on the investigation of the molecular interactions that occur between microbes and their hosts that contribute to the pathogenesis of disease. Through these studies, they aim to identify critical molecules and exploit them as potential vaccine agents and/or as targets for therapeutic intervention. Once identified, the group then looks at the commercialization of IP relating to vaccine candidates, and the design, synthesis and development of novel anti-microbial molecules.

### **Nuclear Magnetic Resonance Institute Centre & Pharmaceutical Analysis**

The research group is focused on the application of advanced spectroscopic methods to the characterization and structural confirmation of molecules.

They use leading edge technologies and their work supports industry based R&D efforts seeking to design new molecules and/or optimize processes for the production of pharmaceutical intermediate and finished products. Amongst the technologies used are NMR (300 & 500MHz) and LCMSMS (mass spectrometry) to characterize compounds and intermediates. The group also a strong Process Analytical Technology (PAT) capability of a standard similar to that being increasingly introduced into the pharmaceutical industry to support the manufacture of intermediate and finished pharmaceutical products. PAT uses a variety of advanced techniques (e.g. NIR, FTNIR, Raman microscopy, rheology, particle size analysis, differential scanning calorimetry, thermogravimetric analysis to, for example, study drug distribution in tablets, aid the definitive identification of powders active ingredients or other drug components. This research supports company R&D and process optimization / development activity.

**Further details: NMR - Dr. Brian Murray**

 brian.murray@it-tallaght.ie

**and PAT - Dr. Edwin Carey**

 ed.carey@it-tallaght.ie

### **Sports Science and Performance Research**

The Sports Science and Health research group apply scientific and medical principles to the evaluation of physical performance and endurance during sports and exercise. It involves scientific studies of physiology and biomechanics in relation to the ability of people to adapt to motion, physical activity and health changes. The types of research studies carried out are varied and include, for example, an examination of the perceived effects of carbohydrate and caffeine ingestion

**The Institute has a vibrant community of postgraduate students conducting research in a modern environment with state-of-the-art technology and facilities.**



during exercise performance as part of prolonged periods of exercise (e.g. in a game of hurling) and in high intensity interval training - a type of exercise characterized by short repeated bouts of very high intensity exercise performed at a level close to eliciting VO<sub>2</sub> peak (the highest value of VO<sub>2</sub> attained by a particular maximal exercise test) separated by passive or active recovery periods of lower intensity. Participants are monitored during exercise to determine any impact on their level of performance and correlated with studies on blood gases and metabolite profiles.

#### **Social Media Research Group**

The Social Media Research Group (SMRG) conducts research in a wide spectrum of projects under the Social Media umbrella. Projects range from those which extend the theoretical foundations of Social Media to those which demonstrate novel applications of the technologies. Recent projects include

- Personality Based Recommender Systems
- Characterisation and Clustering of the Blogosphere
- Personal Sense in Subjective Language Research
- Automatic Assessment correction using Ontology Matching
- Virtual learning environments for Medical Information System training

The Social Web can provide a source of knowledge to enhance existing Customer Relationship Management (CRM) tools serving for example, as a marketing tool, a means of managing purchasing, partners, sales and customer support, and more recently as a means of acquiring insights into trends and sentiment towards products and services using text mining techniques.

Open data is data in machine processable format, which is freely available to everyone to use, without restrictions from copyright, patents etc. Such data can be mined to identify trends and to predict future needs of communities. Research is focusing on design of infrastructure which will allow for the (semi-) automatic identification, extraction, interrogation and management of data sourced on the Social Web and from Open Data sources.

**Further details are available from Dr John Cardiff**

✉ [john.cardiff@it-tallaght.ie](mailto:john.cardiff@it-tallaght.ie)

#### **Bioengineering Technology Centre (BTC)**

The BTC (Bioengineering Technology Centre) has a vision to improve human health and quality of life by applying engineering principles to medical problems ultimately leading to innovative applications in clinical practice. The centre has an 8 axis material test machine (the only one of its type in Europe) designed to be capable of testing spines in fatigue with a full range of motion. The group works in close collaboration with medical consultants. Scoliosis is a spinal deformity exhibiting combinations of both lateral bending and torsional effects. Approximately 10% of all adolescents have some degree of scoliosis, and 10% of these have curves which require medical attention beyond monitoring. The condition is a combined bending and twisting of the spinal column affecting mainly the thoracic (middle spine) or the lumbar (lower spine). It is sometimes progressive and distorts the chest and back. Scoliosis affects mainly adolescents of both sexes, but is more common in girls.

*Postgraduate research studies in the specialist area concerned are carried out under the supervision and guidance of a suitably qualified Academic staff member, or in some cases, a team of Academics where the research project has been designed by a Research Centre or Group*

Current research involves the investigation of two methods of spinal stabilization:

1. Posterior Dynamic Stabilization (PDS) which utilises special mechanical components (screws & rods) that allows limited movement of the spine.
2. Kyphoplasty which involves inflating a balloon within a vertebral body (to recover the vertebrae shape) which also creates a void within the body, into which bone cement such as polymethylmethacrylate (PMMA) is injected.

These devices are designed with the intent of providing stabilization of the spine, eliminating pain and preserving the integrity of the facet joints and intervertebral disc in the case of trauma injury (such as collapsed vertebra) and deformities (such as Scoliosis).

**Further details are available from the lead researchers Fiona McEvoy**

✉ fiona.mcevoy@it-tallaght.ie

**and Stephen Tiernan**

✉ stephen.tiernan@it-tallaght.ie

## Electronic Engineering Research

Active research in electronic engineering is currently focused on the areas of

- Development of Flexible Multimedia Compression Engine for ASIC Based Architectures
- Fibre Optic Interrogation Systems for Chemical/Biopharmaceutical Processes
- Radio Frequency Technology Centre (RFTC)

### Flexible Multimedia Compression Engine

Design of hardware systems enabling image compression from a variety of protocols including H262/MPEG2, H263 (flash), H264 (MPEG4 part10), HEVC - "H265" (2012), Motion JPEG2000

(only for server side acceleration), RDP8(Microsoft), HDX (Citrix), and PCoIP (VMWare). Because these protocols never all run at the same time, the aim is to design a multimedia engine which can compress and decompress any two of the listed protocols but with a silicon footprint which is significantly less than having a separate engine for each such that this engine can be used as a solution with Microsoft, Citrix or Teradici thin clients. The implementation target is broadcast quality 1920x1080 pixels, 60fps.

**Further details are available from Dick Gahan**

✉ rgahan@it-tallaght.ie

### Fibre Optic Interrogation System for a Chemical/Biopharmaceutical Process

The research aims to demonstrate the capability of a Fibre Optic Interrogation system to obtain data from the FBG sensors in a real industrial environment and the integration of on-line chemical/bio-pharmaceutical process measurements, with an existing networked process monitoring and control (SCADA) system. Reinforcement and enhancement of our knowledge of advanced process control and fluid flow systems involving the control and supervision of a multivariable process using an innovative FBG sensor approach will enable significant process optimization and development with associated competitive advantage.

Translation of dimension (XYZ) data measured by the FBG sensors can be converted into practical information about the behavior of a process system or the mass flow rate and viscosity in a pipe; this data will provide detailed knowledge of the system performance, and identify critical zones. The research aims to produce and commercialize an optical based embedded sensor system that is capable of measuring a

variety of system parameters such as temperature, stress, strain and flow properties.

**Further details are available from Dick Gahan**

✉ rgahan@it-tallaght.ie

### Radio Frequency Technology Centre

The mission of the RFTC is to provide radio frequency and electronics applied research services to companies by way of supporting project collaboration and partnership projects. Areas of research include:

- Development of a high frequency development test-bed to support RF circuit design and power transistor load pull analysis.
- RF circuit design up to 3GHz - Zigbee (IEEE 802.15.4) radio front end optimisation for range extension (RF PA, Diplexers, Filters, Antenna, RF Switches, Baluns, Matching circuits using SMT components, screening)
- National winner for research on RF Load-Pull techniques for high frequency power transistor optimisation.

The fundamental research question is whether novel test and measurement techniques can be used to improve the sensitivity of microwave receivers in the 2 GHz to 6 GHz range. There is a growing demand for low cost, low energy wireless monitoring systems with extended range. Extended range is desirable as it reduces the number of wireless routers or repeaters that need to be deployed in a large building or campus. One way to extend radio range is to increase transmitter power; however there are regulatory upper limits in terms of power spectral density.

**Further details are available from Brian Keogh**

✉ brian.keogh@it-tallaght.ie

## *Academic supervision is central to the successful completion of postgraduate research work.*

### **National Centre for Franco-Irish Studies (NCFIS)**

This centre was established to act as a conduit for research into the historical, literary, spiritual, cultural and other links between France and Ireland. It further seeks to attract postgraduate students to carry out research on areas directly related to the core activities of the Centre, and to develop research networks between third level institutions in France and Ireland with an interest in all things Franco-Irish.

#### **Dr Eamon Maher**

✉ eamon.maher@it-tallaght.ie



### **Why Do Postgraduate Research at IT Tallaght?**

Research is central to the mission of the Institute of Technology Tallaght (IT Tallaght). The Institute has a vibrant community of postgraduate students conducting research in a modern environment with state-of-the-art technology and facilities. Postgraduate students benefit from the many advantages that are on offer at the Institute including:

- Broad range of individual and multidisciplinary research degree programmes from Masters to Doctoral levels
- High quality academic staff providing quality supervision and support
- Institute Research Centres with an international reputation for performing high quality fundamental and applied research
- Strong links with industry, hospitals, and other academic institutions including involvement in National Research Centres and facilities there
- Flexible modes of study
- An expanding postgraduate student body
- State-of-the-art specialist research facilities and library
- Accessible personal and welfare services

- Excellent opportunities to pursue sports, recreational and cultural interests.

### **Research Degree Admission Process**

Applications for postgraduate study by research can be considered at any time of the year. However, most applications tend to be at the beginning of the academic year. Prospective applicants should make contact with possible supervisors in good time to allow discussions on the research topic and to obtain information about funding mechanisms. Advice on the availability of scholarships and funding mechanisms is also available from the Development and External Services Office. Preliminary meetings can be arranged by making contact based on research interests, by looking at the Institute's web pages, or by enquiry to the relevant Head of Department, who will put you in contact with the appropriate Academic staff member. Students are normally required to have obtained First or Second Class Honours degrees in a relevant area. It is usually necessary to obtain funding for conducting research degree study at the Institute. All postgraduate funding opportunities are publicly advertised and are also posted on the Institute's research web pages. Information on how to apply for admission to postgraduate research degree programmes is available from the Office of the Registrar.



# A Ladder System of Progression

One of the unique features of most of our programmes at IT Tallaght is the ladder system of progression whereby students can progress from Higher Certificate to a Bachelor Degree to an Honours Bachelor Degree.

One of the unique features of most of our programmes at IT Tallaght is the ladder system of progression whereby students can progress from Higher Certificate to a Bachelor Degree to an Honours Bachelor Degree.

Candidates from IT Tallaght holding Higher Certificates will be admitted to Bachelor Degree programmes on an order of merit

basis. Students will be advised on any minimum threshold. Candidates from outside the Institute are encouraged to apply and will be similarly ranked.

Candidates from IT Tallaght holding Bachelor Degrees will be admitted to Honours Bachelor Degree programmes on an order of merit basis. Students will be advised on any minimum threshold.

Candidates from outside the Institute are encouraged to apply and will be similarly ranked.

Applications to join Follow-On programmes should be made to Admissions Office, IT Tallaght, Tallaght, Dublin 24. For further details regarding progression contact the Registrar's Office.

## Ladder of Progression with the Higher Certificate (Level 6)



## Ladder of Progression with the Bachelor Degree (Level 7)



## The Direct Entry Honours Bachelor Degree (Level 8)



# Schools of Study

## President

Thomas Stone, BComm, MBS, FCCA.

## Registrar

Ken Carroll, BSc (Hons), PhD, MA.

## Business & Humanities

### Head of School

Dr Damien Roche LLB BL MSc MBA  
PhD FCIS CPA AITI

### Heads of Department

#### Accountancy and Professional Studies

Christine Nangle, BBus (Hons), ACA.

#### Humanities

Helena Doody, BA, HDip, M.Ed.

#### Management

Dr Damien Roche LLB BL MSc MBA  
PhD FCIS CPA AITI

#### Marketing and Business Computing

Glenn Mehta, BBS (Hons), MA.

## Engineering

### Head of School

Fiona Cranley, BSc. MSc. (Eng)

### Heads of Department

#### Electronic Engineering

James Wright, MEng, MIEI.

#### Mechanical Engineering

Diarmuid Rush, B.Sc., M.Sc.

## Science and Computing

### Head of School

Mike Ahern, BSc, PhD, MEng, HDip  
Mgt, MAVS.

### Heads of Department

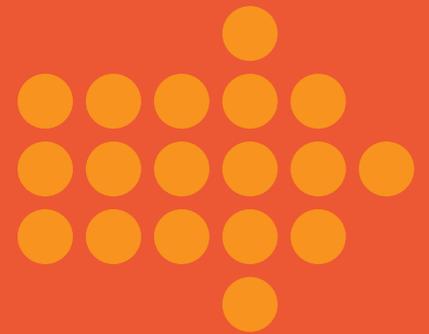
#### Science

John Behan, BSc(Hons,) MSc, MBS  
(Hons).

#### Computing

Barry Feeney, MSc, PhD.

# School of Business & Humanities



## **Head of School**

Dr Damien Roche, LLB, BL, MSc, MBA, PhD, FCIS, CPA, AITI

## **Heads of Department**

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### **Accountancy and Professional Studies**

Christine Nangle, BBus (Hons), ACA.

### **Humanities**

Helena Doody, BA, HDip, M.Ed.

### **Management**

Dr Damien Roche, LLB, BL, MSc, MBA, PhD, FCIS, CPA, AITI

### **Marketing and Business Computing**

Glenn Mehta, BBS (Hons), MA.

# Accountancy and Professional Studies



**“Our students are provided with a focused and targeted programme of modules that are highly regarded by both our students and employers of our graduates. Our programmes offer transformative life experiences and we recognise and welcome diversity in our lecture rooms”**

*Christine Nangle, Head of Department of Accounting, Finance and Professional Studies*

Course	CAO Code	Level	Length of Programme
<b>Accounting</b>	TA 111	<b>Bachelor Degrees – Level 7</b>	
		Bachelor Degree of Business – Accounting & Finance	3 Years
		Follow-on Honours Bachelor Degree of Business – Accounting & Finance	1 Year
<b>Accounting</b>	TA 121	<b>Honours Bachelor Degrees – Level 8</b>	
		Honours Bachelor Degree of Business – Accounting & Finance	4 Years

## What are my Career Opportunities

Would you like to play a strategic role in the management and development of an organisation? Would you like a career that is broad ranging, interesting, demanding and dynamic? Would you like a career that can take you all over the world?

A career in Accounting and Finance can offer you all of this and is financially attractive and recession proof. Newly qualified accountants, having completed their professional accounting qualifications, can expect to enjoy a salary in excess of €50,000.

The majority of accountants work in industry while many work as auditors, tax consultants and management consultants. Some graduates of this programme also enjoy rewarding careers

in teaching, banking, charities as well as public sector roles. Other graduates pursue further postgraduate education before taking up career opportunities.

## Work Placements or Industry Projects

The Department prides itself on its strong industry links and its approach to supporting our students in the preparation and securing of employment. Our graduates have achieved enormous career success and are sought after by a range of employers for their broad practical skills.

Students are encouraged and assisted to gain relevant and practical experience through summer internships with professional services firms and industry.

*“The course gave me a practical and academic understanding in accounting*

*The accountant is a key adviser in the operation of any organisation.*

and finance. It allowed me to intern in a top 10 accountancy firm and gain first-hand experience on how this course gives you the practical tools to work in an accounting practice. I now have secured a graduate position as a trainee accountant with Grant Thornton. I would recommend anybody who wanted to peruse a career in accounting and finance to do this course."

**Hugh McKenna, Graduate ITT, 2018**

**Programme key Facts**

- No Leaving certificate Accounting, Business or Economics subjects are required. We start at an introductory level and we will prepare you for the more complex concepts in the programme that you will meet at a later stage.

- As you progress through the programme you build up credits and exemptions which are recognised nationally and internationally and you can receive the maximum exemptions available to a level 8 graduate from the examinations of professional accountancy bodies including Chartered Accountants Ireland, ACCA, CIMA, Irish Institute of Tax and CPA. After just 3 years you will have obtained 7 ACCA exemptions, and after 4 years, 9 ACCA exemptions along with exemption form CAP1 of the Chartered Accounting (ICAI) examination. *(visit our website for full details on exemptions from these professional bodies).*
- On completion of your Level 8 qualification, should you wish to

continue your studies, you will have the opportunity to progress to a level 9 research masters.

- Should your circumstances change you will have the flexibility to postpone your studies or continue your studies part time in the evening or exit the programme at level 6 (Higher certificate in Business & Accounting) or at level 7 (Bachelor of Business in Accounting and Finance).

**What Will I Study**

This programme offers you the opportunity to develop practical skills in a broad range of subjects including:

- accounting, tax, audit & finance;
- information technology, big data and accounting information systems;

**Module Pathways**

		Financial Accounting & Reporting	Decision Making and Risk Analysis	Business Management & Communications	Economics and Finance	Law & Tax	Data Management & IS	Banking & Financial Services Elective
Year 1	Semester 1	Financial Accounting 1	Business Maths 1	Principles of Business 1	Critical Skills Development	Principles of Law	Data Skills and Information Technology	
	Semester 2	Financial Accounting 2	Business Maths 2	Principles of Business 2	Economics 1	Business Law	Data Technology in Organisations	
Year 2	Semester 3	International Financial Reporting 1	Management Accounting 1	Marketing	Economics 2	Law of Employment & Business Formation	Enterprise Systems and Processes	
	Semester 4	International Financial Reporting 2	Management Accounting 2	Organisational Psychology	Personal Finance	Company Law	Business Process & Information Systems	
Year 3	Semester 5	International Financial Reporting 3	Auditing & Assurance 1	Business Ethics	Financial Management	Income Tax	Business in the Digital Age	
	Semester 6	International Financial Reporting 4	Auditing & Assurance 2	Professional Communication & Employment Preparation	Investment Analysis	Business and Capital Taxes	Accounting Information Systems & CAATs	
Year 4	Semester 7	Advanced International Financial Reporting & Audit Practice	Advanced Management Accounting 1	Strategic Formulation	International Corporate Finance 1	Advanced Tax 1	Accounting Information Systems & Reporting (Elective)	Banking & Financial Services (Elective)
	Semester 8	Advanced International Financial Reporting	Advanced Management Accounting 2	Strategy Implementation	International Corporate Finance 2	Advanced Tax 2	Business Modelling	



- business management, professional communications and psychology; and
- legal and ethical.

These modules are designed to develop the core technical skills you will require in the role of an accountant or manager in business as well as the broader skills to assist with professional ethical decision making in a digital world.

The programme places a strong emphasis on developing your computing skills with a clear IT pathway in all semesters. Furthermore an integrated approach is taken, whereby IT is embedded in modules delivered across the programme.

Student centred classes are designed and delivered:

- By professionally qualified lecturers with extensive industry experience;
- In small class groups, supported with tutorials and online learning tools;
- In a caring environment with approachable and friendly lecturers, supported by a range of institute wide student supports; and

- Over two semesters per academic year enabling you to spread your workload thereby allowing a fairer and more complete assessment of your efforts.

Assessments have a strong practical focus with continuous assessments, designed to alleviate the pressure of final exams and more fairly support different learning styles. Continuous Assessments may take the form of in class tests, individual or group projects, presentations, case studies, quizzes and peer to peer teaching.

The Department of Accounting, Finance and Professional Studies and our industry partners recognise student excellence through sponsored annual prizes and awards for all years 1 to 4. In 2017 our awarding sponsors included:

- The Association of Chartered Certified Accountants;
- The Chartered Institute of Management Accountants Award;
- The Institute of Certified Public Accountants in Ireland Award;
- The Irish Tax Institute Award;

- The Accountancyschool.ie Award;
- The BDO Award;
- The Hayden Brown Award;
- The LHM Casey McGrath Award;
- The Leinster Society of Chartered Accountants Award

The success of our programme is further recognised through a number of our graduates being placed in the professional exams of ACCA and Chartered Accountants Ireland.

### Our Graduate Performance speaks for itself:

**Darren Farrell** was placed 4th in Ireland in the Chartered Accountants Ireland CA Proficiency 2 Examinations (CAP 2's) in 2016 and in 2017 he placed 7th in Ireland in the Chartered Accountants Ireland Final Admittance Examinations (FAE's)

**Naheed Bari** who having graduated in 2016 went on to complete her ACCA exams in one year and has recently also recently completed the Institute of Tax exams.

Both of the above students won the CIMA Global Business Challenge Ireland in 2015.

**Theresa Hatton**, who graduated from ITT in 2014 won the AIB sponsored award for being placed first in Ireland in the ACCA final examinations.

**Guguletha Ndlovu** placed first in Ireland in her P6 exam (December 2016).

### What our Students and Graduates Say about us:

*"This course prepares each individual student for the workplace, by giving particular attention to the skills*

*that they would need to become a successful accountant. The lecturers are approachable and take time out of their day to help any students with any queries they may have. The content of the course aligns with the professional accounting bodies and in turn this gives a greater degree of preparation than most other accounting courses."*

**Derek Martin Year 4 2017/18**

*"At final year level, the lecturers are involved in preparing every student for the workplace before they complete the course in May, and are always on hand to offer advice when needed"*

**Lee Whelan Year 4 2017/18**

### Advanced Entry

The programme welcomes advanced entry applicants whose previous accredited learning will be considered for advanced entry to level 6, 7 and 8. Specifically, we welcome advanced entry, into year 3 of the level 7, to students who have completed the 2 year ATI Diploma for Accounting Technicians.

### Contact Information

**Christine Nangle**

Head of Department of Accounting,  
Finance and Professional Studies

☎ 003531 4042880

✉ Christine.nangle@it-tallaght.ie



*Celebrating 25 Years of ITT Accounting Graduates*

*Form left to right  
Christine Nangle, Martin Nolan, Helena  
Doody, Thomas Stone, Angela Feeney*

CAO Code: TA 111

Course Level: 7

Length of course: 3 years

Follow-on Degrees:

Honours Bachelor Degree of Business -  
Accounting and Finance (1 year)

# Accounting and Finance

## Bachelor Degree Of Business

### Module Pathways

		Financial Accounting & Reporting	Decision Making and Risk Analysis	Business Management & Communications	Economics and Finance	Law & Tax	Data Management & IS
Year 1	Semester 1	Financial Accounting 1	Business Maths 1	Principles of Business 1	Critical Skills Development	Principles of Law	Data Skills and Information Technology
	Semester 2	Financial Accounting 2	Business Maths 2	Principles of Business 2	Economics 1	Business Law	Data Technology in Organisations
Year 2	Semester 3	International Financial Reporting 1	Management Accounting 1	Marketing	Economics 2	Law of Employment & Business Formation	Enterprise Systems and Processes
	Semester 4	International Financial Reporting 2	Management Accounting 2	Organisational Psychology	Personal Finance	Company Law	Business Process & Information Systems
Year 3	Semester 5	International Financial Reporting 3	Auditing & Assurance 1	Business Ethics	Financial Management	Income Tax	Business in the Digital Age
	Semester 6	International Financial Reporting 4	Auditing & Assurance 2	Professional Communication & Employment Preparation	Investment Analysis	Business and Capital Taxes	Accounting Information Systems & CAATs

This three year programme aims to provide a level of knowledge and skills in Accounting and Finance that prepares students for middle level responsibility in an Accountancy environment. Students who gain the Bachelor Degree Award may exit into the world of employment with this solid qualification. Alternatively they may decide to apply for a place on the Honours Bachelor Degree programme to acquire a further level of knowledge, skills and competency.

### Career Opportunities

BBS Accounting – Graduate opportunities from this programme are excellent. The majority choose to successfully continue their studies in IT Tallaght at honours degree level in Accounting and Finance. Alternatively, graduates may enter professional practices or industry as trainee accountants.

BBS(Hons) Accounting – Graduate opportunities from this programme are excellent. They may follow careers as trainee professional accountants in practice and industry. Many more choose employment in second level teaching, financial services or further academic study at master's level.

### Entry Requirements

Leaving Certificate examination with at least ordinary level Grade O6 or better in five subjects. The subject list must include either English or Irish. Ordinary level Mathematics Grade O6 or better is also a requirement.

Recent minimum CAO points: 200

Points Range 200 – 480

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Postgraduate level for Honours Students

Recognition for Teaching - Graduates wishing to pursue a career in teaching at second

level may be eligible to teach accounting and business, subject to meeting the requirements of the Teaching Council.

CAO Code: TA 121

Course Level: 8

Length of course: 4 years

# Accounting and Finance

## Honours Bachelor Degree Of Business

### Module Pathways

		Financial Accounting & Reporting	Decision Making and Risk Analysis	Business Management & Communications	Economics and Finance	Law & Tax	Data Management & IS	Banking & Financial Services Elective
Year 1	Semester 1	Financial Accounting 1	Business Maths 1	Principles of Business 1	Critical Skills Development	Principles of Law	Data Skills and Information Technology	
	Semester 2	Financial Accounting 2	Business Maths 2	Principles of Business 2	Economics 1	Business Law	Data Technology in Organisations	
Year 2	Semester 3	International Financial Reporting 1	Management Accounting 1	Marketing	Economics 2	Law of Employment & Business Formation	Enterprise Systems and Processes	
	Semester 4	International Financial Reporting 2	Management Accounting 2	Organisational Psychology	Personal Finance	Company Law	Business Process & Information Systems	
Year 3	Semester 5	International Financial Reporting 3	Auditing & Assurance 1	Business Ethics	Financial Management	Income Tax	Business in the Digital Age	
	Semester 6	International Financial Reporting 4	Auditing & Assurance 2	Professional Communication & Employment Preparation	Investment Analysis	Business and Capital Taxes	Accounting Information Systems & CAATs	
Year 4	Semester 7	Advanced International Financial Reporting & Audit Practice	Advanced Management Accounting 1	Strategic Formulation	International Corporate Finance 1	Advanced Tax 1	Accounting Information Systems & Reporting (Elective)	Banking & Financial Services (Elective)
	Semester 8	Advanced International Financial Reporting	Advanced Management Accounting 2	Strategy Implementation	International Corporate Finance 2	Advanced Tax 2	Business Modelling	

### Career Opportunities

BBS(Hons) Accounting and Finance – Graduate opportunities from this programme are excellent. They may follow careers as trainee professional accountants in practice and industry. Many more choose employment in second level teaching, financial services or further academic study at Master's level.

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or or better.

Recent minimum CAO points: 215

Points Range 215 – 470

Recognised in Europe

Membership of the Professional Body

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Postgraduate level for Honours Students

CAO Code: TA 106

Course Level: 6

Length of course: 2 years

# Business Administration

## Higher Certificate in Business Administration (Common Entry)

Course	CAO Code	Level	Length of Programme
		<b>Business Administration</b>	
<b>Business Administration</b>	TA 106	Higher Certificate in Business Administration (Common Entry)	2 Years

### Entry Requirements

Leaving Certificate examination with at least Grade O6 (ordinary level) or better in five subjects including Mathematics and English or Irish.

Recent minimum CAO points: 183

Points Range 183 – 370

Recognised in Europe

Membership of the Professional Body

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

### What are my Career Opportunities

On completion of the Higher Certificate in Business Administration, students will be equipped with a strong foundation in business administration, accounting, organisational behaviour and information technology / Data Management (specifically Microsoft office for which they can receive Microsoft Accreditation). The modules are designed to develop the core foundational skills you will require to participate within a wide variety of business roles in any organisation including finance, marketing or human resources as well as the broader skills to assist with professional ethical decision making in a digital world.

On successful completion of year 1 of the Higher Certificate in Business Administration, students may opt to transfer to Year Two of either The Bachelor Degree of Business in Management, Accounting & Finance or Marketing. Students who complete the Higher Certificate in Business Administration may progress to Year 3 of The Bachelor Degree of Business in Management or in Accounting and Finance.

### Programme key Facts

- No Leaving certificate Accounting, Business or Economics subjects are required. We start at an introductory level and we will prepare you for the more complex concepts in the programme that you will meet at a later stage.
- On successful completion of the 2 year Higher Certificate you will be able to progress to Year 3 Accounting where you will have the opportunity to obtain exemptions from the professional exams of the Accounting Bodies. After just 3 years you will have obtained 7 ACCA exemptions, and after 4 years, 9 ACCA exemptions, along with exemption from CAP1 of the Chartered Accounting (ICAI) examination.
- Should you go on to complete a Level 8 qualification, and wish to continue your studies further, you will have the opportunity to progress to a level 9 research masters.

### What Will I Study

This programme offers you the opportunity to develop practical skills in a broad range of subjects including:

- information technology, big data and accounting information systems;
- business management, professional communications and psychology;
- the legal business and employment environment; and
- Accounting and management accounting.



The programme places a strong emphasis on developing your computing skills with a clear IT pathway in all semesters. Furthermore an integrated approach is taken, whereby IT is embedded in modules delivered across the programme.

### Module Pathways

		Financial Accounting & Reporting	Decision Making and Risk Analysis	Business Management & Communications	Economics and Finance	Law & Tax	Data Management & IS
Year 1	Semester 1	Financial Accounting 1	Business Maths 1	Principles of Business 1	Critical Skills Development	Principles of Law	Data Skills and Information Technology
	Semester 2	Financial Accounting 2	Business Maths 2	Principles of Business 2	Economics 1	Business Law	Data Technology in Organisations
Year 2	Semester 3	International Financial Reporting 1	Management Accounting 1	Marketing	Economics 2	Law of Employment & Business Formation	Enterprise Systems and Processes
	Semester 4	International Financial Reporting 2	Management Accounting 2	Organisational Psychology	Personal Finance	Company Law	Business Process & Information Systems

Student centred classes are designed and delivered:

- In small class groups, supported with tutorials and online learning tools;
- In a caring environment with approachable and friendly lecturers, supported by a range of institute wide student supports; and
- Over two semesters per academic year enabling you to spread your workload thereby allowing a fairer and more complete assessment of your efforts.

Assessments have a strong practical focus with continuous assessments, designed to alleviate the pressure of final exams and more fairly support different learning styles. Continuous Assessments may take the form of in class tests, individual or group projects, presentations, case studies, quizzes and peer to peer teaching.



### Contact Information

**Christine Nangle**  
 Head of Department of Accounting,  
 Finance and Professional Studies  
 ☎ 003531 4042880  
 ✉ Christine.nangle@it-tallaght.ie

# Department of Management



Course	CAO Code	Level	Length of Programme
<b>Higher Certificates – Level 6</b>			
<b>Culinary Arts</b>	TA 006	Higher Certificate in Arts – Culinary Arts	2 Years
		Follow on Bachelor Degree of Arts – Culinary Arts	1 Year
<b>Bachelor Degrees – Level 7</b>			
<b>Management</b>	TA 113	Bachelor Degree of Business – Management	3 Years
		Follow-on Honours Bachelor Degree of Business – Management	1 Year
<b>International Business</b>	TA 116	Bachelor Degree of Business – International Business	3 Years
		Follow-on Honours Bachelor Degree of Business – International Business	1 Year
<b>International Hospitality and Tourism Management</b>	TA 015	Bachelor Degree of Arts - International Hospitality and Tourism Management	3 Years
		Follow-on Bachelor Degree of Arts International Hospitality and Tourism Management	1 year



Bachelor of  
Business Hons  
Management

Bachelor of  
Business Hons  
International  
Business

Bachelor of  
Arts Honours  
International  
Hospitality  
and Tourism  
Management

Leaving Cert Entry  
TA 122

Leaving Cert Entry  
TA 125

Leaving Cert Entry  
TA 026



Course	CAO Code	Level	Length of Programme
		<b>Honours Bachelor Degrees – Level 8</b>	
<b>Management</b>	TA 122	Honours Bachelor Degree of Business – Management	4 Years
<b>International Business</b>	TA 125	Honours Bachelor Degree of Business – International Business	4 Years
<b>International Hospitality and Tourism Management</b>	TA 026	Honours Bachelor Degree of International Hospitality and Tourism Management	4 Years



# Bachelor of Business in Management

Course	CAO Code	Level	Length of Programme
		<b>Bachelor Degrees – Level 7</b>	
<b>Management</b>	TA 113	Bachelor Degree of Business – Management	3 Years
		Follow-on Honours Bachelor Degree of Business – Management	1 Year
		<b>Honours Bachelor Degrees – Level 8</b>	
<b>Management</b>	TA 122	Honours Bachelor Degree of Business – International Business	4 years



## What are my Career Opportunities?

This programme in Management uses an inter-disciplinary and applied approach in design and delivery. It is underpinned by practical application of theory and practice related to modern business and its management. This programme allows students to work across a wide range of industry sectors. Past students have:

- Gained employment in leading organisations such as Google, Citi Bank, Coca Cola, Board na Mona, Primark and AIB.
- Successfully set up and manage their own businesses in a variety of different sectors.
- Worked in a broad spectrum of roles.
- Progressed to qualify as secondary school teachers.
- Participated in post graduate study in all third level institutions in Ireland and abroad.

## Industry Projects

The Department prides itself on its strong industry links and its approach to supporting our students in the preparation and securing of employment. Our graduates have achieved enormous career success and are sought after by a range of employers for their broad practical skills.

Our capstone project, Business Simulation for the Level 7 Programme involves the students managing a digital business. This allows students to apply their skills in real time whilst having the safety of digital learning environment.

Our capstone project strategy for Level 8 is multifaceted. The Executive Skills Development module will encourage professional and public speaking capabilities, executive precision presentation skills and develop corporate flair. The Strategy modules, amongst others, will involve the student in industry as well as enhance strategic and analytical skills. Students are encouraged and assisted to gain relevant and practical experience through summer internships with professional services firms and industry.

## Programme key Facts

The Management Programme is characterized by a student-centred approach. Students will be challenged to develop an intrinsic interest in their own professional development. We enable student to build business knowledge and apply practical skills through the medium of six modern Pathways.

These Pathways are as follows:

- Business Practice, Legal & Management Practice
- Personal & People Development
- Information Systems
- Finance & Governance
- Industry & Business
- Languages.

## What Will I Study

This programme offers you the opportunity to develop practical skills in a broad range of subjects including:

- Retail Management and International Services
- Accounting and Information Technology
- Business Management, Enterprise and Operations
- Human Resource Management
- Business Simulation and Innovation
- Strategy, Global Supply Chain
- Law and Ethics

These modules are designed to develop the core technical skills you will require in the role of a manager in business as well as the broader skills to assist with professional and ethical decision making in a digital world.



My years in IT Tallaght were amazing. They enabled me to reach my potential, push past my fears and realise that I could achieve whatever I set my mind to.

**Antanas Balkaitas**  
**B.Bus. in Management Honours.**  
**Alumni member**



## Module Pathways

Bachelor of Business in Management Programme 2018							
	Business Practice Pathway	Legal & Management Practice Pathway	Personal and People Development Pathway	Finance & Governance Pathway	Information Systems Pathway.	Elective Pathway 1: Industry & Business	Elective Pathway 2: Lanaguage
Year 1: Management Skill Foundation		5 Core & 2 Electives					
Semester 1	Principles of Business 1	Principles of Law	Critical Skills Development	Financial Accounting for Business Managers 1	Data Skills & Information Technology	Business Environment	French/ Spanish / German
Semester 2	Principles of Business 2	Maths for Managers	Cross Cultural Management	Financial Accounting for Business Managers 2	Data Technology in Organisations	Europe in the Global Context	French/ Spanish / German
Year 2: Management Skill Exploration		5 Core & 2 Elective					
Semester 3	Marketing	Economics for Business	HRM	Management Accounting for Business Managers 1	Business Processes & IS	International Services	French/ Spanish / German
Semester 4	Managing Digital Opportunity	Business Law	Talent Management	Management Accounting for Business Managers 2	Enterprise Systems & Processes	International Trade & Policy	French/ Spanish / German
Year 3: Management Skill Application		5 Core & 2 Electives					
Semester 5	Enterprise Development	Retail Management	Professional Communications & Work Preparation	Financial Management 1	Business in the Digital Age	Market Research in Practice	French/ Spanish / German
Semester 6	Operations & Quality Mgt	Company & Partnership Law	Business Simulation	Financial Management 2	Sales Management	Web & App Design	French/ Spanish / German
Year 4: Management Executive Development		5 Core & 2 Electives					
Semester 7	Strategy Formulation	Innovation	Executive Skill Development	Corporate & Social Responsibility	Business Modelling & Data Analysis	Banking & Financial Services	French/ Spanish / German
Semester 8	Strategy Implementation	Employment Law	International Business	Corporate Finance & Governance	Global Supply Chain & Logistics	Organisation Development & Change	French/ Spanish / German

Student centred classes are designed and delivered:

- By professionally qualified lecturers with extensive industry experience;
- In small class groups, supported with tutorials and online learning tools;
- In a caring environment with approachable and friendly lecturers, supported by a range of institute wide student supports; and
- Over two semesters per academic year enabling you to spread your workload thereby allowing a fairer and more complete assessment of your efforts.

Assessments have a strong practical focus with continuous assessments, designed to alleviate the pressure of final exams and more fairly support different learning styles. Continuous Assessments may take the form of in class tests, individual or group projects, presentations, case studies, quizzes and peer to peer teaching.

## Level 7 Entry Requirements

Leaving Certificate examination with at least ordinary level Grade 06 or better in five subjects. The subject list must include either English or Irish. Ordinary level Mathematics Grade 06 or better is also a requirement.

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Recent minimum Cao points: 175

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Points Range: 175-380

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Recognised in Europe

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Membership of the Professional Body

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.



I am really enjoying all aspects of college life. My studies are helping me grow my knowledge base. The course modules are equipping me with the right skills to enter the business world.

**Matthew O'Connor**  
**Level 7 Management Student**

## Level 8 Entry Requirements

Leaving Certificate Examinations which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade 06 or better.

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Recent minimum Cao points: 221

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Points Range: 221-440

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Recognised in Europe

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Membership of the Professional Body

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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A Level 8 Bachelor of Business in Management degree entitles you to apply for a place on the Professional Master of Education (PME) which is a two year Secondary Teacher Education qualification offered by all NUI's, Trinity College, DCU, University of Limerick and Hibernia College.

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Graduates who have attained the required honours standard are eligible for postgraduate study in all third level institutions in Ireland and abroad. Popular Masters and postgraduate choices of ITT BBS (Hons) Management graduates are: Strategic Management, Logistics and Supply Chain Management, Human Resources, Social Media, Civic engagement, Management for the Not for Profit Sector, Health Sector management.

## Advanced Entry

The programme welcomes advanced entry applicants whose previous accredited learning will be considered for advanced entry to level 6, 7 and 8. Specifically, we welcome advanced entry, into year 3 of the level 7 programme.



IT Tallaght will always have a place in my heart. If you are looking for a dynamic learning environment with great lecturers, then I would definitely recommend Bachelor of Business in Management. Go for it and enjoy every minute

**Jessica Kane**  
**Bachelor of Business Alumni & Customer Service and Transport Administrator for Stericycle.**

## Contact Information

**Christine Nangle**

*Head of Department of Accounting, Finance and Professional Studies*

☎ 003531 4042880

✉ [Christine.nangle@it-tallaght.ie](mailto:Christine.nangle@it-tallaght.ie)

# Bachelor of Business in International Business

The International Business Degree is designed to create a 'Business Ready' Graduate. Students will be dynamic and resourceful business people who are multi skilled, culturally sensitive and internationally aware. You will study a range of business and cultural topics and develop essential business skills in Innovation, Enterprise, Communication, Information

Course	CAO Code	Level	Length of Programme
		<b>Bachelor Degrees – Level 7</b>	
<b>International Business</b>	TA 116	Bachelor Degree of Business – International Business	3 Years
		Follow on Honors Bachelor Degree in Business - International Business	1 Year
		<b>Honours Bachelor Degrees – Level 8</b>	
<b>International Business</b>	TA 125	Honours Bachelor Degree of Business – International Business	4 years



Technology, Teamwork and Problem Solving—all vital for success in today's global business environment.

Most importantly the focus is on you, the student. One of our core Pathways is all about your personal development, creating your core competencies to enable you to flourish in a services innovation based economy. You can choose to study a Language or if you prefer study another exciting business related module instead. The choice is yours.

## What are my Career Opportunities?

The International Business Programme will enable you to navigate new environments, an ability to look at a project or situation from different perspectives, gain an understanding of diverse issues, cultures and the confidence to take calculated risks.

Your combination of business experience, cultural awareness and international knowledge will present a particularly attractive package to employers. You will have the potential to choose from a host of paths, including International / multinational management, diverse roles in SME's, Business corporations, agencies, tourism and trade.

## Work Placements or Industry Projects

The Department prides itself on its strong industry links and its approach to supporting our students in the preparation and securing of employment.

In year three, students have the option of undertaking a placement in an international business. This could include a semester studying in IT Tallaght's partner institutes or completing an international work placement.

Students are encouraged and assisted to gain relevant and practical experience through summer internships with professional services firms and industry.

### Programme key Facts

The programme has been designed to reflect a modern and contemporary approach to business.

- There are 5 core pathways for students that evolve over the course of your degree. These are International Business, Personal Development, Business Practice, IT for Business and Finance & Performance Management.
- In addition, you can choose to specialise your Elective choice in Business modules or in a Language.
- Semester 6 comes with a placement opportunity in an international business setting- giving you the chance to apply your learning and hone your skills
- In year 4, you will study a range of business and industry specific topics and develop essential business skills in business planning, strategy, market management, law and export management.
- The International Business Project Modules allow you to showcase your work, talents and abilities. You will gain knowledge, become creative, innovative and build your executive skills through teamwork and problem solving—all vital for success in today's internationally integrated business environment and economy
- Smaller class sizes coupled with a vibrant team of approachable and engaging lecturers that possess expert and practical industry experience, provides a more personal and engaging classroom dynamic between students and lecturers.
- The Personal Development pathway gives you the opportunity to grow as a person, develop your C.V. and ensures you enter the job market as a capable and confident graduate.

### What Will I Study

This programme offers you the opportunity to develop practical, applicable and contemporary skills in a broad range of subjects such as:

- Business simulation;
- Cross Cultural Management;
- Global Business and Emerging Markets;
- Personal and Professional Development

These modules are designed to develop the core technical skills you will require to navigate modern international and global business roles.

The programme places a strong emphasis on developing your computing skills with a clear IT pathway in all semesters.



## Module Pathways

Year 1: International Business Skill Foundation 5 Pathways & 1 Electives							
5 Pathways & 1 Elective	Core Program Pathway: Finance & Performance Management	Core Program Pathway: IT in Business	Core Program Pathway: Personal Development	Core Program Pathway: International Business	Core Program Pathway: Business Practice	Elective : Management	Elective: Language
Knowledge Foundation Semester 1	Financial Accounting 1 for Business Managers	Data Skills & Information Technology	Critical Skill Development	Business Environment	Principles of Business 1	Principles of Law	French/ Spanish / German / English
Semester 2	Financial Accounting 2 for Business Managers	Data Technology in Organisations	Cross Cultural Management	Europe in a Global Context	Principles of Business 2	Business Law	French/ Spanish / German / English
Year 2: International Business Skill Exploration 5 Pathways & 1 Electives							
Specialisation: Knowledge & Skills Semester 3	Management Accounting 1	Business Processes and IS	HRM	Globalisation in Emerging Markets	International Services	Economics for Business / Marketing	French/ Spanish / German / English
Semester 4	Management Accounting 2	Enterprise Systems & Processes	Talent Development	International Trade & Policy	Managing Digital Opportunity	Company Law	French/ Spanish / German / English
Year 3: International Business Skill Application 5 Pathways & 1 Electives							
Semester 5	Financial Management 1	Web & App Design	Professional Communications & Placement Preparation	Business Simulation	International Selling Strategies	Retail Management	French/ Spanish / German / English
Semester 6	Placement	Placement	Placement	Placement	Placement	Placement	Placement
Year 4: Global Business Executive Development 3 Pathways & 2 Electives							
3 Pathways & 2 Electives	Core Program Pathway: Business Practice	Core Program Pathway: Business Practice	Core Program Pathway: International Business	Core Program Pathway: International Business	Electives	Electives	Electives
Year 4: Knowledge Breadth & Critical Analysis Semester 7	International Business Project 1	International Business Project 1	International Marketing & Export Management	Corporate Social Responsibility	Executive Development Skill	Innovation	French Spanish German English
Semester 8	International Business Project 2	International Business Project 2	International Trade Law	Global Competitive Strategies	Global Supply Chain & Logistics	International Business	French Spanish German English

Student centred classes are designed and delivered:

- By professionally qualified lecturers with extensive industry experience;
- In small class groups, supported with tutorials and online learning tools;
- In a caring environment with approachable and friendly lecturers, supported by a range of institute wide student supports; and
- Over two semesters per academic year enabling you to spread your workload thereby allowing a fairer and more complete assessment of your efforts.

## Graduate Attributes

The following are the anticipated graduate attributes:

- **Business Ready: Highly-skilled, Practical & Capable:** Graduates are practice-oriented, technically competent and numerate, and have the confidence to bring their knowledge to bear on real world problems.
- **Collaborative & Adaptive:** Students learn to interact effectively with people from different disciplines, backgrounds and cultures, through curricular and extra-curricular activities.
- **Articulate & Effective Communicators:** Graduates have the ability to communicate clearly, articulately and effectively. Graduates guide public opinion with a high awareness of international concerns.
- **Critical & Analytical Problem Solvers:** Graduates will have a developed capacity for critical thinking and to bring their knowledge to bear on real world problems. They provide insight into contemporary problems and have the confidence to respond to difficult challenges in a constructive way.
- **Innovative, Creative, Entrepreneurial & Resilient:** Graduates will have a proactive can do attitude. They will have the curiosity and drive to discover, develop, invent and innovate.
- **Ethical & Professionally Responsible:** Graduates will have high ethical standards in their personal, professional and civic domains.

Assessments have a strong practical focus with continuous assessments, designed to alleviate the pressure of final exams and more fairly support different learning styles. Continuous Assessments may take the form of in class tests, individual or group projects, presentations, case studies, quizzes and peer to peer teaching.



Jordan Ryan – is currently studying International Business and looking forward to an interesting and challenging employment placement

## Level 8 Entry Requirement's

Leaving Certificate Examination, which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better.

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Recent minimum Cao points: 210

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Points Range: 210-440

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Recognised in Europe

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Membership of the Professional Body

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Mature Students Welcome

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Mature applicant's (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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A Level 8 Bachelor Of Business in Management degree entitles you to apply for a place on the Professional Master of Education (PME) which is a two year Secondary Teacher Education Qualification offered by all NUI's, Trinity College, DCU, University of Limerick and Hibernia College.

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Graduates who have attained the required honours standard are eligible for postgraduates study in all third level institutions in Ireland and abroad. Popular Masters and postgraduate choices of ITT BBS (Hons) Management graduates are: Strategic Management, Logistics and Supply Chain Management, Human Resources, Social Media, Civic Engagement, Management for the Not for Profit Sector, Health Sector Management.

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## Level 7 Entry Requirement's

Leaving Certificate examination with at least ordinary level Grade O6 or better in 5 subjects. The subject list must include English or Irish. Ordinary level Mathematics Grade O6 or better is also a requirement.

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Recent Minimum CAO points: 191

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Points Range: 191-380

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Recognised in Europe

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Membership of the Professional Body

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Mature students welcome

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Mature applicant's (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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## Advanced Entry

The programme welcomes advanced entry applicants whose previous accredited learning will be considered for advanced entry to level 6, 7 and 8. Specifically, we welcome advanced entry, into year 3 of the level 7 programme.

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## Contact Information

**Christine Nangle**

*Head of Department of Accounting,  
Finance and Professional Studies*

☎ 003531 4042880

✉ [Christine.nangle@it-tallaght.ie](mailto:Christine.nangle@it-tallaght.ie)



Lecturer's Aishling Duhy and Caroline Tansey in Hue College of Economics, Vietnam with the class of Year 2, Bachelor of Business in Management.

# International Hospitality and Tourism Management



**Over the past six decades, tourism has experienced continued expansion and diversification, becoming one of the largest and fastest-growing economic sectors in the world.**

According to *Tourism Towards 2030*, UNWTO's recently updated, long-term outlook and assessment of future tourism trends, the number of international tourist arrivals worldwide is expected to increase by 43 million annually, reaching a total of 1.8 billion arrivals by 2030.

This industry is fast-moving, competitive and truly global in scope. Organizations range from multi-national corporations, through public sector bodies to small individually owned business enterprises.

The BA Degree in International Hospitality & Tourism Management TA 015 and the BA Degree (Hons) in International Hospitality & Tourism Management TA 026 are designed to provide graduates with a unique skill-set to enable them build and pursue successful careers in international hospitality & tourism management. These graduates will be in demand by hospitality companies, transport companies, tour operators, destination and event management companies, state agencies and consulting companies at home and abroad.

Partnership with industry means that students will be exposed to a contemporary and practical curriculum focused on three components of international best practice: operations, communications and management. In semester five, they will undertake a six month professional internship in Ireland, Europe, the UK or the USA.

Students will be able to study French, German, or Spanish thereby maximising the full benefits of their internship and their employability upon graduation. They will also have the opportunity to study contemporary modules in web design and e-business, media planning, procurement, food & drink tourism, corporate social responsibility, entrepreneurship and sustainable tourism policy and planning.

CAO Code TA 026

Course Level: 8

Length of course: 4 years

# International Hospitality and Tourism Management

## Bachelor of Arts (Honours)

The International Hospitality and Tourism Business Degree is designed to create a 'Business Ready' Graduate. Students will be dynamic and resourceful business people who are multi skilled, culturally sensitive and internationally aware. You will study a range of business and cultural topics and develop essential business skills in Tourism, Gastronomy, Innovation, Enterprise, Communication, Information Technology, Teamwork and Problem Solving—all vital for success in today's global tourism environment.

Most importantly the focus is on you, the student. One of our core Pathways is all about your personal development, creating your core competencies to enable you to flourish in a services innovation based economy. You can choose to study a Language or if you prefer study another exciting business related module instead. The choice is yours.

Course	CAO Code	Level	Length of Programme
IHTM	TA 026	<b>Honours Bachelor Degrees – Level 8</b> Honours Bachelor Degree of Business – International Hospitality & Tourism Management	4 Years
IHTM	TA 015	<b>Honours Bachelor Degrees – Level 7</b> Bachelor Degree of Business – International Hospitality & Tourism Management Follow-on Honours Bachelor Degree of Business – International Hospitality & Tourism Management	3 Years 1 Year

### What are my Career Opportunities

The International Tourism and Hospitality Management Programme will enable you to navigate new environments, an ability to look at a project or situation from different perspectives, gain an understanding of diverse issues, cultures and the confidence to take calculated risks.

Your combination of business experience, cultural awareness and international knowledge will present a particularly attractive package to employers.

### Work Placements or Industry Projects

The Department prides itself on its strong industry links and its approach to supporting our students in the preparation and securing of employment. Our graduates have achieved excellent career success and are sought after by a range of employers for their broad practical skills.

In year three, students have the option of undertaking a placement in an international tourism. This could include a semester studying in IT Tallaght's partner institutes or completing an international work placement.



### What Will I Study

This programme offers you the opportunity to develop practical, applicable and contemporary skills in a broad range of subjects such as:

- Hospitality and Tourism Operations
- Business simulation;
- Cross Cultural Management;
- Global Business and Emerging Markets;
- Personal and Professional Development
- Culture and leisure Tourism

These modules are designed to develop the core technical skills you will require to navigate modern international tourism business roles.



## Module Pathways

		Hospitality & Tourism Operations	Hospitality & Tourism Operations	Hospitality & Tourism Operations	Business	Business	Elective	Elective
Year 1	Semester 1	Gastronomy	Kitchen and Restaurant Operations 1	Irish Hospitality and tourism Studies	Critical Skills & Development	Hospitality Information Systems	French/Spanish/German	Tourism and Hospitality Business Environment
	Semester 2	Front Office and Accommodation Operations 1	Kitchen and Restaurant Operations 2	International Hospitality and tourism Studies	Economics 1	Hospitality Information Systems 2	French/Spanish/German	Europe in a Global Context
Year 2	Semester 3	Front Office and Accommodation Operations 2	Wine and Beverage Studies 1	Cultural, Leisure and Shopping Tourism	Economics 2	Financial Accounting 1	French/Spanish/German	International Customer Care 1
	Semester 4	Principles of Hospitality Management	Wine and Beverage Studies 2	Marketing for Hospitality and Tourism	Hospitality and Tourism Law	Financial Accounting 2	French/Spanish/German	International Customer Care 2
Year 3	Semester 5	Placement						
	Semester 6	Sales for Hospitality and Tourism	Managing People in Hospitality and Tourism	Business Sport and Event Tourism	Applied Hospitality and Tourism Research	Management Accounting	Creative Digital Design	
Year 4	Semester 7	Hospitality & Tourism Entrepreneurship	Food and Drink Tourism	International Tourism Policy	Sustainability and CSR in Hospital and Tourism	Online Content Management		
	Semester 8	Hospitality and Tourism Business Planning		Tourism Strategy and Futures	Media Planning for Hospitality and Tourism	The Digital T Student		

Student centred classes are designed and delivered:

- By professionally qualified lecturers with extensive industry experience;
- In small class groups, supported with tutorials and online learning tools;
- In a caring environment with approachable and friendly lecturers, supported by a range of institute wide student supports; and
- Over two semesters per academic year enabling you to spread your workload thereby allowing a fairer and more complete assessment of your efforts.

### Our Graduate Performance speaks for itself:

The following are the anticipated graduate attributes:

- Business Ready: Highly-skilled, Practical & Capable: Graduates are practice-oriented, technically competent and numerate, and have the confidence to bring their knowledge to bear on real world problems.

- Collaborative & Adaptive: Students learn to interact effectively with people from different disciplines, backgrounds and cultures, through curricular and extra-curricular activities.
- Articulate & Effective Communicators: Graduates have the ability to communicate clearly, articulately and effectively. Graduates guide public opinion with a high awareness of international concerns.
- Critical & Analytical Problem Solvers: Graduates will have a developed capacity for critical thinking and to bring their knowledge to bear on real world problems. They provide insight into contemporary problems and have the confidence to respond to difficult challenges in a constructive way.
- Innovative, Creative, Entrepreneurial & Resilient: Graduates will have a proactive can do attitude. They will have the curiosity and drive to discover, develop, invent and innovate.

Assessments have a strong practical focus with continuous assessments, designed to alleviate the pressure of final exams and more fairly support different learning styles. Continuous Assessments may take the form of in class tests, individual or group projects, presentations, case studies, quizzes and peer to peer teaching.



CAO Code: TA 015

Course Level: 7

Length of course: 3 years

Follow-on Degrees:

Honours Bachelor Degree (1 year)

# International Hospitality and Tourism Management

## Bachelor of Arts Level 7 degree

This is a 3 year programme delivered over 6 semesters. Candidates who complete the level 7 programme are eligible to complete the level 8 honours degree in one further academic year of study

### Module Pathways

		Hospitality & Tourism Operations	Hospitality & Tourism Operations	Hospitality & Tourism Operations	Business	Business		Elective	Elective
Year 1	Semester 1	Gastronomy	Kitchen & Restaurant Operations 1	International Hospitality & Tourism Studies 1	Learning to Learn	Information Technology 1		French/Spanish / German	European Studies
	Semester 2	Front Office & Accommodation Operations 1	Front Office & Accommodation Operations 2	International Hospitality & Tourism Studies 2	Economics 1	Information Technology 2		French/Spanish / German	Active Citizenship
Year 2	Semester 3	Front Office & Accommodation Operations 2	Wine & Beverage Studies 1	Cultural & Leisure Tourism	Economics 2	Financial Accounting 1		French/Spanish / German	International Customer Care 1
	Semester 4	Principles of Hospitality Management	Wine & Beverage Studies 2	Marketing for Hospitality & Tourism	Hospitality & Tourism Law	Financial Accounting 2		French/Spanish / German	International Customer Care 2
Year 3	Semester 5	Placement	Placement	Placement	Placement	Placement	Placement		
	Semester 6	Sales for Hospitality & Tourism	Applied Hospitality & Tourism Research	Business & Event Tourism	Managing People in Hospitality & Tourism	Management Accounting	Facilities Management for Hospitality & Tourism		

### Level 7 Entry Requirements

Leaving Certificate examination with at least Grade 06 or better in five subjects. The subject list must include either English or Irish. Ordinary level Mathematics Grade 06 or better is also a requirement.

Recent minimum CAO Points: 155

Points Range 155-440

Recognised in Europe

Mature Students Welcome

Mature applicants, EU nationals aged 23 on or before January in the year of entry.

### Level 8 Entry Requirements

Leaving Certificate examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade 06 or better

Recent minimum CAO Points: 200

Points Range 200-420

Recognised in Europe

Mature Students Welcome

Mature applicants, EU nationals aged 23 on or before January in the year of entry.

### Advanced Entry

The programme welcomes advanced entry applicants whose previous accredited learning will be considered for advanced entry to level 7 and 8. Specifically, we welcome advanced entry, into year 3 of the level 7 programme.

Level 6 TA 006

Higher Certificate in Culinary Arts

Add on Degrees: Level 7 Bachelor of Arts in Culinary Arts

Level 7 – Refer to ITT website for code

Bachelor of Arts in Culinary Arts

Add on Degrees: Level 8 Honours Bachelor of Arts in Culinary Arts

Level 8 – Refer to ITT website for CAO code Honours Bachelor of Arts in Culinary Arts

# Culinary Arts

The aim of the Culinary Arts programme is to provide learners with the knowledge, skills and competence necessary for a career in the culinary arts sector, and to establish a base for further professional career development. This is achieved by providing the learners with essential practical skills and academic knowledge required of modern day professionals working in kitchen environments.

There is an industry placement required of 16 weeks (400 hours approx.) during and/or following Year 1 but prior to commencement of Year 2.

## Higher Certificate in Culinary Arts (2 Year Programme)

The Higher Certificate in Arts (Culinary Arts) is the current foundation for all students aspiring to have a culinary career.

The course will qualify students to find employment as a 3rd year commis chef in hotels, restaurants, licenced trade, cruise ships, industrial catering and other food related businesses.

## Bachelor of Arts in Culinary Arts Level 7 (3 Year Programme or 1 Year Add on)

The Level 7 was designed to provide students with the knowledge, skills and competencies to be effective team leaders and production specialists at an operational and technical level in the workplace. The programme provides a rigorous technical and artistic education and training in the culinary arts and is designed as an add-on to the Higher Certificate in Arts- Culinary Arts. The programme is currently delivered in full time and part-time day-release modes, allowing for progression from craft to advanced craft

## Bachelor of Arts Honours in Culinary Arts Level 8 (4 Year Programme or 1 Year Add on)

The BA (Honours) in Botanical Cuisine, builds on the wide breadth of knowledge skills and competence gained by graduates from a Level 7 culinary arts degree; in culinary skills, applied food science, product development, gastronomy and leadership. It emphasises horticulture theory and practice, culinary nutrition related to food, health and food production, along with project management theories. It will enable participants to develop through structured hands-on learning; a professional and technical competency in growing their own food for restaurant kitchens with a specialism in plant-based cuisine.



Level 6 Higher Certificate in Culinary Arts	Year 1 Culinary Skills Foundation						
	Semester 1	Culinary Skills	Culinary Operations	Bread & Pastry Techniques	Food Safety & Culinary Science	Restaurant Service	Critical Skills Development
	Semester 2	Culinary Skills	Culinary Operations	Bread & Pastry Techniques	Nutrition	The Mindful Kitchen	Applied Culinary Information Technology
	Work based learning will take place one day per week in each semester and 2 months over June and July						
	Year 2 Culinary Application						
Semester 3	Culinary Events	Global Cuisine	Applied Culinary Science & Food Safety	Food & Beverage Cost Control	Integrated IT within Applied Culinary Science and Food Safety		
Semester 4	Culinary Events	Classical & Contemporary Cuisine	Culinary Nutrition	Gastronomy	Integrated IT within Culinary Nutrition Module		
Level 7 Bachelor of Arts in Culinary Arts	Year 3 Culinary Specialism						
	Semester 5	Creative Cuisine	Food Product Development	Advanced Food Science & Technology	Culinary Management & Training	Gastronomy	Synoptic Study
	Semester 6	Creative Deserts & Pastry (OR) Artisan Breads	Food Product Development	Advanced Food Science & Technology	Culinary Management & Training	Food Media Design	Work Based Learning
Level 8 Bachelor of Arts (Honours) in Culinary Arts	Year 4 Botanical Cuisine						
	Semester 7	Farm to Kitchen Internship	Edible Gardening				
	Semester 8	Culinary Events Project Management	Edible Gardening	Botanical Cuisine	Applied Culinary Nutrition		

## Level 6 (2 Years) & 7 (3 Years) Entry Requirements

Leaving Certificate examination with at least Grade O6 or better in five subjects. The subject list must include either English or Irish.

**OR** A pass grade in any FETAC level 5 or 6

**OR** An equivalent qualification

Recognised in Europe

Mature Students Welcome

Mature applicants, EU nationals aged 23 on or before January in the year of entry.

Points Range 195 – 440

Recent Minimum CAO Points - 195

## Level 7 Add on

It is a requirement that students on programme have achieved a National Certificate in professional Cookery, FETAC award (Level 6) or equivalent.

## Level 8 Entry Requirements

Leaving Certificate examination with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6. Subjects must include English or Irish.

**OR** A pass grade in any FETAC level 5 or 6

**OR** An equivalent qualification

Recognised in Europe

Mature Students Welcome

Mature applicants, EU nationals aged 23 on or before January in the year of entry.

Points Range 195 – 440

Recent Minimum CAO Points – New Offering

# Marketing and Business Computing



Course	CAO Code	Level	Length of Programme
		<b>Bachelor Degrees – Level 7</b>	
<b>Marketing</b>	TA 114	Bachelor Degree of Business – Marketing	3 Years
		Follow-on Honours Bachelor Degree of Business – Marketing	1 Year
<b>Advertising and Marketing Communications</b>	TA 014	Bachelor Degree of Arts – Advertising and Marketing Communications	3 Years
		Follow-on Honours Bachelor Degree of Arts – Advertising and Marketing Communications	1 Year
<b>Digital Marketing</b>	TA 117	Bachelor of Arts – Digital Marketing	3 Years
		Follow-on Honours Bachelor Degree – Marketing Management	1 Year
		<b>Honours Bachelor Degrees – Level 8</b>	
<b>Marketing Management</b>	TA 123	Honours Bachelor of Business – Marketing Management	4 years
<b>Advertising and Marketing Communications</b>	TA 023	Honours Bachelor of Arts – Advertising and Marketing Communications	4 Years
<b>Creative Digital Media</b>	TA 022	Bachelor of Arts Honours – Creative Digital Media	4 years

# Department of Marketing and Business Computing

**If you study Marketing, Advertising or Digital in ITT, you will be supported all along the way by a team of professional and experienced academics. Our lecturers combine academic, industry and practical skills in their teaching and engagement with students, who bring vast amounts of experience from industry and international links.**

## **#LearnMór**

Our #LearnMór concept is simple. Choose any of our courses in Marketing, Advertising or Digital and we'll help you to #LearnMór – that is think big, learn more, be confident in your qualification, develop future-relevant skills, and take the first or next steps on a digitally-focussed, internationally-oriented career path.

After all, Dublin has become an important international tech hubs, and Ireland, as a small open economy, must anticipate and respond to the changing employment needs of industries across all sectors. So let us help you position yourself to make the most of the opportunities in Dublin, elsewhere in Europe and around the world by welcoming you onto one of our programmes.

We think outside the box and utilise an excellent pool of talented professionals who deliver dynamic, modern and career-relevant topics over a range of subject areas to develop a future-focussed marketing professional.

Our specific courses in Marketing Management, Advertising and Marketing Communications, and Digital Marketing are tailored to the unique needs of each of these individual sectors. However, no matter which one you choose, we think about the big picture to ensure that all of our

graduates are presented with the most up-to-date knowledge and have the opportunities to develop a well-rounded education. And so we encourage you to #LearnMór in preparation for the key skills needed when you walk out the door and become our ambassadors.

And we go the extra mile to support you along the way, with smaller class sizes, unrivalled technology access and real-life industry practitioners and academics delivering some of the most modern programmes available anywhere. So come on - #LearnMór at IT Tallaght.

## **Bio**

The Department of Marketing and Business Computing is a leading provider of courses in Marketing Management, Advertising and Marketing Communications, and Digital Marketing, offering courses at Higher Certificate, Ordinary Degree and Honours Degree level. It also offers a Higher Diploma in Business in Marketing, as well as a BSc in Data Analytics with Digital Marketing, and research Masters.

BRAND NEW for 2018, the Department will offer a new Level 7 Bachelor of Arts (Ordinary Degree) in Digital Marketing, which is particularly relevant to the needs of Ireland's fast-expanding technology sector, where ICT employers are growing their business operations.

The Department plans to continue to develop its links with this sector across

all programmes of study, as well as Irish and global business enterprise to create industry-ready, career-focussed graduates that are highly-skilled in the needs of the modern digital enterprise.

### It's all about the people

If you study Marketing, Advertising or Digital in ITT, you will be supported all along the way by an excellent team of professional academics, who bring vast amounts of experience from industry and international links.

In addition to our team of lecturers, students on all our courses will interact with industry practitioners through guest lectures, webinars, projects and online workshops.

We're confident that we have the right mix of highly-respected academics and experienced practitioners who jointly deliver classes and support projects on all of our programmes.

## Marketing Management

- Industry focussed, business graduate, ready for the dynamic Marketing sector
- Excellent modern and traditional marketing skills from a highly-skilled team of lecturers.
- Several business and management elements (Law, HR, Accounting) to support core marketing skills.
- Practical modules and industry experience throughout.
- International dimension as core element of delivery, as well as language option and option to study a semester abroad.

## Advertising and Marketing Communications

- Facilitators of Creative Talent Development.
- Engaging and highly practical content and delivery.
- Industry collaboration, portfolio development and agency collaboration.
- Professional marketing communications and core business development.
- Unrivalled team of professional practitioners and academics.
- State-of-the-art equipment, software and electronic resources.
- Interactive marketing skills development to meet industry needs.



## Digital Marketing

- Brand new for this year, responding to current skills needs of Dublin and global tech sector.
- Close links with technology hubs and Digital Docklands.
- Developing core Marketing and Applied Digital Skills.
- Hybrid of digital/IT skills with international marketing and communications.
- Social Media. Data Analytics. IT. Design. Business.
- International core pillar throughout course, and optional language and semester abroad as an option.
- Applied education and practical skills development - Work placement or major industry project.
- Core module – Marketing Technology Landscape – to prepare graduates for changing trends in digital transformation of all organisations.

# Marketing

**Marketing is an essential business activity for profit and non-profit organisations worldwide. The Marketing programmes in IT Tallaght give you a wide range of Marketing expertise encompassing Consumer Behaviour, Brand Management, Marketing Research, Event Management, Marketing Communications, Digital Marketing, Global Marketing and Entrepreneurship.**

The programmes prepare you for rewarding career options in business, public sector and the non-profit sectors. At IT Tallaght you will get more than just a classroom education; throughout the programme you will be assigned projects that require you to use practical skills and tackle key marketing issues.

The faculty in the Department includes leaders on Branding, Consumer Behaviour, Entrepreneurship, Market Research, Digital Marketing, Marketing Communications, and International Marketing. Our faculty members also cover a wide variety of core Marketing topics:

- Marketing Communications
- Brand Management
- Digital Marketing & Social Media
- Data Analytics
- Marketing Strategy
- Selling & Sales Management
- Public Relations
- Event Management
- Retail Management
- Service Marketing
- Global Business
- Creativity and Design
- Innovation and Entrepreneurship

## The needs of customers

Meeting the needs of customers is critical to the success and survival of all businesses in competitive environments. Many students find marketing to be a desirable and exciting career because the nature of the job is so dynamic. New competitors, new products and services, new markets and changing customer wants and

expectations require the marketer to have the knowledge and skills to adapt to this ever-changing business world. In IT Tallaght you gain the knowledge and develop the skills to play a critical part on a marketing team.

## Our Marketing Courses

We offer a Bachelor Degree (Ordinary) in Marketing and a four year Honours Degree in Marketing Management. Students on the Higher Certificate (two years) and Ordinary Degree (three years) courses have the opportunity to complete an Honours Degree in Marketing Management in four years providing they successfully complete the first three years of the programme.

Each award prepares you for a career in marketing, whether in a small business, a not-for-profit organisation or a large international firm. As you gain each award your employment opportunities expand and the responsibilities you are capable of undertaking are increased. Career paths include services marketing, marketing research, digital marketing, advertising, promotion, event management, brand management, customer service, retail and category management, personal selling and starting your own enterprise.

### Programme Leader:

Dr. Donal Rogan

✉ [Donal.Rogan@it-tallaght.ie](mailto:Donal.Rogan@it-tallaght.ie)

CAO Code TA114

Level 7

3 Years

Follow-on Degrees: Honours Bachelor Degree – (1 year)

# Marketing

## Bachelor Degree of Business

Students who complete this programme and achieve this award are prepared to gain positions of responsibility in marketing. Students are well prepared for a role on a marketing team, whether in a small firm, a large corporation or a not-for-profit organisation. The modules introduce students to the study of consumer behaviour, marketing research, marketing communications, financial management, international marketing, digital marketing and web design. As part of the Events management module, for example, student will organise an event on campus and raise money for a charity of choice.

Student's communication and teamwork skills are also fostered and real issues from the world of marketing are addressed and studied. Students may elect to study abroad for one semester with an ERASMUS partner institution in Europe. Students who successfully complete the Bachelor in Business Studies degree may opt to spend an additional year and complete the Honours degree in Business Studies (Marketing) and will study modules including marketing strategy and planning, brand management, enterprise development and corporate strategy and governance. Students may elect to take a European language (French, German or Spanish), subject to sufficient demand.

### Career Opportunities

Opportunities exist across a range of industries and services. Graduates wishing to pursue a career in teaching at second level will have to complete the Honour's Bachelor Degree, and may be eligible to teach Business, subject to meeting the requirements of the Teaching Council.

### What will I study?

**Year 1** Introduction to Marketing, Critical Skills Development, Financial Accounting, Business Mathematics, Introduction to IT, Apps and Social Media, Economics 1, Business IT and Introduction to Data Analysis, Trends in Cultures & Societies, Principles of Management (Elective), Contemporary Business (Elective), Business Language (Elective).

**Year 2** International Marketing Applications, Behavioural Studies, Economics 2, Database Systems, Principles of Law, Marketing & Business Development, Information Analysis for Decision Making, Marketing Finance, Research Methods, Marketing Law, Personal Finance (Elective), PR & Media Relations (Elective), Human Resource Management (Elective), Business Language (Elective).

**Year 3** Consumer Behaviour, Global Business, Applied Global Digital Marketing, Event Management/IMC1, Marketing Channel Management, Services & Business Marketing, Marketing Across Cultures, Quantitative Methods for Marketing, Web/App Design & Optimisation, Event Management/IMC2, The Consumer in the Socio-Cultural Setting, Retailing and Category Management (Elective), Sales Management (Elective), Business Language (Elective), (Optional study abroad).

### Leaving Cert Requirements

Minimum No. Of		Minimum Grade In:	
Subjects	Honours	Maths	English or Irish
5		06	06

Recent minimum CAO points: 175

Points Range 175 – 420

Recognised in Europe

Membership of the Professional Body - Students who successfully complete the Bachelor in Business Studies (Honours) in Marketing Management are eligible to apply to the Marketing Institute of Ireland to undertake its membership examination. On successfully completing this exam, the graduate will receive the award MII (Grad.).

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Postgraduate level

CAO Code TA123

Level 8

4 Years

# Marketing Management

## Honours Bachelor Degree of Business

### Leaving Cert Requirements

Minimum No. Of		Minimum Grade In:	
Subjects	Honours	Maths	English or Irish
6	2H5's	06	06

Recent minimum CAO points: 225

Points Range 225 – 360

Recognised in Europe

Membership of the Professional Body

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Postgraduate level

### Career Opportunities

Opportunities exist across a range of industries and services.

### What will I study?

- Year 1** Introduction to Marketing, Critical Skills Development, Financial Accounting, Business Mathematics, Introduction to Information technologies and Applications, Economics 1, Business IT and Introduction to Data Analysis, Trends in Cultures & Societies, Principles of Management (Elective), Contemporary Business (Elective), Business Language (Elective).
- Year 2** International Marketing Applications, Behavioural Studies, Economics 2, Database Systems, Principles of Law, Marketing & Business Development, Information Analysis for Decision Making, Marketing Finance, Research Methods, Marketing Law, Personal Finance (Elective), PR & Media Relations (Elective), Human Resource Management (Elective), Business Language (Elective).
- Year 3** Consumer Behaviour, Global Business, Applied Global Digital Marketing, Event Management/IMC1, Marketing Channel Management, Services & Business Marketing, Marketing Across Cultures, Quantitative Methods for Marketing, Web/App Design & Optimisation, Event Management/IMC2, The Consumer in the Socio-Cultural Setting, Retailing and Category Management (Elective), Sales Management (Elective), Business Language (Elective), (Optional study abroad).
- Year 4** Marketing Management, Creativity & Innovation, Corporate Finance, Qualitative Research Methods, Corporate Strategy and Governance, Marketing Strategy, Business Policy, Marketing Practice, Strategic Business Analytics, Business Ethics, Enterprise Development, Contemporary Issues in Marketing (Elective), Brand Management (Elective), Management Science (Elective), Business Language (Elective).

# Advertising and Marketing Communications

**The Bachelor of Arts in Advertising Marketing Communications is a course that is designed for students who intend to pursue a professional career in Marketing Communications.**

The course has been developed with the aid of industry practitioners, so when you graduate you will have a wide variety of skills and knowledge to perform in a number of different areas, such as:

- Advertising
- Public Relations
- Event Management
- Digital Marketing
- Sponsorship
- Media
- Direct Marketing and Customer
- Relationship Management
- Sales promotions
- Brand Management
- Creativity and Innovation

To be successful in Marketing Communications, you will be required to have a wide variety of specific skills, so the course has been designed to equip you with the ability to exercise your creativity in areas such as creating advertisements, organising and running events, integrating various Marketing Communications elements into a campaign, creating radio and video ads, crafting a digital marketing strategy, using graphic design tools such as Photoshop and illustrator, working in teams and developing highly developed and sophisticated communications skills.

## Examples of what our graduates are doing:

- Performing as part of the team that designs successful advertising and promotion campaigns for clients.
- Are involved in organising sporting, musical and cultural events.
- Advising companies as to how they can get the most out of their Public Relations activities.
- Designing digital marketing and social media campaigns for communicating with new and existing customers.
- Devising sales promotions and loyalty programmes that help launch new products or help boost the sales of brands in competitive markets.
- Working in a public or private sector organisation and are responsible for their advertising and marketing communications activities.
- Doing Masters Degrees in various related fields

## BA (Honours) Programme structure and content

The BA (Honours) in Advertising and Marketing Communications is an Honours Degree (NFQ level 8). The content has been designed after in-depth consultation with industry leaders and academic advisors in Ireland, the United Kingdom, the European Union and North America.

### Year one

You will become acquainted with the Advertising, Event Management and PR industries and will be introduced to Marketing and Digital Marketing with social media. You will begin with the fundamentals of analysing Media, and explore the mind of the consumer in Behavioural Studies. Your communication skills will be developed so that you can make presentations and write effectively.

### Year two

You will examine more detailed Marketing Applications. You will learn about the dynamic media industry and how to build effective relationships with the various players. Your IT and data analysis skills will be further developed and you will learn design theory and skills (such as Photoshop) that will enable you to develop effective promotional material.

### Year three

You will organise an event and fundraise for charity.

You will make radio and TV advertisements.

You will learn the principles and practices of graphic design.

You will learn how to build a website, and link it to various social media.

You will learn to optimise the website and apply analytics. A practical client-based project enhances student learning.

You have the option of completing a semester abroad with one of our ERASMUS partner institutions in Europe. (Taught in English)

### **Year four (Advertising Portfolio & Work Placement)**

Your final year culminates in the Advertising Portfolio module. It takes place in a simulated agency setting, AdLab that is equipped with industry-standard equipment. You will work in a team and take a brief from a client organisation. You will design a fully integrated campaign and present your solutions to the client and a panel of lecturers and industry practitioners. This module provides you with excellent networking opportunities, and you will have a portfolio of work to show potential employers. All of the modules taught in year four will help you create your advertising and marketing communications campaign. Your year's work will be presented at the Advertising Showcase at the end of the academic year. You also have the opportunity to participate in a work placement during the month of January in an agency or on the client side.

#### **Programme Leader:**

Ms Trish Medcalf

✉ Patricia.Medcalf@it-tallaght.ie

### **Student quotes on Advertising industry Guest Lecturers:**

*"I found the seminar was remarkably interesting as it told me a lot of valuable information about an industry which interests me."*

*"This seminar has inspired me to take a design course during the summer in preparation for the future."*

*"The seminar also revealed to me how all our classes come together. It showed me how Behavioural Studies, Statistics, Advertising Studies and Digital Marketing all come into that industry. It is important to have knowledge on many different subjects to be able to be the best in the industry and to differentiate yourself."*

### **Student quotes on the MacLab**

*"I also realised how much the college has invested in our course by having a lab for just advertising students with Mac computers, and radio and TV equipment."*

### **On the benefits of working in groups**

*"I learned that for a team to work and be successful, you have to be a good listener and take on board everyone's ideas."*

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**Check out some of the Advertising students' work on: [www.youtube.com/user/ITTADS](http://www.youtube.com/user/ITTADS)**

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# Advertising and Marketing Communications

## Ordinary Bachelor Degree of Arts

### Career Opportunities

Opportunities exist in a Marketing position across a range of industries and Marketing Communications agencies. Graduates wishing to pursue a career in teaching at second level may be eligible to teach Business, subject to meeting the requirements of the Teaching Council.

### What will I study?

- Year 1** Introduction to Marketing, Introduction to Advertising, Critical Skills Development, Introduction to IT, Apps and Social Media, Analysing the Media. EU Studies Behavioural Studies, The Marketing Communications, Industry, Trends in Cultures & Society, Business Information Systems, Introduction to Statistics, Mass Communications.
- Year 2** Marketing Applications, Media Options, Principles of Law, Database Systems, Culture and Identity, Design Studies, PR & Media Relations, Research Methods, Advertising Law, Data Warehousing & Business Intelligence, Fundamentals of Financial & Management Accounting, Graphic Design.
- Year 3** Event Management/IMC 1, Global Business, Interactive Marketing, The Consumer as an Individual, Quantitative Methods for Marketing, Media Production 1, The Consumer in the Socio-Cultural Setting, Event Management/IMC 2, Qualitative Research Methods, Web/App Design and Optimisation, Marketing Across Cultures, Media Production 2, (ERASMUS: Optional semester abroad) Management Science (Elective) Business Language (Elective).



CAO Code TA014

Level 7

3 Years

Follow-on Degrees: Honours Bachelor Degree of Arts – (1 year)

### Leaving Cert Requirements

Minimum No. Of		Minimum Grade In:	
Subjects	Honours	Maths	English or Irish
5 (#including portfolio)		06	06

Recent minimum CAO points: 610 (including portfolio) A Portfolio of work must be submitted directly to the Institute

Points Range #610 – (including portfolio) Recognised in Europe

Membership of the Professional Body

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Postgraduate level

CAO Code TA023

Level 8

4 Years

# Advertising and Marketing Communications

## Honours Bachelor Degree of Arts

### Leaving Cert Requirements

Minimum No. Of		Minimum Grade In:	
Subjects	Honours	Maths	English or Irish
6	2 H5's	06	06

Recent minimum CAO points: 235

Points Range 235 – 410

Recognised in Europe

Membership of the Professional Body

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Postgraduate level

### Career Opportunities

Opportunities exist in a Marketing position across a range of industries and Marketing Communications agencies. Graduates wishing to pursue a career in teaching at second level may be eligible to teach Business, subject to meeting the requirements of the Teaching Council.

### What will I study?

- Year 1** Introduction to Marketing, Introduction to Advertising, Critical Skills Development, Introduction to IT, Apps and Social Media, Analysing the Media EU Studies Behavioural Studies, The Marketing Communications, Industry, Trends in Cultures & Society, Business Information Systems, Introduction to Statistics, Mass Communications.
- Year 2** Marketing Applications, Media Options, Principles of Law, Database Systems, Culture and Identity, Design Studies, PR & Media Relations, Research Methods, Advertising Law, Data Warehousing & Business Intelligence, Fundamentals of Financial & Management Accounting, Graphic Design.
- Year 3** Event Management/IMC 1, Global Business, Interactive Marketing, The Consumer as an Individual, Quantitative Methods for Marketing, Media Production 1, The Consumer in the Socio-Cultural Setting, Event Management/IMC 2, Qualitative Research Methods, Web/App Design and Optimisation, Marketing Across Cultures, Media Production 2, (ERASMUS: Optional semester abroad) Management Science (Elective) Business Language (Elective).
- Year 4** Advertising Portfolio Design 1, Marketing Management, Interactive Campaign Analysis & Modelling, Communications Planning & Strategy, Innovation, Advertising Portfolio Design 2, Brand Management, Business Ethics, Small Business Management and Entrepreneurship, Financial Management, (Optional Work Placement).



# Digital Marketing

## Bachelor of Arts

A brand new, employment-focussed degree, particularly relevant to the needs of Ireland's fast-expanding technology sector, where ICT employers are growing their business operations.

The Department plans to continue to develop its links with this sector, as well as Irish and global business enterprise to create industry-ready, career-focussed graduates that are highly-skilled in the needs of the modern digital enterprise.

ITT is proud to introduce you to our brand new, industry-focussed and dynamic BA in Digital Marketing, launching in September 2018. This is Ireland's newest degree in Digital Marketing, and therefore is right up to date, relevant and answers the key needs of Dublin's vibrant tech community.

We've listened to the needs of employers and students alike, and created a unique degree that is delivered in a flexible and dynamic mode at our state of the art campus in Tallaght with content that is directly relevant to the Dublin and global tech sector.

Feedback from employers in the Digital Docklands and elsewhere informed us on what subjects and specific topics to include, from core Applied Digital Marketing concepts to Graphic Design to create the perfect content, as well as up-to-the-minute trends in the Marketing Technology Landscape and traditional business and marketing approaches (including elements of Marketing Law, HR, Accounting and Management) – all of this packaged together into a high-quality Level 7 BA Degree which can be put directly into practice to enhance organisational success and improve customer engagement.

We are confident that this internationally-focussed Degree offers the best skills set to prepare the digitally-focussed student for a career in the Digital sector, or a fast-track progression through the sector.

### What will I study?

#### Year 1

Introduction to Digital Marketing, Introduction to IT, Apps and Social Media, Behavioural Studies, Critical Skills Development, Introduction to Marketing, French/Spanish/ German, Marketing Technology Landscape, Business IT & Intro to Data Analysis, Statistics, Trends in Cultures & Societies, The Marketing Communications Industry, as well as ONE of the following electives per semester: French/Spanish/ German, Analysing the Media, Culture and Identity, Introduction to Advertising, Media Communications, Principles of Management, Active Citizenship.

#### Year 2

Graphic Design, Database Systems, Behavioural Economics, International Marketing Applications, Marketing/Advertising Law, Data Warehousing & Business Intelligence, Information Analysis for Decision Making, Fundamentals of Financial & Management Accounting, Research Methods, Marketing & Business Development, as well as ONE of the following electives per semester: French/Spanish/ German, Media Options, Human Resource Management, French/Spanish/ German, PR & Media Relations, Personal Finance.

#### Year 3

Applied Global/ Digital Marketing, Data Analytics & Visualisation, Project Management, Consumer Behaviour, Marketing Channel Management, Applied Industry Project / Placement, Web/ App Design and Optimisation, Quantitative Methods for Marketing and Advertising, Social Media Marketing & Global PR, as well as ONE of the following electives per semester: French/Spanish/ German, Event Management/ IMC 1 and 2, Services and Business Marketing, Sales Management.

CAO Code TA117

Level 7

3 Years

Follow-on Degrees offered - Honours  
Bachelor Degree in Marketing  
Management – (1 year)

#### Leaving Cert Requirements

Minimum No. Of		Minimum Grade In:	
Subjects	Honours	Maths	English or Irish
5		06	06

Recent minimum CAO points: 180-250 (estimate)

Recognised in Europe

Membership of the Professional Body

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at

Postgraduate level

# Creative Digital Media

The Creative Digital Media Degree is a recognised leader in its field, having established a strong reputation within the creative/media industry for providing graduates with the professional skills relevant to current and future job markets. Graduates from the programme have the kind of technological and creative flexibility much sought after within the digital media industry.



## What Our Graduates Say About Us.

It was only when I went out into the workforce that I really felt the benefit of the broad set of skills I had learned as part of CDM. Having trained in video shooting, editing, audio recording and editing, along with a whole host of other skillsets, it meant that I could confidently walk into a job interview knowing that I had the experience and the know how to make me a highly versatile candidate for any potential employer. Since I've left college, it's still something that stands to me to this day, and my broad range of skills is something a number of people in my job have commented on very positively.

I now work for RTÉ Radio doing a whole host of different things. Day to day I work as a Studio Co-Ordinator for our digital Alternative Music Station RTÉ 2XM. My job entails things like evaluating and selecting music for our playlists, coordinating content from producers in Ireland and around the world to ensure it's delivered on time and loaded in to our systems in time for broadcast, and in general ensuring that our station remains on air.

As part of my work in RTÉ Radio I also work closely with RTÉ 2FM on air. I'm a regular contributor to The Nicky Byrne Show with Jenny Greene, and I also work as a standby/cover presenter throughout the year. CDM was very helpful in getting me to this point in my career in that it gave me a really great array of practical skills. Having such a broad practical skillset has given me a great advantage over other in what is a very competitive workplace. There have been a number of occasions over the past 4 years when I've been sent on weekends away with work and been able to do what traditionally would have been the work of 3 people. This versatility is highly practical for many employers. I have also maintained contact with some former lecturers who have always been very obliging to offer support and advice on anything I might come to them with. I also feel it's important to mention the experience and skills I learned as part of the IT Tallaght Radio Society. Both on air and off air on ITT FM, I learned invaluable lessons that are still a big part of what I do today

**Carl Mullan**



I cannot speak highly enough about my time in IT Tallaght. I studied Creative Digital Media for four years and it was the perfect mix of practice and theory. We were given the opportunity to express ourselves creatively through various projects in Interactive Design, Multimedia, Video and Professional Photography. We also studied many theory subjects including marketing, digital marketing, film studies, cultural studies and enterprise development. Before I went to ITT I didn't really know what I wanted to do and it was perfect because the course allowed you to explore loads of different options. From directing your own film, designing your own website, creating your own CGI effects project, curating your own photography exhibition to pitching mock presentations for clients, it has all been one exciting journey of self-exploration.

I am currently working for Google Dublin as an Associate Account Strategist. I provide small and medium businesses with a digital marketing strategy to help improve their return on investments. CDM has got me to where I am today. ITT encourages you to think outside the box and that is something that you can carry forward into the future and apply it to any type of business model or company you decide to work for.

**Aisling Durcan**

CAO Code TA022

Level 8

4 Years

# Creative Digital Media

## Honours Bachelor Degree of Arts

As a Creative Media student at ITT Dublin, you'll be thinking, designing and creating from your first days in the door. The course attracts ambitious, talented people who want a practical, hands-on education that prepares them for careers in the media and cultural sectors. An exciting range of practice-based modules allows students to specialise as they move through the programme. You'll also be studying and discussing the role of the media in society keeping an eye to emerging 21st century social and technological trends. Our practical modules and specialist workshops are in the areas of digital content creation across television, video and film, multimedia, photography, radio and sound production.

You'll cover all these subjects in the first two years and as you develop your understanding of the technologies, their storytelling potential and your industry interests, you get to choose which path you want to follow. Project work throughout the programme includes the production of short dramas, documentaries and music videos, as well as 2D and 3D animations, motion design, website design and photographic portfolios. Our programme also introduces students to emerging media practices such as interactive video and Augmented and Virtual Reality ensuring our graduates are familiar with the very latest media and storytelling technologies. Frequently you'll be working for real world clients so the expectations are high and the deadlines are real. You can see examples of student work on the website which third year students create: [www.creativemediadegree.ie](http://www.creativemediadegree.ie).

### Career Opportunities

Our graduates have gone on to work throughout regional, national and international media and cultural industries including RTE, TV3, BBC, TG4, Google, Facebook, Windmill Lane, Ardmore Studios, Getty Images and the Gallery of Photography. Our past students have worked on major productions such as Room, Game of Thrones, Rebellion, Vikings, Ripper Street, 28 Days Later and many more. Increasingly, graduates with broad-ranging media skills are now being employed in non-traditional areas, in companies such as SAP (Enterprise Software Solutions) and Eircom. Graduates have gone on to complete postgraduate studies in related disciplines such as Documentary Photography, Journalism, Interactive Digital Media and Art in the Digital World.



### Leaving Cert Requirements

Minimum No. Of		Minimum Grade In:	
Subjects	Honours	Maths	English or Irish
6	2 H5's	06	06

Recent minimum CAO points: 235

Points Range 235 to 440

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.



I am currently an Assistant Director in the Film and Television Industry. I've worked on a variety of productions filmed in Ireland; from commercials for "O2" and "Cadbury's" to feature films like the award winning "Brooklyn" and high budget TV shows like "Penny Dreadful" and "Vikings". I'm currently working on Season 5 of Vikings as an Assistant Extras Co-Ordinator, I've been on the show from Season 1. "Vikings" is entirely filmed at Ashford Studios and around the beautiful surrounding landscapes in county Wicklow. I was also the Extras Co-Ordinator on Jim Sheridan's Feature; *The Secret Scripture* based on the book by Sebastian Barry's Novel of the same name.

I have nothing but fond memories from my four years of the Bachelor of Arts Honours in Creative Digital Media, to study so many areas of the media, film and television industry was invaluable. The fact that a lot of your college projects integrate the knowledge and skills you gain from a variety of different classes that you study over the years is very helpful.

Lecturers are highly knowledgeable in their respective fields, they are very easy to approach, they have that perfect balance of being helpful towards your assignments but also giving you the freedom to let your own creativity shine. For anyone who is not a 100% sure in what field they wish to get into within the media industry the CDM Degree course is the ideal choice.

**Daniel Lloyd**



## What will I study?

- Year 1** Critical Skills Development, Graphic Arts 1, Media Studies, TV Studio Production 1, Introduction to Media Writing, Creative Photography, Film Style and Genre, Graphic Arts 2, Media and Society, TV Studio Production 2, Radio Production, Media Technologies 1 (Elective), Language (Elective)
- Year 2** Screenwriting 1, Location Production Techniques, Motion Graphics, Cultural Studies, Digital Imaging for Photographers, Media Technologies 2, Screenwriting 2, Media Politics, 2D Animation, Location Video Production, Audio Design & Productions, Media Technologies 3, Language (Elective)
- Year 3** Applied Media Law, Media Entrepreneurship, Motion Design and Special Effects, Screen Studies, Video Drama Production (studio/location), Advanced Radio Production, Studio Photography, Emerging Media Practice, Storytelling, Interactive Design & Development, Project, Creative Narrative Video Production, Radio Programming, Emerging Media Practices, Documentary photography
- Year 4** Political Economy, Professional Development, Dissertation 1, Digital Audio Production Technology, Digital Media Project: Multimedia, Digital Media Production, Advanced Photographic Techniques, Culture and Technology, Portfolio Development, Dissertation 2, Digital Media Project.



# Department of Humanities

**Bachelor of Arts  
Honours  
Early Childhood Care  
and Education  
4 Years**

**Bachelor of Arts  
Honours  
Social Care Practice  
4 Years**

**CAO Entry  
To Be Determined**

**CAO Entry  
TA 025**



Course	CAO Code	Level	Length of Programme
		<b>Honours Bachelor Degrees – Level 8</b>	
<b>Early Childhood Care and Education</b>	To be determined	Honours Bachelor Degree of Arts – Early Childhood Care and Education	4 Years
<b>Social Care Practice</b>	TA 025	Honours Bachelor Degree of Arts – Social Care Practice	4 Years



CAO Code TA

Course Level: 8

Length of course: 4 years

# Early Childhood Care and Education

## Honours Bachelor Degree of Arts

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better.

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Recent minimum CAO points: 275

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Points Range: New Programme

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Recognised in Europe

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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Research opportunities at Post Graduate level: Holders of this degree can apply to pursue postgraduate studies in diverse areas such as Social Work, Counselling, Drama Therapies.

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IT Tallaght is delighted to offer the BA (Honours) Degree Programme in Early Childhood Care and Education. The course opens up opportunities for students to have a fulfilling and challenging career in the Early Childhood Care and Education sector. Graduates with a degree in Early Childhood Care and education work in a number of different early education settings including crèche, play school, pre-school, early start and after-school programmes. Graduates work in private, community and statutory services. The programme will also give students the skills to set up their own early childhood education setting. Students also go on to work in support services including county childcare committees, Better Start, AIM. Graduates can also work in department of education inspection as well as Pre-school inspection roles.

This degree is internationally recognised and it equips people to work in Ireland and in many other countries around the world.

The course is taught through lectures, tutorials and practicals. Students also complete a work placement in year 2 and 3 of the programme. These work placements provide students with the chance to apply what they have learnt in their lectures to the real-world of early childhood care and education.

The teaching staff has extensive experience working with children and families and share their expertise and experience so that students will, after four years, be very highly qualified and trained to work to an excellent standard as early childhood educators.

### Who should apply for this course?

- Are you interested in understanding children, how they learn, grow and develop as unique capable individuals?
- Working with young children offers the opportunity to be creative and innovative.
- This course is for students who wish to work with young children in an early childhood education environment.
- It offers an opportunity to help shape the children of today, to be active citizens of their communities
- Do you like being active and busy?
- Do you like working as part of a team?

If you have answered YES to any of the above questions, then a degree in Early Childhood Care and Education might really suit you.

### **The course has a number of key objectives:**

To equip you with knowledge, skills and attitudes necessary to work in Early Childhood Care and Education settings.

To understand the role of the Early Childhood Educator including key areas such as Diversity and Equality, Language Acquisition, Statutory Legal Requirements including Child Protection, Research Methods and Professional Practice.

The role of play and interactions in supporting children's overall development, especially their social and emotional development. This includes understanding the important role of the family in children's development.

Understanding of the key elements that underpin best practice, including Aistear, Síolta, child protection and Pre-School Regulations.

A broad understanding of curricula used in early childhood education settings

Linking theory to practice with a supervised practice placement

Understand the role of creativity in children's growth and development

Role of learning for the student personally and professionally

Importance of reflective practice

Planning and design of appropriate interventions and activities

For Further Information visit our website [www.it-tallaght.ie](http://www.it-tallaght.ie)

### **What will I study?**

**Students will study a broad range of subjects relating to Early Childhood Care and education. Some of these are listed below:**

**Year 1** Critical Skills Development, Child centred practice, Child development, Sociology of childhood, Drama and movement, Health and wellbeing in the early years, Art and music, Early childhood curriculum.

**Year 2** Practice placement, Social policy, team and group dynamics, Literacy and numeracy, curriculum and pedagogy, Outdoor learning, psychology and learning

**Year 3** Practice Placement, Legal studies for Early Education, Equality and diversity in Early childhood, Professional practice and child protection, research methods, creative group facilitation

**Year 4** Family studies, Dissertation, Curriculum development, children's rights, school aged childcare, second language pedagogy, supporting positive interactions with children, social justice, leadership, management and mentoring.

CAO Code TA 025

Course Level: 8

Length of course: 4 years

# Social Care Practice

## Honours Bachelor Degree of Arts

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better.

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Recent minimum CAO points: 275

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Points Range 275 to 410

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Recognised in Europe

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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Research opportunities at Post Graduate level: Holders of this degree can apply to pursue postgraduate studies in diverse areas such as Social Work, Counselling, Drama Therapies.

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IT Tallaght is delighted to offer this new and innovative BA (Honours) Degree Programme in Social Care Practice. The course opens up opportunities for students to have a fulfilling and challenging career in the social care sector.

Social Care professionals work with a wide variety of client groups such as people with disabilities, children and young people, members of the Traveller Community, homeless people, elderly people, asylum seekers and people with mental health difficulties. They work in a variety of settings including residential services, community settings and training and education services.

This degree is internationally recognised so it equips people to work in Ireland but also in many other countries around the world.

The course is taught through lectures, tutorials and practicals. Students also go on a number of work placements in years 2 and 4. These work placements provide students with the chance to apply the theory they have learnt in their lectures to the real-world of social care. The teaching staff has worked in various areas of Social Care for many years and will share their expertise and experience so that students will, after four years, be very highly qualified and trained to work to an excellent standard as social care professionals.

### Who should apply for this course?

- Do you enjoy meeting new people?
- Are you outgoing and friendly?
- Would you like to work in a job where you could give help and support to other people?
- Would you enjoy a job which involves supporting people to achieve things and to develop new skills which give them satisfaction?
- Do you like being active and busy?
- Do you like working as part of a team?
- Would you like to have a career which would give you the opportunity to earn a good salary but also be motivated by the work you do and support you give to other people?

If you have answered YES to any of the above questions, then a degree in Social Care Practice might really suit you.

## The course has a number of key objectives:

- To ensure students learn the skills required to work effectively with individuals, families, groups and associations in the community, in project work and in residential settings;
- To ensure that IT Tallaght graduates have a thorough grasp of the responsibilities of social care professionals to work in an ethical manner and to the highest standard of best practice;
- To introduce students to social care interventions, policy management, administration and political advocacy;
- To allow students to acquire a primary degree that will be recognized both nationally and internationally in the area of professional social care work (residential, community and project work);
- To ensure graduates are capable of acting as informed advocates for their clients and strive to improve their clients' quality of life;
- To afford graduates the opportunity to obtain a highly respected degree that will open up the possibility for them to pursue post-graduate studies in Social Care;
- To train students so that they will be in a position to conduct research in the area of Social and Behavioural Science;
- To ensure that graduates will understand a variety of emotional and behavioural disorders and be able to work effectively with clients who may experience these disorders;
- To enable graduates to apply creative therapies in Social Care contexts.

For Further Information visit our website  [www.it-tallaght.ie](http://www.it-tallaght.ie)

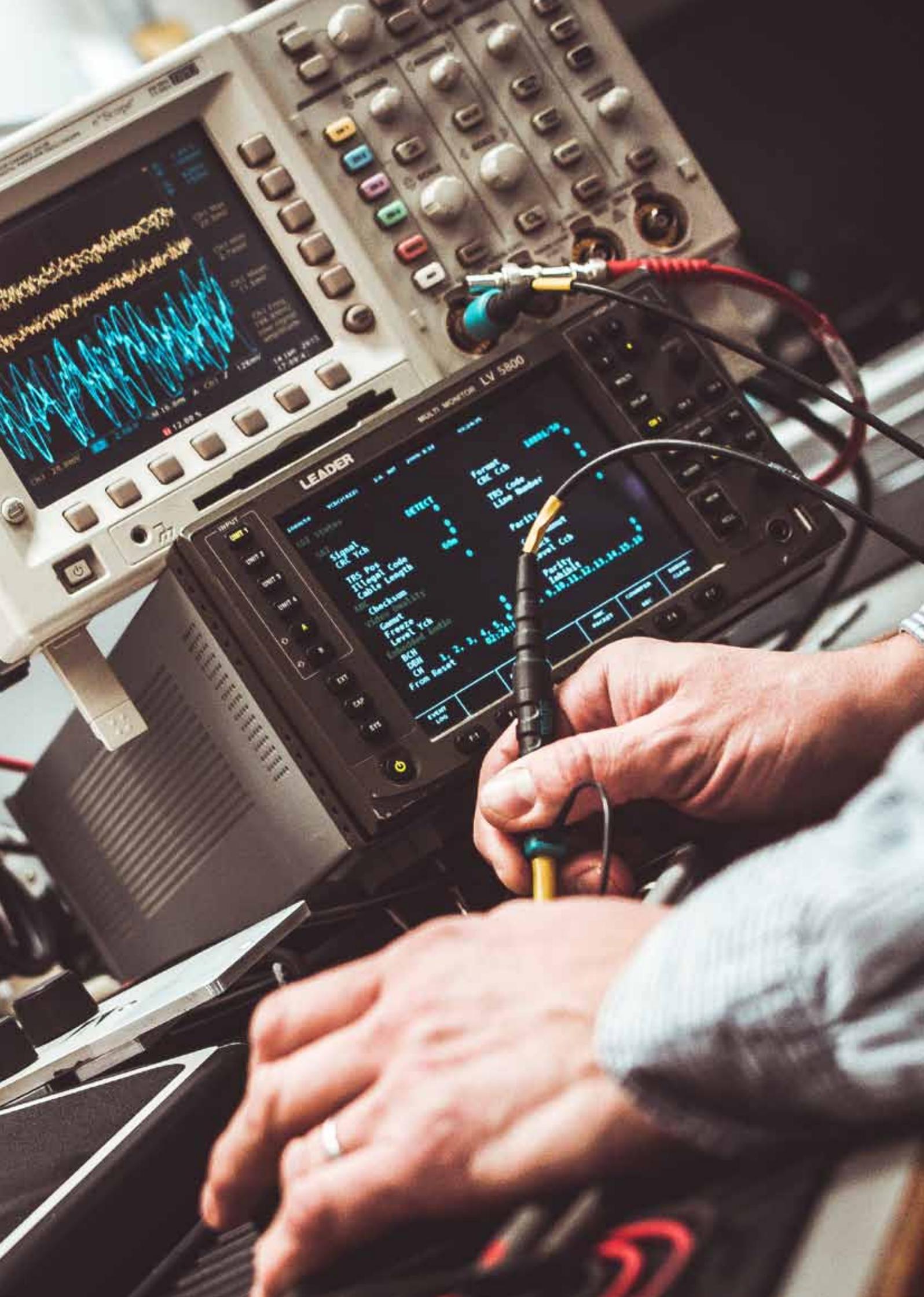
## What will I study?

**Year 1** Critical Skills Development, Psychology, Communications, Sociology, Creative Approaches to Social Care, Understanding Disability, Health Education and Promotion, Politics, Public Administration, Applied Social Care.

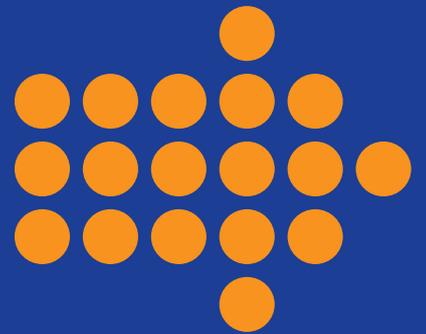
**Year 2** Professional Practice, Child Developmental Psychology, Applied Sociology, Social Policy, Youth Justice, Work Placement (Practicum).

**Year 3** Professional Practice, Group Work, Social Care and Older People, Legal Studies, Research Methodology, Creative Approaches to Social Care, Applied Sociology, Abnormal Psychology, Conflict Resolution Skills.

**Year 4** Work Placement (Practicum), Counselling, Community Studies, Managing Social Care Environments, Contemporary Approaches to Managing Challenging Behaviour, Professional Practice.



# School of Engineering



**Head of School**

Fiona Cranley, BSc. MSc. (Eng), MIEI

**Heads of Department**

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**Electronic Engineering**

James Wright, MEng MIEI.

**Mechanical Engineering**

Diarmuid Rush, B.Sc., M.Sc.

# The School of Engineering

**Ireland needs more engineers. There is a critical shortage of engineering graduates to meet the skills need within this country. An exciting and rewarding career lies ahead for those who choose engineering.**

Our programmes are designed along with industry employers and past graduates to give a rich insight into the needs of industry. Therefore it ensures that our graduates are industry ready. They find employment very soon after completing their qualification at IT Tallaght. This is a wonderful recognition of the strength of our programmes in industry both nationally and internationally.

Engineers are changing the way we live for the better. They improve how quickly and reliably we communicate with each other. Many have mobile devices, we all demand faster more reliable communications. We seek greater apps, image and speech recognition, wearable technology and more powerful phones and laptops. Engineers are improving medical equipment, reducing surgery times through sensor technology and 3D printing. They are improving our transport systems through light rail, autonomous vehicles, collision detection and electric vehicles.

We pride ourselves on offering students an opportunity to study in the following areas of Engineering at IT Tallaght:

- Sustainable Energy
- Engineering Software
- Biomedical Design
- Electronics
- Mechanical
- Electrical & Renewables
- Automation
- Intelligent Manufacturing & Robotics

Further details on our programmes for September 2019 in the Electrical and Renewables, Robotics and Intelligent Manufacturing programmes will be available on our website in January 2019 or

✉ [engineering@it-tallaght.ie](mailto:engineering@it-tallaght.ie)

## Engineers Improving our Lives every Day

Engineers play critical roles in energy, telecommunications, software, pharmaceutical, food and medical device industries. They work with scientists, medical professionals, agricultural experts and researchers to produce the highest standard of medical tools, prosthetics and prescription drugs in the fight against well-known diseases. They work in food production to reduce contamination and environmental waste with smart packaging and they develop powerful computer chips for improved software applications and communications.

## Engineers are the key to the success of our economy.

The recent national report on Expert Future Growth & Skills Need identified a need for more engineers and technicians in Ireland. This is replicated across the globe where our graduates find themselves working in multi disciplinary teams at the cutting edge of new technologies to improve our lives. It is an invigorating and rewarding experience for any graduate. Many of our engineering graduates have job offers before their final exams.

## International Partner Institutions

Our programmes are also well recognized internationally. We have partner institutions across 8 different countries. This brings a great dynamic to our degree programmes. It also gives our students opportunities to work on projects with engineering students in America, Canada, China and across Europe. We also have joint programmes with Nanjing Tech University in China as well as Shanghai Institute of Technology. Our students have travelled to China and America for competitions and summer schools over recent years resulting in a superb experience for all.

Not only do we offer summer schools in Ireland for our international partners but often our students go abroad for summer school, work placement, or as part of the Erasmus exchange programme. The Girls in Engineering Summer School in Austria is particularly popular with our female engineering students each year.

## Travel

The opportunities open to graduates of our Engineering programmes are endless. Graduates have worked in Australia, Canada, India, Malaysia, China and all across Europe. Their roles have varied across technician, engineer, sales, research, project manager, software developer, site manager. We have had graduates work in the ski slopes of Austria, electrical power plants in India, mines in Australia, food production in Singapore and computer processor plants in Arizona and Oregon. Ireland is an enviable location for engineering companies due to our climate, corporate

*“Scientists investigate that which already is; Engineers create that which has never been”*  
*Albert Einstein*

laws and having English as a first language. As such, the opportunities for our graduates to work in large multinational and start-up companies are vast.

## Careers

Many of our graduates are now managers or CEOs of their own companies. They come back each year to IT Tallaght looking to recruit more graduates as they are confident of the high standard of engineering skills and knowledge that our graduates will have. Graduates have gone on to work as engineers, technicians or researchers. Most have risen quite quickly up the management chain and are in powerful positions now. Our graduates have been employed by Intel, Xilinx, Lufthansa, Cuisine to France, Eir, Bord na Mona, ESB, Microsoft, Boston Scientific, Airbus, Tallaght Hospital, BD Medical, IBM, Lucent, BMW, Pfizer, Google, Aer Rianta, Nypro Healthcare, Kerry Foods, Loctite and Jacobs.

Each year employers come to the Engineering Project Show to meet with graduates presenting their final year Projects. This event is a significant date in the School of Engineering's calendar as it gives our students an opportunity to meet employers and discuss potential employment opportunities. Students often find their first Engineering job at the Annual Engineering Project Show event.

## Engineers Ireland Accreditation

Engineers Ireland, the accreditation body within Ireland for all Engineering qualifications have accredited our Engineering programmes. This is a prestigious award as it ensures that our engineering graduates are recognized across the globe for their qualification if they decide to work in Australia, Canada, Hong Kong and many other exciting destinations that our graduates have gone to. They are also on the path to apply for Chartered Engineer status.



## Research

The School of Engineering also has an extensive portfolio of research activity over the past number of years. Research is the key to a recovering economy. Many of the new technologies in renewable energy, mobile devices, nanotechnology, bioengineering, 3D printing, sensors, software and robotics are improving the lives of all through less damaging environmental emissions, improved health care, transport systems and wireless communication. The research aspect of our School is an area which we are immensely proud of and where we continue to graduate at Masters and PhD level each year. Students upon successful completion of a Level 8 Degree have the option upon meeting minimum requirements to progress to Level 9 Masters Degree and Level 10 PhD at IT Tallaght.

## Green Campus

The School of Engineering is leading the project for IT Tallaght to receive its Green Campus flag. The Sustainable Energy & Environmental Engineering programme supports this initiative with expertise from academics, technicians and students. Projects in biodiversity, solar power, wind power, waste

management and transport are the focus of the group for 2019. The aim is to enhance sustainability and to make a long term commitment to continuous improvement on campus.

## Healthy Campus

Engineers are also paving the way for the IT Tallaght Healthy Campus flag through wireless communication and data collection from wearable devices used to track fitness levels, heart rates, blood pressure and weight. Apps have been developed and plans are in place to synchronise data with Food Technology and Nutrition areas with a view to improving health and well being of the campus and local community. Engineering has a strong sporting community with past students representing Ireland in GAA and hockey over the years. Research projects into diabetes, scoliosis, oesophageal cancer, concussion and also use of high impact and performance materials in sports helmets and running footwear are all contributing to the Healthy Campus pillar. Engineers are constantly working with medical professionals on medical devices from an electronic, mechanical, biomedical, manufacturing or software aspect.

# Electronic Engineering

**Computers, telecommunication systems and consumer electronics are continually advancing and entering all areas of our lives and Electronic engineers are the inventors of many things that we take for granted today.**

Electronic and embedded computing systems are at the core of these developments, and there is a rapidly growing demand for well-qualified professional engineers across the full breadth of electronic and computer engineering. As our industries become more advanced and dependent on information and data communication technologies the demand increases for engineering specialists who can work in a high technology environment and have a deep understanding of the behaviour of electronic and software based systems.

## Why the Institute of Technology Tallaght?

The Department of Electronic Engineering at IT Tallaght provides programmes which mix both theory and practice on an equal basis. Students learn the fundamentals of electronic, electrical, computer and digital systems, and circuits, with an emphasis on hands-on experience to complement their theoretical knowledge. We pride ourselves on graduating engineers with strong practical engineering skills and who are industry ready engineers. Students spend 60% of their time working and learning in our modern well equipped laboratories and our graduates have a deep understanding of the behaviour of electronic and software based systems. Our modern laboratory facilities are considered to be state of the art with advanced equipment and networked computer suites available to all students in the Department. We

continually review and develop all our programmes in order to ensure that our graduates have the knowledge and skills demanded by industry as well as the foundations for progression to further study. Our objective is to produce engineers of the highest quality at a time when there is a shortage of such people.

Our Electronic Engineering and Engineering Software Programmes are designed to cross the boundaries between hardware electronics, wireless systems, software and computer networks. We will develop you in electronics, computer systems, and engineering software and prepare you for an exciting career in the information technology and computing industries.

## Programme overview

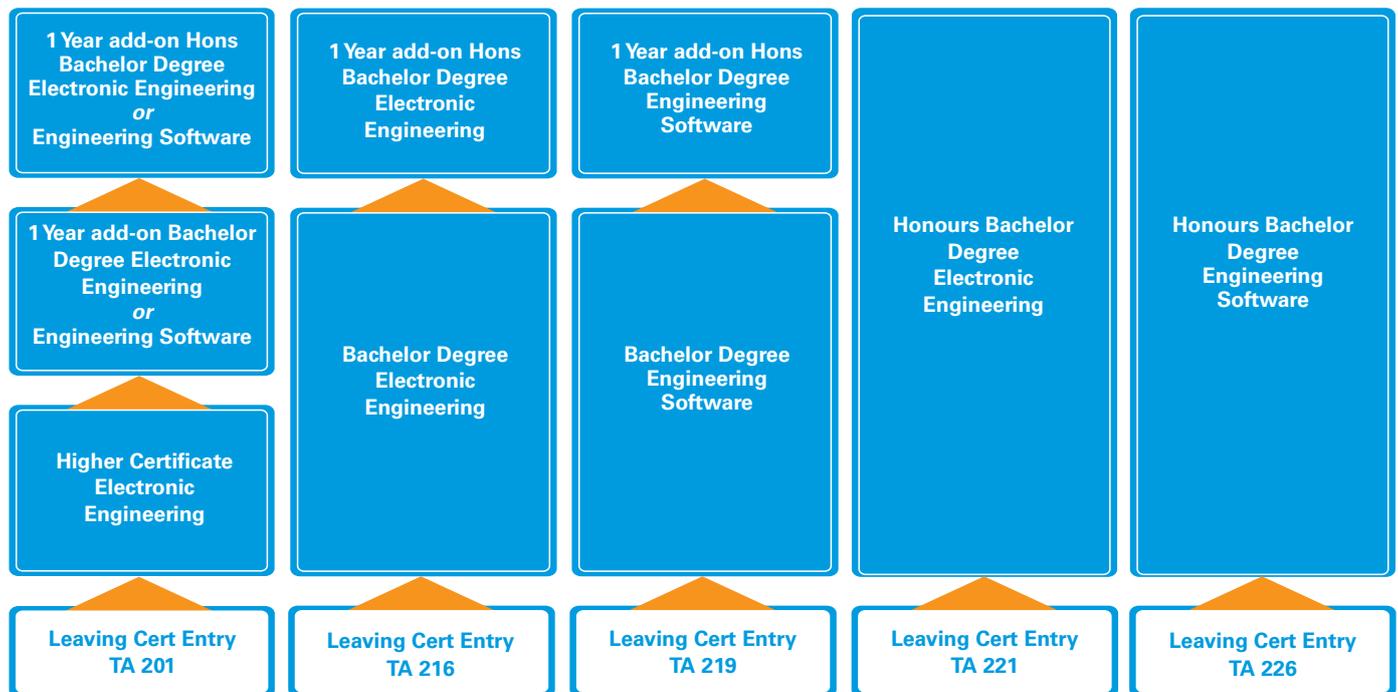
We focus on applying theory to real engineering problems and developing professional engineering skills combined with a strong analytical background. The programmes provide our students with the skills necessary to work in all aspects of high technology industry, combining core knowledge in electronic hardware and computing with a broad selection of advanced modules in wireless, microelectronics, software and communications technology. You will learn by doing and put the theories and facts you study in the classroom to work solving real engineering problems. Preparation for professional practice involves significant project work incorporated in each year, from

Year 2, where you will get the chance to research, design and develop a hardware or software system within a unique laboratory experience using the Department's facilities and the latest computer software. This background will facilitate a deep understanding and provide you with the experience necessary to become a successful engineer. The Department laboratory facilities offer the opportunity to reinforce the key theories taught in the classroom and assist you to develop the necessary skills required in high technology industry.

## Programme structure

The structure of our programmes follow clear educational aims that are tailored to each programme. Our Programmes have a ladder structure where students can gain an award and move to the next level of progression. For example, graduates from the Higher Certificate programme can progress to the Bachelors Programmes (B.Eng) and subsequently to the Honours Bachelors Programmes B.Eng (Hons). All our Programmes share the early Semesters after which the student can commence to specialise into the separate streams of Electronics Engineering or Engineering Software.

# Programme Structure in the Department of Electronic Engineering



Course	CAO Code	Level	Length of Programme
<b>Higher Certificates – Level 6</b>			
<b>Electronic Engineering</b>	TA201	Higher Certificate in Engineering in Electronic Engineering	2 Years
		Follow-on Bachelor Degree in Electronic Engineering or Engineering Software	1 Year Add-on
<b>Bachelor Degrees – Level 7</b>			
<b>Electronic Engineering</b>	TA216	Bachelor Degree in Electronic Engineering	3 Years
<b>Engineering Software</b>	TA219	Bachelor Degree in Engineering Software	3 Years
		Follow-on Honours Bachelor Degree for qualified applicants -	1 Year Add-on
<b>Honours Bachelor Degrees – Level 8</b>			
<b>Electronic Engineering</b>	TA221	Honours Bachelor Degree in Electronic Engineering	4 Years
<b>Engineering Software</b>	TA226	Honours Bachelor Degree in Engineering Software	4 Years



CAO Code TA 201

Length of course: 2 years

Follow-on Degrees offered

# Higher Certificate in Electronic Engineering

## Entry Requirements

Leaving Certificate examination with at least Grade O5 or better in Mathematics and Grade O6 or better in four other subjects including English.

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Points Range 150 – 310

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Recognised Internationally

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Engineering Technician Membership of Engineers Ireland

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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Research opportunities at Post Graduate level Masters and PhD

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Electronic technicians are required to complete two years of specialised education, leading to a Higher Certificate in Electronic Engineering. A typical week consists of 24 contact hours with over 60% involving laboratory work. The Higher Certificate Programme is designed to allow students gain knowledge of the fundamentals of Electrical and Electronic Engineering and study the building blocks that are the foundation of computer hardware and software engineering. The graduate from this programme will have the required expertise for training as an electronic engineering technician in industry.

## Programme overview

At Higher Certificate level, students are introduced to the fundamentals of electronics, computer and software systems. You will learn about analogue and digital systems, engineering science, information communications, control systems, computer programming and network engineering. Our First Year student mentor will meet with you weekly during your first academic year and assist with your move to studying at a Third Level Institute. In the second year of the Programme a significant hands-on project is provided in order to allow the student to develop strong design skills when solving a real engineering problem. Finding solutions to problems is a major part of any engineering job. At the end of the two year Programme, the Higher Certificate graduates will understand the operation of electronic and computer systems and will be ready to work at technician level in industry or stay on to achieve further academic awards.

## Programme structure

The Higher Certificate Programme has four Semesters over two years with examinations in January and May of each year. Each Semester comprises six Programme modules that are carefully designed to provide a broad based technical foundation in Electronic Engineering. The practical elements of our modules are very important and you will spend approximately 60% of your time working with advanced equipment and software in our laboratories. You will work with lecturers on real problems from industry allowing you to develop professional engineering skills as you study the technical content of your Programme.

Successful completion of the Higher Certificate in Engineering will allow you choose your progression path between the BEng Programme in Electronic Engineering and the BEng Programme in Engineering Software.

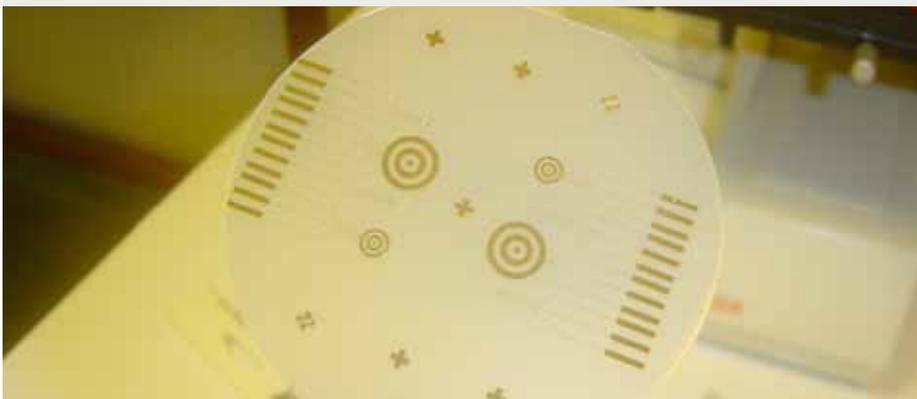
## Career Options:

The Electronic Technician is trained to conduct routine maintenance checks, referring to wiring diagrams and service manuals to find the source of a problem. The Technician will also be trained to use various testing equipment such as voltmeters, oscilloscopes, signal generators and frequency counters. The Technician must also have a thorough understanding of electrical theory applications and be able to interface with engineers on the resolution of technical issues. Technicians are integral to the manufacturing industry based in Ireland today. They are responsible for the maintenance, testing, programming and debugging of electronic equipment. The technician can also act as a field service engineer, repairing customer's equipment in the field, a task that requires strong knowledge of hardware and software systems. Many technicians are also involved in the calibration of sensitive laboratory based measurement equipment or as technical sales specialists. The second year of the Programme includes a hardware and software project that covers technical issues that you will encounter while working in industry.

## What will I study?

**Year 1** Mathematics 1, Electric Circuits 1, Interactive Computer Programming, Electronic Workshop, Engineering Science, Learning to Learn, Mathematics 2, Electric Circuits 2, Interactive Embedded Computer Systems, Analogue Electronics, Digital Systems 1, Computer Aided Design.

**Year 2** Mathematics 3, Java Programming, Computer Network Fundamentals, Radio Systems, Digital Systems 2, Project – Stage 1, Mathematics 4, Microprocessor Fundamentals, Network Routers and Switches, Solid State Electronics, Control Systems, Project – Stage 2.



CAO Code TA 216

Length of course: 3 years

Follow-on Degrees offered

# Bachelor of Engineering in Electronic Engineering

## Entry Requirements

Leaving Certificate with a minimum of Grade O4 in Ordinary Level Mathematics and at least Grade O6 in four other subjects including English.

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Points Range 175 – 260

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Recognised Internationally

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Associate Membership of Engineers Ireland

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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The Bachelor of Engineering Programme is designed to provide students with a proficiency in Electronic Engineering and equip them with professional engineering skills and knowledge that prepares them for employment or further study. Students will work with lecturers on real problems from industry allowing the development of professional engineering abilities during the Programme. Graduates of the Programme will be skilled at multitasking and capable of leading a multifunctional team in a technical environment. They will also demonstrate a strong knowledge of electronic hardware and embedded computing technology and display excellent trouble shooting and problem solving skills.

## Programme overview

This Programme provides you with the skills necessary to work in all aspects of the ICT industry including electronics, information technology, telecommunications, and computer network engineering, while also offering the graduate an option of progressing to an Honours Degree programme. The Programme forms the Electronic stream and focuses on hardware and data communications design. Our graduates are ideal candidates to fill many different roles in Ireland's technically advanced industries. Successful completion of the Bachelor of Engineering will provide a progression path to the BEng (Hons) Programme in Electronic Engineering.

## Programme structure

The Bachelor of Engineering Programme comprises of six semesters over three years with examinations in January and May of each year. Each semester delivers six modules that are carefully designed to provide a broad based technical foundation in Electronic Engineering. In the first two years, you will gain a strong foundation in electronics and communication engineering as well as computing applications. The third year of the Programme introduces specialist design-based modules in communications, computing networks, digital circuit design, control systems and the fabrication of microelectronic devices. In addition you will take an Integrated Project module over both semesters. The practical elements of our modules ensure you will spend approximately 60% of your time working with advanced equipment and software in our laboratories.

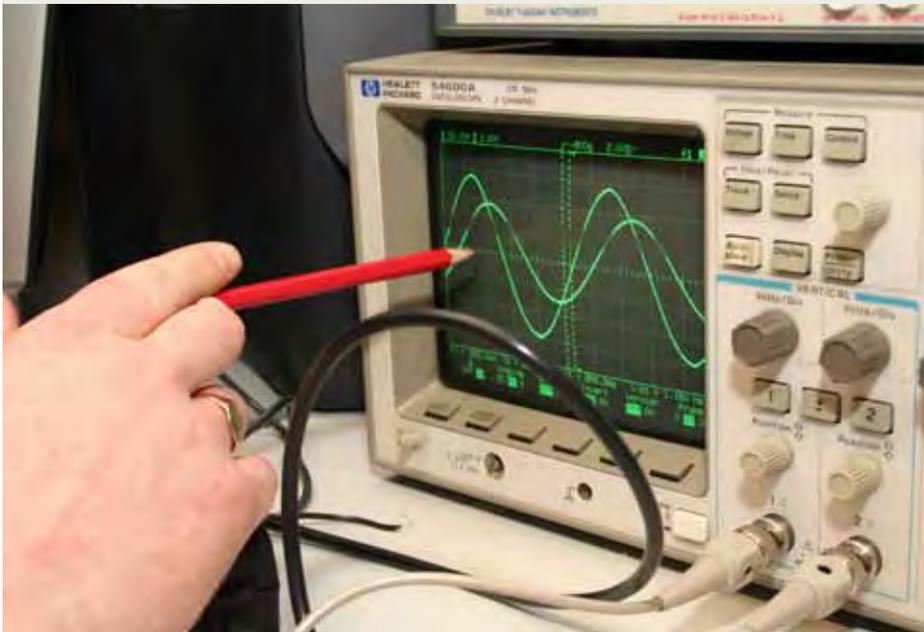
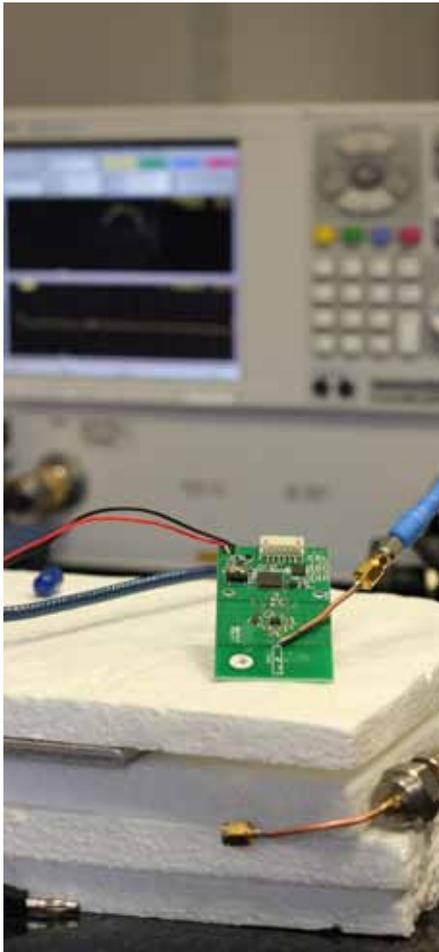
## Career Options:

The broad-based foundation will enable you to pursue a wide range of careers. With our industry-relevant curriculum, you will be well placed to meet the needs of the industry when you graduate. Graduates can work in areas such as product design and testing, equipment maintenance in manufacturing, mobile phone system maintenance and computer networking design and support. The need for engineering specialists will continue to increase particularly as computing and telecommunications technologies have penetrated into almost all aspects of our lives.



## What will I study?

- Year 1** Mathematics 1, Electric Circuits 1, Interactive Computer Programming, Electronic Workshop, Engineering Science, Learning to Learn, Mathematics 2, Electric Circuits 2, Interactive Embedded Computer Systems, Analogue Electronics, Digital Systems 1, Computer Aided Design.
- Year 2** Mathematics 3, Java Programming, Computer Network Fundamentals, Radio Systems, Digital Systems 2, Project – Stage 1, Mathematics 4, Microprocessor Fundamentals, Network Routers and Switches, Solid State Electronics, Control Systems, Project – Stage 2.
- Year 3** Mathematics 5, Network Design, Digital Communications, C Programming, Semiconductor Fabrication, Control System Design, Integrated Project – Stage 1, Mathematics 6, Digital Design with Verilog, Analogue System Design, Power Engineering, Analysis of Analogue Communications, Embedded Computer Systems, Integrated Project – Stage 2.



CAO Code TA 219

Length of course: 3 years

Follow-on Degrees offered

# Bachelor of Engineering in Engineering Software

## Entry Requirements

Leaving Certificate with a minimum of Grade O4 in Ordinary Level Mathematics and at least Grade O6 in four other subjects including English.

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Points Range 175 – 260

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Recognised Internationally

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Associate Membership of Engineers Ireland

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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The Bachelor of Engineering Programme is designed to provide students with a proficiency in Engineering Software and equip them with professional engineering skills and knowledge that prepares them for employment or further study. Engineering Software graduates from this Programme combine expertise in electronic engineering with advanced knowledge of computer hardware and software. These engineers apply their skills to the design of systems ranging from the embedded microprocessors in modern mobile devices, such as smart phones, through to high-performance computing. Graduates who have an in-depth background in this rapidly advancing interdisciplinary field are well placed for interesting and rewarding careers at the interface of engineering and computing.

## Programme overview

This Programme provides you with the skills necessary to work in all aspects of the ICT industry including software design, information technology, telecommunications, and computer network engineering, while also offering the graduate an option of progressing to an Honours Degree programme. The Programme forms the Engineering Software stream and focuses on engineering software and the interfacing of engineering and computing. Students develop their design skills using industry standard programming languages, operating systems and applications. In addition to a thorough grounding in modern computer systems and programming, you will also study specialist units on topics such as digital communication systems, computational intelligence and embedded computing design. This programme produces graduates who will be at the forefront of developing “Internet of Things” (IOT) systems. Practical work and projects and engineering laboratory classes are a feature in all years of the programme. Successful completion of the Bachelor of Engineering will provide a progression path to the BEng. (Hons) Programme in Engineering Software.

## Programme structure

The Bachelor of Engineering Software comprises of six Semesters over three years with examinations in January and May of each year. Each Semester delivers six modules that are carefully designed to provide a broad based technical foundation in Engineering Software. In the first two years, you will gain a strong foundation in electronics, computer and communication engineering as well as computing applications. The third year of the Programme introduces specialist design-based modules in programming, computing networks, digital circuit design, control systems and data structures. In addition you will take an Integrated Project module over both semesters. The practical elements of our modules ensure you will spend approximately 60% of your time working with advanced equipment and engineering software systems in our laboratories.

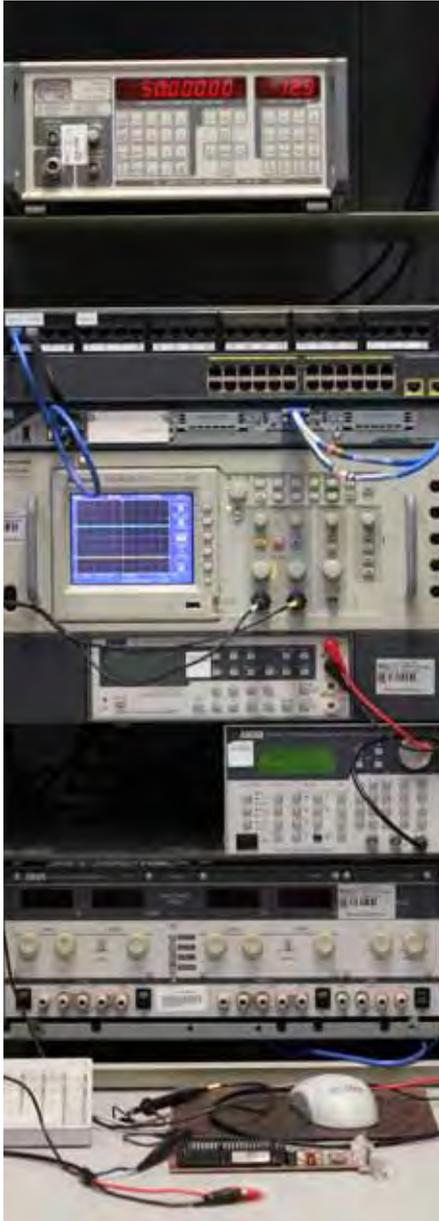


## Career Options:

ICT industries are likely to form the main sources of employment for graduates of the Programme. Most companies involved in the high technology sector rely on people with software skills to function as a creative and innovative element of the workforce and in addition a range of service industries, including mobile system development, rail transport and aviation. Computer network engineers are responsible for establishing different types of networks such as LAN or WAN for organisations and connecting them. Network engineers are also responsible for establishing and keeping system routers and servers functioning.

## What will I study?

- Year 1** Mathematics 1, Electric Circuits 1, Interactive Computer Programming, Electronic Workshop, Engineering Science, Learning to Learn, Mathematics 2, Electric Circuits 2, Interactive Embedded Computer Systems, Analogue Electronics, Digital Systems 1, Computer Aided Design.
- Year 2** Mathematics 3, Java Programming, Computer Network Fundamentals, Introduction to Smart Sensors, Digital Systems 2, Project – Stage 1, Mathematics 4, Microprocessor Fundamentals, Network Routers and Switches, GUI Development, Control Systems, Project – Stage 2.
- Year 3** Mathematics 5, Management Practice, Computer Network Design, C Programming, Object Oriented Design, Project – Stage 1, Mathematics 6, Control System Design, Network Security and Administration, Embedded Computer Systems, Data Structures & Algorithms, Project - Stage 2.



CAO Code TA 221

Length of course: 4 years

# Honours Bachelor of Engineering in Electronic Engineering

## Entry Requirements

Leaving Certificate Examination with a minimum of two subjects at Higher Level Grade H5 or better, a minimum of Grade O4 in Mathematics or better, and a minimum of three other subjects at Ordinary Level Grade O6 or better. One of the above subjects must be English.

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Points Range 215 – 400

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Recognised Internationally Membership of Engineers Ireland

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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The B.Eng (Hons) Electronic Engineering Degree Programme is designed to produce graduates that have strong analytical, problem solving skills with the ability to design and optimise complex hardware and communications systems. The Programme follows the Electronic Engineering stream focusing on hardware and embedded software design skills. This Programme will provide you with the opportunity to work as a professional engineer in high technology industry. The B.Eng (Hons) Degree allows students to develop a deep understanding of engineering principles and acquire the ability to quickly grasp engineering issues across a wide range of different fields.

## Programme overview

The BEng (Hons) Degree in Electronic Engineering is a strong technically focused programme and is targeted at producing graduate design engineers specialising in defining system architecture and electronic system design and solving engineering problems. Over the duration of the B.Eng. (Hons) Programme you will spend many hours in the laboratories developing strong technical and design skills. The students choosing electronic design and development will gain expertise in digital design, integrated circuit design communications system design, digital signal processing design and embedded software design, as well as an in-depth knowledge of electronic hardware design techniques. The graduate engineer will be able to offer solutions to problems that are driven by well-developed analytical and practical skills. Students are trained to be creative and inventive and able to solve many difficult problems in areas such as hardware design computer networks, mobile communications and software systems. When researching and designing a solution to an engineering problem, you will learn to work as an individual as well as part of a team. Successful completion of the Honours Bachelor of Engineering in Electronic Engineering will provide a progression path to postgraduate study.

## Programme structure

The BEng (Hons) Degree in Electronic Engineering comprises of eight Semesters over four years with examinations in January and May of each year. Each Semester delivers six modules that are carefully designed to provide a broad based technical foundation in Electronic Engineering. In the third year of the B.Eng (Hons) Programmes students are provided with a major hardware or software project which constitutes an important element of both programmes. This project will be based on a guided approach with strong interaction between the supervisor and the student. In the final year of the programme the students will be provided with an open ended design project which will necessitate an element of research, project management, and a creative approach to the solution. A significant report is published upon completion of the project which is designed to develop the student's communications skills. In final year you can tailor the Programme to your area of interest by selecting

specific elective modules such as software design or communications systems. These electives will provide you with the opportunity to study a particular area of interest at a greater depth.

### Career Options:

In the Electronic Engineering Programme, students are introduced to important current industrial trends and cover all aspects of Electronic Engineering from Analogue Electronics to Mobile Networking to Computer Networking and Nanotechnology Device Fabrication gaining the skills necessary to work in disciplines such as semiconductor technology, automotive electronics, process engineering, consumer electronics, technical sales, avionics, wireless networks, sustainable energy, and programming. Electronic Engineers are very often employed in technical roles in the IT industry either designing high speed equipment or writing programmes. Some typical roles are Network Engineer, Radio Transmission Engineer, Hardware Design Engineer, Field Service engineer, Network Operations Engineer, Research Data Specialist, RAN Optimisation Engineer, and Process Engineer.



### What will I study?

**Year 1** Mathematics 1, Electric Circuits 1, Interactive Computer Programming, Electronic Workshop, Engineering Science, Learning to Learn, Mathematics 2, Electric Circuits 2, Interactive Embedded Computer Systems, Analogue Electronics, Digital Systems 1, Computer Aided Design.

**Year 2** Mathematics 3, Java Programming, Computer Network Fundamentals, Radio Systems, Digital Systems 2, Project – Stage 1, Mathematics 4, Microprocessor Fundamentals, Network Routers and Switches, Solid State Electronics, Control Systems, Project – Stage 2.

**Year 3** Mathematics 5, Network Design, Digital Communications, C Programming, Semiconductor Fabrication, Control System Design, Integrated Project – Stage 1, Mathematics 6, Digital Design with Verilog, Analogue System Design, Power Engineering, Analysis of Analogue Communications, Embedded Computer Systems, Integrated Project – Stage 2.

**Year 3** Mathematics 7, Analysis of Digital Communications, Digital FSM Design, Software Development 1 (E), Semiconductor Device Physics (E), Communications Engineering (E), Project – Stage 1, Mathematics 8, Management Practice, Digital Signal Processing, Software Development 2 (E), Operating Systems (E), Digital Processor Design (E), Submicron MOSFET Design (E), Project – Stage 2.

**E= Elective Module**

# Honours Bachelor of Engineering in Engineering Software

## Entry Requirements

Leaving Certificate Examination with a minimum of two subjects at Higher Level Grade H5 or better, a minimum of Grade O4 in Mathematics or better, and a minimum of three other subjects at Ordinary Level Grade O6 or better. One of the above subjects must be English.

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Points Range 215 – 400

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Recognised Internationally Membership of Engineers Ireland

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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The B.Eng (Hons) Programme is designed to produce graduates that have strong analytical, problem solving skills with the ability to design and optimise complex software engineering systems. The Programme follows the Engineering Software stream focusing on hardware and embedded software design skills. This Programme will provide you with the opportunity to work as a professional engineer in high technology industry. Engineers specialising in software bring fundamental engineering principles to the design, development, testing, and evaluation of the software systems. The B.Eng (Hons) Degree allows students to develop a deep understanding of engineering principles and acquire the ability to quickly grasp engineering issues across a wide range of different fields. Upon completion you will have a strong base in engineering software theory and professional software systems.

## Programme overview

The BEng (Hons) Degree in Engineering Software targets the student to become an engineer specialising in software who understands the interaction between hardware and software systems and can apply fundamental engineering software principles to construct complex hardware and software systems. This is a practical course balancing theory and implementation to support the specification, design, programming and evaluation of computer based systems. The Engineering Software BEng (Hons) emphasises fundamental principles, design, the acquisition of practical skills and the evaluation of technologies.

The Programme looks at the best ways to design and evaluate software systems and aims to develop the professional technical skills you will need in the engineering software industry. Recent advances in sensors, wireless network and embedded systems have facilitated the rapid development of the principle of Internet of Things (IoT). This Programme covers the underlining theories and hardware/software technologies, as well as hands-on system development. Upon successful completion of the BEng (Hons) in Engineering Software programme you may take up employment in industry or progress to the postgraduate Masters Degree programme.

## Programme structure

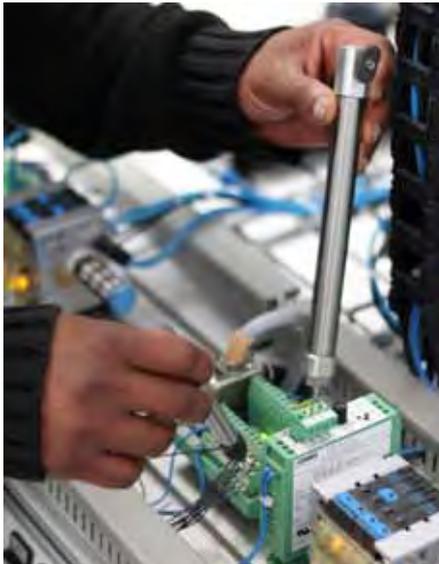
The Honours Bachelor of Engineering in Engineering Software comprises of eight Semesters over four years with examinations in January and May of each year. Each Semester delivers six modules that are carefully designed to provide a broad based technical foundation in Engineering Software design. In the third year of the B.Eng (Hons) Programme in Engineering Software students are provided with a major software project which constitutes an important element of the programme. This project will be based on a guided approach with strong interaction between the supervisor and the student. In the final year of the programme the students will be provided with an open ended design project which will necessitate an element of



research, project management, and a creative approach to the solution. A significant report is published upon completion of the project which is designed to develop the student's communications skills. In final year you can tailor the Programme by selecting specific elective modules which will provide you with the opportunity to study a particular area of interest in greater depth.

### Career Options:

This Programme will equip you to take up a wide range of career opportunities, including an engineer specialising in software, a network engineer, a web application programmer, a designer of software in engineering systems or website designer/programmer. You will study software development, programming languages, technologies and applications including Java, C++, computer networks, concurrent systems, Internet of Things, and web and mobile computing. Some typical roles are as an Engineer specialising in software, a Network Engineer, a Software Validation, and Network Planning Engineer.



### What will I study?

**Year 1** Mathematics 1, Electric Circuits 1, Interactive Computer Programming, Electronic Workshop, Engineering Science, Learning to Learn, Mathematics 2, Electric Circuits 2, Interactive Embedded Computer Systems, Analogue Electronics, Digital Systems 1, Computer Aided Design.

**Year 2** Mathematics 3, Java Programming, Computer Network Fundamentals, Introduction to Smart Sensors, Digital Systems 2, Project – Stage 1, Mathematics 4, Microprocessor Fundamentals, Network Routers and Switches, GUI Development, Control Systems, Project – Stage 2.

**Year 3** Mathematics 5, Management Practice, Computer Network Design, C Programming, Object Oriented Design, Project – Stage 1, Mathematics 6, Control System Design, Network Security and Administration, Embedded Computer Systems, Data Structures & Algorithms, Project - Stage 2.

**Year 4** Mathematics 7, Internet Systems, Software Development 1, Embedded System Software Design, Mobile Systems Programming (E), Digital Signal Processing (E), Project – Stage 1, Mathematics 8, Internet of Things, Software Development 2, Operating Systems, Computer Network Engineering (E), Digital Processor Design (E), Project - Stage 2.

**E= Elective Module**

# Masters of Engineering Degree in Electronic Engineering

## Entry Requirements

### (a) Engineering Graduates

- Applicants who hold a Bachelors Degree at honours level 8 in Electronic Engineering, at a minimum award level of 2nd class honours grade 2 (2.2), are eligible for entry to the programme.
- Applicants who hold a Bachelors Degree at honours level 8 in Electronic Engineering (level 8), at and award level of PASS are eligible for entry to the programme subject to relevant experience and an interview to determine their suitability for entry.

### (b) Graduates in Equivalent Cognate Fields

- Applicants who hold a Bachelors Degree at honours level 8 in an equivalent relevant cognate field (e.g. scientific, mathematical or engineering discipline) at a minimum award level of 2nd class honours grade 2 (2.2), are eligible for entry to the programme subject to interview to determine their suitability for entry.
- Applicants who hold a Bachelors Degree at honours level 8 in an equivalent relevant cognate field (e.g. scientific, mathematical or engineering discipline) at and award level of PASS, are eligible for entry to the programme subject to relevant postgraduate experience and an interview to determine their suitability for entry

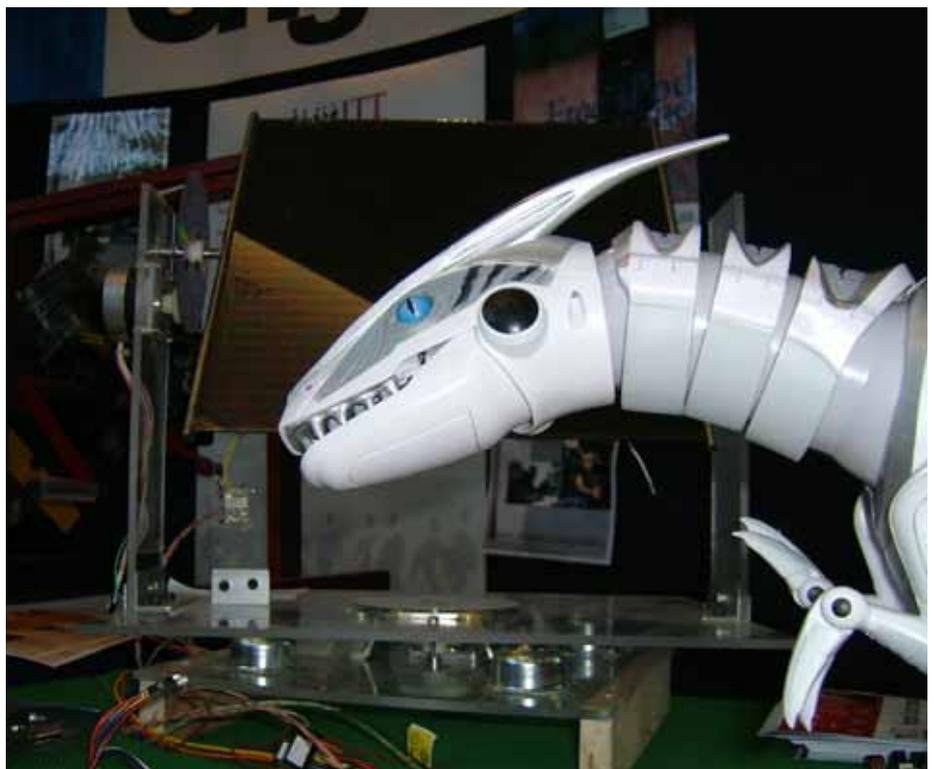
### Recognised Internationally

### Membership of Engineers Ireland

This M.Eng programme is targeted specifically at the area of Electronic Design Engineering. There is a wide breadth and depth requirement in the techniques regarded as indispensable for the design of modern complex electronic products. In the field of Electronic Design Engineering it is unlikely that any single individual will possess all the required skills to sufficient depth. In reality each individual Engineer must endeavour to reach a depth of knowledge in a chosen speciality to allow participation in that discipline as part of a team. The Engineer must also possess a breadth of skills and knowledge to ensure they are not too constrained by their speciality and also to allow for constructive interaction with Engineers from other disciplines.

## Programme overview

Electronic systems can be viewed as a combination of analogue, digital and software sub-systems. Design problems or tasks are often partitioned into sub-systems in each of these categories, and perhaps some others, where they can be tackled by specialist Engineers. Modern Engineers need specialist knowledge i.e. the depth of knowledge to function effectively but must also understand more than just their narrow area and in smaller companies will be required to contribute across a broader spectrum of skills. For example, digital designers need to understand clock skew, cross talk, fan out limitations and much more to be effective while software engineers performing real time software design typically must understand the principles of microprocessor performance and input/output latencies to be effective. This Masters Degree Programme aims to give the students the necessary depth and breadth of knowledge to be effective at a professional level.



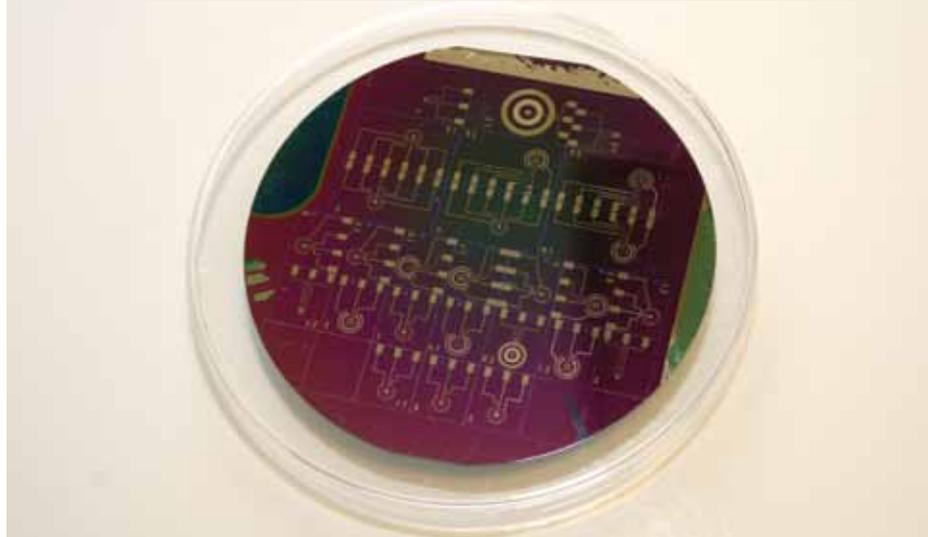
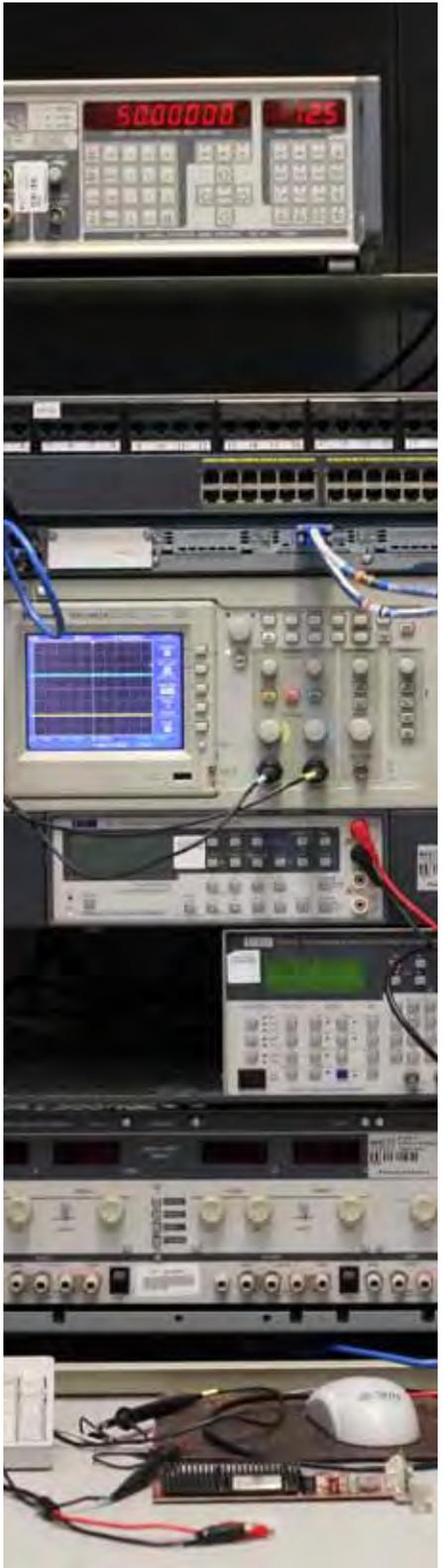


## Programme Structure

This is a year-long Programme and requires the student to take modules in the major area while also taking additional modules to give breadth to their studies. This combination of modules delivers the breadth and depth of knowledge and skills required of a modern graduate. The student is also required to study a module on Technical Innovation and Research Methods which aims to provide lifelong learning and self-learning skills in the crucially important area of research and innovation. In total the student will take eight taught modules. The Project and Dissertation permits further opportunity for skills and knowledge to be developed and practiced. The programme provides a valuable progression route from undergraduate to M.Eng degree, as well as providing a continuing professional development option for Electronic Engineering professionals in industry. Students will study a range of topics which are directly relevant to electronic design engineering and will have the opportunity of acquiring and developing more specialist knowledge through the dissertation element of the programme which accounts for one third of the credits on offer. The programme will provide specialised content in emerging areas and will also develop the graduate's research skills.

## Programme Modules

- Digital System Design 1
- Digital System Modelling
- High Frequency Design
- Engineering Software
- Technical Innovation and Research methods
- Digital Systems Design II
- Digital System Verification
- Radio Frequency Design
- OR**
- Engineering Software Design
- Project & Dissertation



# Department of Mechanical Engineering

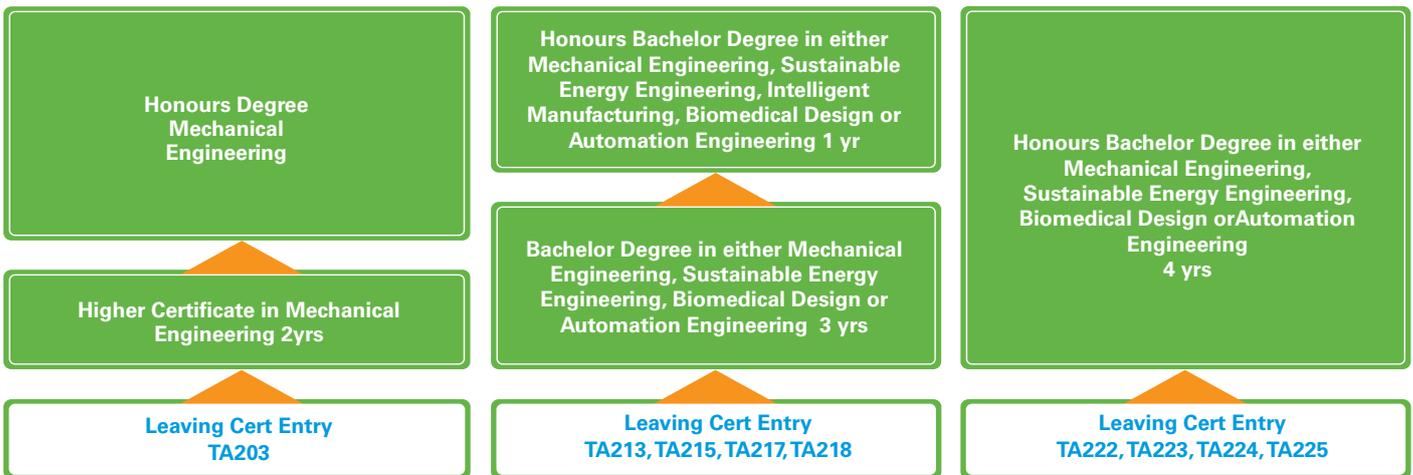
The Department of Mechanical Engineering offers students options to study Mechanical Engineering, Automation Engineering, Sustainable Energy & Environmental Engineering, Biomedical Design.

The Department's flagship programme is the B.Eng (Hons) in Mechanical Engineering. Graduates of this programme have strong analytical, problem solving and design engineering skills. Their communication, ethics, social responsibility, management and environmental skills are highly commended. Engineers Ireland since 1995 have accredited programmes due to the high quality of graduate and recommendations from international academic panels and employers.

The Department's key strengths are in mechanical design, renewable energy, biomedical design, automation, control, robotics, materials science, additive manufacturing and 3D printing.

The first semester of each degree programme is largely common therefore students may apply to move to a different degree discipline at the end of the first year if they wish.

## Department of Mechanical Engineering Programmes 2018



Course	CAO Code	Level	Length of Programme
<b>Higher Certificates – Level 6</b>			
<b>Mechanical Engineering</b>	TA203	Higher Certificate in Engineering - Mechanical Engineering	2 years
<i>follow on Degrees for Certificate graduates</i>			
<b>Bachelor Degrees – Level 7</b>			
<b>Mechanical Engineering</b>	TA213	Bachelor in Engineering - Mechanical Engineering	3 years
<b>Sustainable Energy Engineering</b>	TA215	Bachelor in Engineering - Sustainable Energy & Environmental Engineering	3 years
<b>Automation Engineering</b>	TA217	Bachelor in Engineering - Automation Engineering	3 years
<b>Biomedical Design</b>	TA218	Bachelor in Engineering - Biomedical Design	3 years
<i>follow on Honours Bachelor Degree for successful graduates</i>			
<b>Honours Bachelor Degrees – Level 8</b>			
<b>Mechanical Engineering</b>	TA222	Honours Bachelor in Engineering - Mechanical Engineering	4 years
<b>Sustainable Energy Engineering</b>	TA223	Honours Bachelor in Engineering - Sustainable Energy Engineering	4 years
<b>Biomedical Design</b>	TA224	Honours Bachelor in Engineering - Automation Engineering	4 years
<b>Automation Engineering</b>	TA225	Honours Bachelor in Engineering - Biomedical Design	4 years

CAO Codes TA 203

TA 213

TA 222

# Mechanical Engineering

TA 203 Level 6 Higher Certificate in Mechanical Engineering

TA 213 Level 7 B.Eng in Mechanical Engineering

TA 222 Level 8 B.Eng (Hons) Mechanical Engineering

Mechanical Engineering is one of the most traditional and broadest engineering disciplines. Graduates are in high demand for their ability to design machines and think innovatively. Mechanical engineers are typically creative and have an ability to think logically and manage a project in a systematic manner. They are highly analytical and respected for their novel ideas and problem solving skills.

Mechanical engineers are involved in almost every aspect of your day to day life. Their innovation and design has brought us powerful cars, efficient household appliances and entertainment systems. They combine principles of mechanics, materials and energy to design faster automotive, aeronautical and robotic systems. They are responsible for the development of robot machines, wind turbines, advances in nanotechnology and biotechnology.

## The core subjects are:

- Mechanical Design
- Materials
- Thermodynamics
- Fluid
- Automation & Control
- Manufacturing Systems & Emerging Technologies,
- Computer Aided Design
- Management & Environment
- Measurement Systems
- Final Year Project

## Career Opportunities

The opportunities for Mechanical Engineers are endless. Past graduates have gone to work as creators and designers of new technologies. Some are involved in research of fuel and energy, materials, heating and cooling processes, storage and pumping of liquids and gases. Other graduates of Mechanical Engineering work as process engineers or project engineers in the food, pharmaceutical, medical device, semi-conductor and energy sectors. Often they rise to work at senior management level within a few years of graduating.



## Entry Requirements

### TA 203

Leaving Certificate examination with at least Grade 05 or better in Mathematics and Grade 06 or better in four other subjects including English.

Points Range 200 – 310

Recognised Internationally

Engineering Technician Membership of Engineers Ireland

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

### TA 213

Leaving Certificate with a minimum of Grade 04 in Ordinary Level Mathematics and at least Grade 06 in four other subjects including English.

Points Range 220 – 260

Recognised Internationally

Associate Membership of Engineers Ireland

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

### TA 222

Leaving Certificate Examination with a minimum of two subjects at Higher Level Grade H5 or better, a minimum of Grade 04 in Mathematics or better, and a minimum of three other subjects at Ordinary Level Grade 06 or better. One of the above subjects must be English.

Points Range 280 – 330

Recognised Internationally Membership of Engineers Ireland

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

# Sustainable Energy & Environmental Engineering

TA 215 Level 7 B.Eng in Sustainable Energy & Environmental Engineering  
TA 223 Level 8 B.Eng (Hons) in Sustainable Energy Engineering

## Entry Requirements

### TA 215

Leaving certificate with maths O5/H7 and minimum five O6/H7 (to include English O6/H7 or Irish F3/O6/H7)

### TA 223

Leaving certificate with maths O5/H7 and at least two H5 and minimum three O6/H7 (to include English O6/H7 or Irish F3/O6/H7)

Points range 250 – 400

Recognised international membership of Engineers Ireland

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Sustainable Energy Engineering involves applying the principles of energy conversion and use. The programme investigates renewable energy sources, such as wind energy, solar energy, and other heat sources. Students learn about maintaining and servicing wind turbines, solar energy panels and other equipment associated with alternative energy. As the focus increases to use and integrate renewable energy as a preferred energy source, the need for a qualified workforce is being sought by industry, communities, environmental groups, governments.

The first two years of the programme introduce and develop the fundamental components of engineering, and modules in mechanical and electrical engineering are included along with specialist energy and sustainability modules such as global energy and traditional energy Sources. The third and fourth years specialise further in transport, renewables, energy policy, bio-energy systems and energy design. There is a greater emphasis on energy auditing and energy control systems, simulation and project work in the final stage of the programme.

Ireland's energy sector now ranks alongside pharmaceuticals and ICT as one of the key growth sectors of the Irish economy. Energy consumption and environmental sustainability are two of the most pressing global challenges mankind has to solve as we are currently behind on reducing our emission targets. For this reason governments, recognising the urgency of the challenges, have been developing legislation and policies to try and balance the need for economic growth with a need to protect the environment. These actions are creating new, important and exciting career opportunities for people in this sector.

Graduates would typically work for companies to reduce energy consumption and carbon emissions for businesses, governments and home-owners. Some other roles include wind turbine operation, construction and repair projects. Solar panel manufacturing, design and installation, geo-thermal installations, retrofits for Green energy buildings, Green energy management, Engineering consulting for clean energy project management.

## The core subjects are:

- Renewable Energy Sources
- Traditional Energy
- Environmental Technology
- Global Environment
- Energy & Environmental Regulations
- Energy Control Systems
- Bio- energy Systems
- Thermal Energy Systems
- Energy Auditing
- Smart Technologies



# Biomedical Design

TA 218 Level 7 B.Eng in Biomedical Design

TA 224 Level 8 B.Eng (Hons) in Biomedical Design

## Overview

Biomedical Engineering has a very significant impact on the way we live. Healthcare and engineering professionals work collaboratively on projects to develop innovative new ways of improving our lives with new medical devices and machines. Together, they design new hip implants, contact lenses, heart stents, surgical tools, incubators, spine braces and sports fitness monitoring devices to improve our lives. Along with the clinical medicine experts the biomedical engineers develop laser systems used in corrective eye surgery, cardiovascular surgery and blood monitoring hand-held devices for diabetic patients. The Biomedical Engineering sector employs over 24,000 people in 160 companies in Ireland.

Students at IT Tallaght School of Engineering apply the design and problem solving skills studied as part of their Biomedical Design course to healthcare problems with the aim of improving the type of devices used in healthcare and also the treatments offered to patients.

Graduates of the B.Eng in Biomedical Design 3 year programme may progress to the 4th year of the B.Eng (Hons) in Biomedical Design to further their analytical skills and knowledge through project work in conjunction with industry and surgeons from Our Lady's Children's Hospital Crumlin, Tallaght Hospital, The Mater Hospital and Santry Sports Clinic. Graduates of the 4 year programme may decide to develop their research skills to Masters or PhD level in the strong Bioengineering Research Centre at IT Tallaght or they may opt to work in the rapidly growing Med Tech sector.

## Career Opportunities

Past graduates have gone to work as Medical Device Engineers or Project Engineers with physicians, doctors, nurses, therapists and technicians. Biomedical Design engineers are also employed as design engineers and production engineers in companies producing artificial hip implants, heart stents, braces, contact lenses, respiratory pumps and pacemakers.



## Entry Requirements

### TA 218

Leaving Certificate with a minimum of Grade 04 in Ordinary Level Mathematics and at least Grade 06 in four other subjects including English.

Points Range 240 – 400

Recognised Internationally

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

### TA 224

Leaving Certificate Examination with a minimum of two subjects at Higher Level Grade H5 or better, a minimum of Grade 04 in Mathematics or better, and a minimum of three other subjects at Ordinary Level Grade 06 or better. One of the above subjects must be English.

Points Range 280 – 400

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

## The core subjects are:

- Medical Imaging & Graphics
- Medical Device Design
- Regulatory Affairs
- Orthopaedic Engineering
- Electronic Applications in Healthcare
- Principles of Biology for Engineers
- Biomechanics and Biomaterials.

# Automation Engineering

TA 217 Level 7 B.Eng in Automation Engineering

TA 225 Level 8 B.Eng (Hons) in Automation Engineering

## Entry Requirements

### TA 217

Leaving Certificate with a minimum of Grade O4 in Ordinary Level Mathematics and at least Grade O6 in four other subjects including English.

Points Range 175 – 260

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

### TA 225

Leaving Certificate Examination with a minimum of two subjects at Higher Level Grade H5 or better, a minimum of Grade O4 in Mathematics or better, and a minimum of three other subjects at Ordinary Level Grade O6 or better. One of the above subjects must be English.

Points Range 215 – 400

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

The programme was launched in response to a growing demand from industry for engineers with a greater emphasis on automation and control. Automation Engineers use robotic and sensor technology along with specialised software to programme machines to act intelligently

The main strengths of the programme are in automation, control, programming and integration with computer technology. Automation engineers with strong core mechanical engineering foundations are highly valued within the pharmaceutical, medical devices, food, mechanical and manufacturing sector.

Hands-on learning using the latest robotics technology will be a key part of the programme. Students will practice the skills necessary to build, repair, troubleshoot and maintain electromechanical equipment and also to programme at a higher level for SCADA and Distributed Control Systems. The Automation Final Year Project is a significant element of the programme which is often based in an engineering company and supervised by industry and IT Tallaght academics.

## The core subjects are:

- Embedded Control and Automation
- Industrial Statistics & Quality
- Dynamic Systems Modelling
- Industrial Automation
- Measurement and Interfacing for Control
- Robotic Programming and Vision
- Emerging Manufacturing Technologies
- Manufacturing Systems & Innovative Technologies

Graduates are employed as Control Engineers, Automation Engineers, Process Improvement Engineers, Industrial Robotics, Pneumatic, Hydraulic experts or PLC programmers in industry. They usually work as part of a large project team brought in to automate a particular function in industry or to develop new technologies alongside software developers, mechanical, electrical and electronic engineers.



Award: Masters of Engineering M.Eng  
 Course Level: 9  
 Duration: 1 Year Sept – Sept (Full Time)  
 2 Years (Part Time)

# Master's of Engineering in Mechanical Engineering

IT Tallaght prepares you for leadership positions in the profession of mechanical engineering and gives you the multidisciplinary tools to progress in this dynamic area. A unique aspect of this programme is Global Business which builds on our links with China, Malaysia, and Vietnam to offer you an insight into the practicalities for engineers doing business in Asia.

- Customise your studies by selecting 3 elective modules
- Develop the core technical, research and analytical skills required to work as a professional mechanical engineer.
- Become a critically aware, informed, innovative, self-reflective, and flexible leader with societal awareness and a strong ethical approach.
- Complete an individual project and apply research, analysis and communication tools in developing an innovative solution to a problem posed by industry.
- An MEng is a requirement for Chartered Membership of Engineers Ireland
- Each module has three contact hours per week, including labs and tutorials.

## How to Apply

You can apply online at [www.ittdublin.ie](http://www.ittdublin.ie). Applications open in April of each year.

For further information please email: [mastersmechanical@ittdublin.ie](mailto:mastersmechanical@ittdublin.ie)

## Course Structure

**SEM 1** Lean Six Sigma & Project Management  
 Engineering Computation  
 Design with FEA  
 Control & Simulation  
 Research Methods & Innovation

*Pharmaceutical Operations Management*  
*Systems Modelling*

**Electives**

**SEM 2** Global Business  
 Heat Transfer  
 Comp. Fluid Dynamics  
 Robotics and Vision  
 Research Project

*Advanced Engineering Materials*  
*Sustainable Energy*  
*BioDevice Design*  
*Nanotechnology*

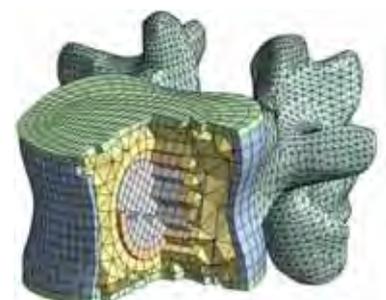
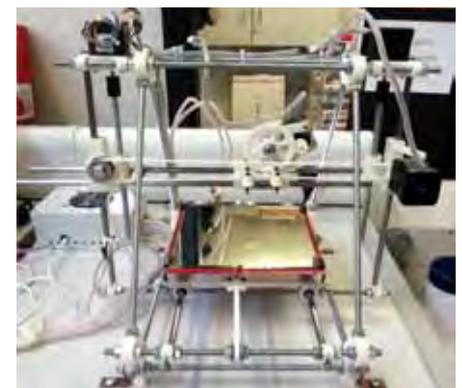
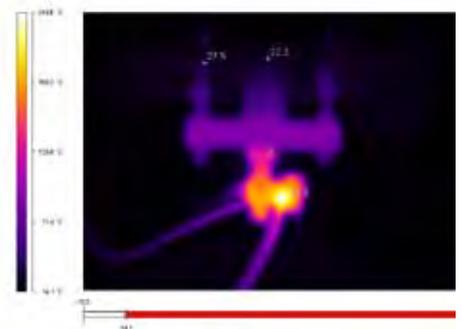
**Electives**

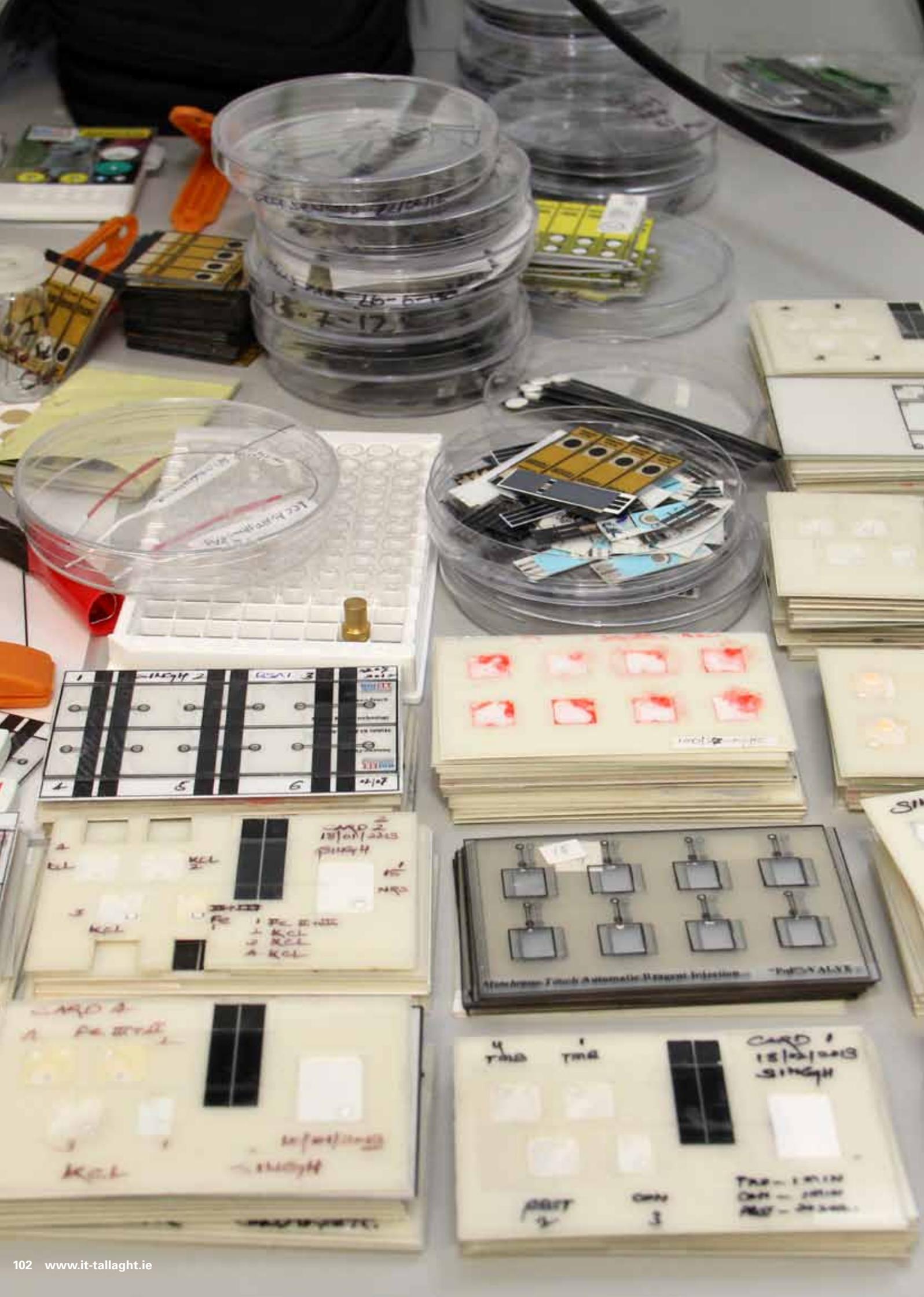
**SEM 3** Research Project (Write up)

**Electives – Choose 3**

## Entry Requirements

BEng (Honours) Mechanical Engineering (minimum 2.2) Degree, at NFQ Level 8 or equivalent.





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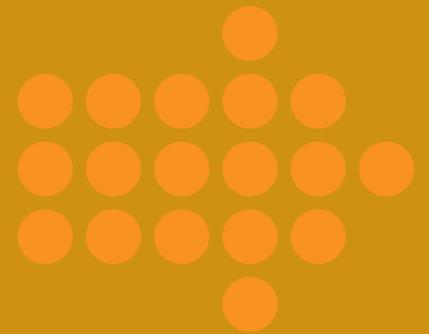
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# School of Science and Computing



**Head of School**

Mike Ahern, BSc, PhD, MEng, HDip, Mgt, MAVS.

**Heads of Department**

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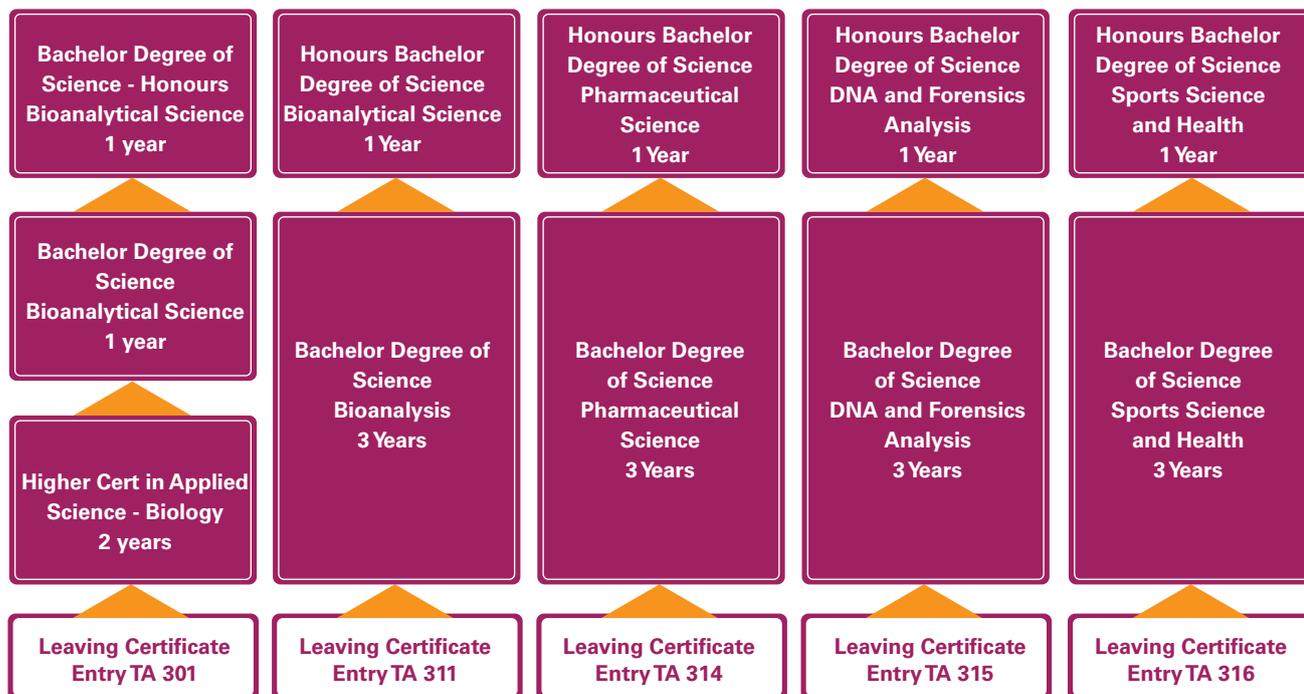
**Science**

John Behan, BSc(Hons), MSc, MBS, (Hons).

**Computing**

Barry Feeney, MSc, PhD.

# Department of Science



Course	CAO Code	Level	Length of Programme
		<b>Higher Certificate – Level 6</b>	
<b>Applied Biology</b>	TA 301	Higher Certificate in Applied Science – Biology	2 Years
		Follow-on Bachelor Degree of Science Ordinary – Bioanalysis	1 Year
		Follow-on Honours Bachelor Degree of Science – Bioanalytical Science	1 Year
		<b>Bachelor Degrees – Level 7</b>	
<b>Bioanalysis</b>	TA 311	Bachelor Degree of Science Ordinary – Bioanalysis	3 years
		Follow-on Honours Bachelor Degree of Science – Bioanalytical Science	1 Year – Post Bachelor Degree Ordinary
<b>Pharmaceutical Science</b>	TA 314	Bachelor Degree of Science Ordinary– Pharmaceutical Science	3 Years
		Follow-on Honours Bachelor Degree of Science - Pharmaceutical Science	1 Year – Post Bachelor Degree
<b>DNA &amp; Forensic Analysis</b>	TA 315	Bachelor Degree of Science Ordinary– DNA and Forensic Analysis	3 Years
		Follow-on Honours Bachelor Degree of Science – DNA & Forensic Analysis	1 Year – Post Bachelor Degree Ordinary
<b>Sports Science &amp; Health</b>	TA 316	Bachelor Degree of Science Ordinary - Sports Science and Health	3 Years
		Follow-on Honours Bachelor Degree of Science – Sports Science and Health	1 Year – Post Bachelor Degree Ordinary

*The biopharmaceutical industry sector in Ireland involves over 120 companies including 16 of the world's top 20 companies and is the second most important sector in the Irish economy.*



**The Department of Science has an active research and development profile. Areas of research include searching for new medicines, developing new methods for the detection of drugs and other chemicals and figuring out how bacteria cause disease and how to stop them**

Course	CAO Code	Level	Length of Programme
<b>Honours Bachelor Degrees – Level 8</b>			
<b>Pharmaceutical Science</b>	TA 321	Honours Bachelor Degree of Science – Pharmaceutical Science	4 Years
<b>DNA &amp; Forensic Analysis</b>	TA 326	Honours Bachelor Degree of Science – DNA and Forensic Analysis	4 Years
<b>Sports Science &amp; Health</b>	TA 327	Honours Bachelor Degree of Science – Sports Science and Health	4 Years





**First year provides students with a fundamental knowledge and understanding of general science with extensive hands-on exposure to the basic practical skills needed to be able to work safely and effectively in a laboratory.**

### **The Structure of the Applied Science Programmes at IT Tallaght**

The Applied Science programmes at IT Tallaght are designed to offer you flexibility in your choice and your career path. You can choose to enter into a 2 year Higher Certificate, 3 year Ordinary Bachelor Degree or 4 year Honours Bachelor Degree programme depending on your particular preference.

You can start with a 3 year B.Sc. Ordinary Degree programme and then take a 1 year add-on to go to B.Sc. Honours Degree. Please note that all the students who complete the BSc Ordinary Degree may not be offered places in a particular year – it depends on the number of applicants.

Alternatively you can enter directly on to the 4 year Honours Bachelor Degree programmes in Pharmaceutical Science, DNS & Forensic Analysis or Sports Science and Health.

There is no direct intake into 1st year of the Honours Bachelor Degree in Bioanalytical Science instead this Honours Bachelor Degree in Bioanalytical Science is obtained by doing the 2 year Higher Certificate in Applied Biology followed by the one year add on BSc Ordinary Degree in Bioanalysis. You may also do a one year add on after completing the BSc Ordinary Degree in Bioanalysis to achieve your Honours Bachelor Degree.

First year in the Higher Certificate in Applied Biology, BSc Ordinary in Bioanalysis, DNA and Forensic Analysis and Pharmaceutical Science is virtually identical in terms of academic content. First year provides students with a fundamental knowledge and understanding of general science with extensive hands-on exposure to the basic practical skills needed to be able to work safely and effectively in a laboratory.

### **Do I need Science at Leaving Certificate? - NO**

You do not have to have studied any of the sciences other than Mathematics at Leaving Certificate though it is advantageous if you have studied one or more. If not, don't worry – you will not be alone and we offer a number of learning supports to help bring people up to a common standard.

### **How are the programmes delivered?**

Small class sizes and significant tutorial support particularly in first year help ensure that students can successfully make the transition to third level education. We have introduced a new module called Learning to Learn at 3rd Level to further help the student make a smooth transition to 3rd level education. We believe in teaching science by doing science. A major emphasis in all our science courses is hands-on practical training ensuring that students develop the skills necessary to

*The sector continues to require employees with specialist technical training and skills at all levels.*

work competently in industry and other laboratory environments.

All of our full-time courses in science are delivered over two semesters (September to January and February to May). There are examinations at the end of each semester but students do have the opportunity to accumulate a significant proportion of their marks through continuous assessment and practical assignments during semester.

### **What Are The Career Prospects For Graduates?**

The biopharmaceutical industry sector in Ireland involves over 120 companies including 16 of the world's top 20 companies and is the second most important sector in the Irish economy. The Irish biopharmaceutical industry is outperforming other sectors in the economy and continues to provide excellent opportunities for science graduates of all disciplines.

An example of a leading biopharmaceutical production and research facility is the Pfizer (formally Wyeth) Biotech Campus at Grange Castle in Clondalkin. It is one of the largest integrated biopharmaceutical production facilities in the world. It employs almost 1,300 people, 60 % of whom are science graduates. This is just one of several success stories in the Irish Biopharmaceutical sector.

The biopharmaceutical sector includes biotechnology, pharmaceutical, chemical and healthcare industries. The sector continues to require employees with specialist technical training and skills at all levels. One of the main reasons that these companies choose to locate in Ireland is our very high educational standards which provides a ready pool of highly educated workers. Between 60% and 70% of all those working in the sector are science graduates. In response to the needs of the

biopharmaceutical sector, we have developed a range of highly relevant courses aimed at meeting industry needs but still allowing graduates the flexibility to diversify into other areas like science teaching, forensic analysis, environmental analysis, quality assurance, microbiology, genetics, biotechnology, chemical sciences, and scientific research and development.

The Department of Science also has an active research and development profile. Areas of research include searching for new medicines, developing new methods for the detection of drugs and other chemicals and figuring out how bacteria cause disease and how to stop them. In addition, there is ongoing collaboration with industry on product development projects.

### **Some Key Areas of Science Covered**

#### **Analysis in the Laboratory**

Analysis is a key activity in every laboratory. It can be simple, for example analysing liquids or solids in order to identify the component elements. This can be the first step on the ladder to the more complex analyses associated with the production of pharmaceutical and health-care products, environmental monitoring, food and agri-production and forensic evidence.

#### **Bioanalysis**

In the science labs at IT Tallaght students are prepared for a future role as laboratory bio-analysts. They learn to detect and quantify all sorts of biological molecules from sugars and proteins, to DNA.

#### **Molecular Biology**

DNA is the substance of life. Molecular biology involves the study of DNA and understanding how information is encoded in it. Manipulating DNA can bring enormous benefits in areas like vaccine production and the design

of new therapies for human disease. Students learn and practice the skills of genetic engineering and DNA fingerprinting and become familiar with their applications.

#### **Immunology**

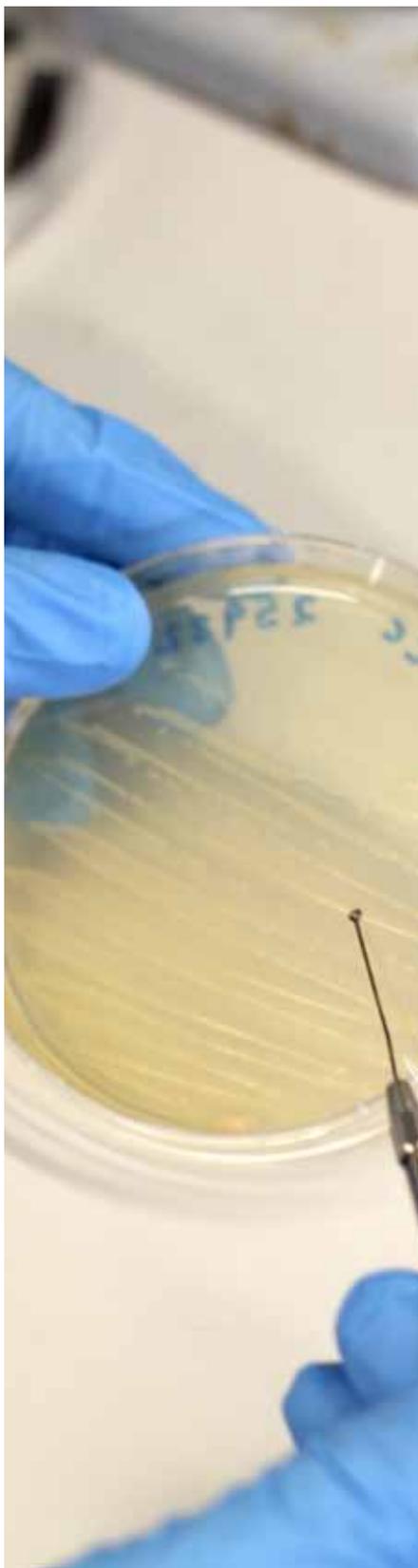
This is the study of how the body's immune system works to protect us from infection and disease. Many of the new drugs now being developed and produced in Ireland for the treatment of diseases like arthritis, psoriasis and eczema are derived from our understanding of immunology.

#### **Sports Science and Health**

Sports Science and Health apply scientific and medical principles to physical performance during sports and exercise. These two fields of healthcare are broad and can lead to many different educational and career opportunities in clinical, sports and academic settings.

#### **DNA and Forensic Analysis**

Forensic science means any science which is used as evidence in a court of law. It is also taken to mean scientific analysis and comparison used in the detection and investigation of crime. It is very important to be aware that many companies outside the state laboratories also carry out forensic analysis e.g. laboratories validating the pedigree of animals or testing for performance-altering drugs in animals or humans. Studying forensics equips the graduate with the analytical skills necessary to work in a range of industries in addition to forensics, including diagnostics, the agri-food sector and biopharmaceuticals. The DNA analysis allows graduates to work in this rapidly growing area of Quality Assurance in companies where DNA analysis is used to rapidly detect contaminants in products a classic example of this is the Regulatory requirement to use DNA analysis techniques to test meat products for contamination.



### **Bachelor of Science in Sports Science and Health -3 year programme**

CAO Code TA316

The Level 7 BSc Degree in 'Sports Science and Health' teaches the application of scientific and medical principles to sports, exercise, and the ability of the body to perform physically. 'Sports Science and Health' is the scientific study of physiology and biomechanics in relation to the ability of the human body to adapt to motion, physical activity and health changes. Students who study sports science will find work in both clinical and academic settings. Obtaining an education in Sports Science can also lead to career opportunities in fitness instruction, sports coaching and lifestyle consultancy. Typical jobs for graduates will include fitness centre/leisure centre manager, lifestyle consultant, sports administrator, sport's coach/instructor & sports development officer. The degree course will include the study of injury prevention, diagnosis and management, how illnesses and disease impact health and physical performance and the application of behavioural science to sports and health.

### **Bachelor Degree in Science DNA Technologies and Forensics - 3 year programme**

CAO Code TA 315

This programme will provide graduates with a broad knowledge and understanding of the core biological and chemical sciences. Practical and problem solving skills will be developed in the laboratory in pharmaceutical, biological, chemical & forensic analysis. Students will also develop a broad knowledge of the theoretical scope and practical elements involved in DNA fingerprinting technology. The programme will provide graduates with the requisite multi-disciplinary knowledge, skills

and competencies to be able to work effectively as analysts in the Biotechnology, Healthcare, Chemical, Pharmaceutical and Forensic sectors.

The biotechnology, pharmaceutical and health-related industries continue to grow and expand throughout the region and across the country which will help sustain demand for graduates of this programme.

### **Bachelor Degree in Pharmaceutical Science - 3 year programme**

CAO Code TA 314

Pharmaceutical science combines a broad range of biology and chemistry disciplines that are critical to the discovery and development of new drugs and therapies. The course covers the development from discovery through to the formulation of the new treatments and highlights the importance of the regulatory requirements to get a new drug on to the market. This is a three year programme, first year and second year are common and develop the fundamental knowledge in chemistry and biology. In year 3 the student also completes a 6-8 month placement as part of the student industrial placement programme (SIPP). This placement gives the student a considerable advantage when seeking employment after completing the course.

### **Honours Bachelor Degree in Science DNA and Forensic Analysis –**

CAO Code TA 326

The first three years are common with the Bachelor Degree in Science DNA Technologies and Forensics. The subsequent year will provide the graduate with additional skills in key areas such as Toxicology, DNA Technologies, Immunodiagnostics and Crime Scene Analysis.

*A major emphasis in all our science courses is hands-on practical training ensuring that students develop the skills necessary to work competently in industry and other laboratory environments.*

This multidisciplinary knowledge will equip the graduate to work effectively as scientists in a range of industries including the healthcare, food and biotechnology sectors as well as in the state laboratories. It will also open up the possibility of pursuing an M.Sc. (masters in science) or a PhD (Doctorate) in research within the department or in other third level colleges. IT Tallaght has recently completed the Centre of Applied Science and Health Research building (CASH centre A 9 million euro investment where Science POST Graduate students carry out their research.

### **Honours Bachelor Degree in Sports Science and Health**

CAO Code TA327

The first three years are common with the Bachelor Degree in Sports Science and Health. The subsequent year will provide the graduate with more in-depth skills in key areas of sports science and sports health.

### **Add-on Honours Degree**

(Bioanalytical Science) Level 8-places may be limited depending on the number of applicants for this course

This programme is a one year add-on to the BSc in Bioanalysis. It gives students advanced level learning and training in modern bioanalytical sciences to prepare them for the challenges of the workplace or for advancement to postgraduate level studies at home or abroad. A project carried out over both semesters develops the students technical, project management and scientific writing skills. During this add-on year, students get a chance to develop a more in-depth knowledge of areas of exciting scientific advancement such as molecular biology (analysis and manipulation of genetic materials).

The scope of the course content ensures a very broad range of career options for our graduates. These include careers in the biopharmaceutical and biotechnology based industries, which are significant employers in the Dublin area. In addition, our graduates have established careers in the food industry, in national reference laboratories, in technical sales, in science teaching and in scientific research both nationally and internationally.

This qualification allows students to progress onto postgraduate research leading to MSc. or Ph.D. awards either at IT Tallaght or in other research institutions.

This programme is also recognised by the Registration Council for the purposes of secondary school teaching of Biology and therefore qualifies students to apply for the Higher Diploma in Education subject to the course continuing to meet the teacher registration council requirements.

### **Bachelor Degree of Science – Bioanalysis**

TA 311 – Level 7

This Level 7 BSc degree in Bioanalysis has been developed and has evolved over the years in direct consultation with key personnel drawn from a number of relevant companies, with past graduates, and with researchers, and academics.

Our principle objective is to provide a degree programme which clearly addresses the educational development needs of students and enables them to meet current and future needs of employers in the area of bioanalytical science. Bioanalytical science is the application of biological sciences to the study and analysis of biological samples allowing the detection of trace amounts of biological molecules, microorganisms,

and chemicals that might be present in or contaminating a biological, environmental, or industrial sample. Bioanalytical techniques have widespread application in industry, public service laboratories, forensic analysis, the food industry and beyond.

The BSc in Bioanalysis has an established reputation amongst employers. The programme will build upon the strengths and learning you gain from your Higher Certificate in Science (Applied Biology) studies. Students may opt to take a year out of college between their Higher Certificate and their BSc studies. This ladder system of qualification provides students with a highly flexible approach to their own career development, which they can tailor to suit their own particular needs. Graduates are eligible to apply for entry to a Level 8 B.Sc. Honours degree (Bioanalytical Science) as a one year add-on at IT Tallaght.

The programme prepares students for work in a laboratory environment where analytical tests and research are undertaken but the career options available to graduates of this programme are many and varied. Graduates have found very good employment in a variety of industries ranging from biotechnology, to food, pharmaceutical, healthcare, hospitals and public service laboratories while others have diversified into technical sales and marketing. Positions held by them include quality control/assurance analysts, production supervisors and managers, technicians, and research assistants.

In the Honours Bachelor Degree programme in Bioanalytical science students develop their skills in the laboratory and deepen their conceptual knowledge of key issues in the bioanalytical area. Preparation for a management role in a bioanalytical

*The Department of Science has an active research and development profile. Areas of research include searching for new medicines, developing new methods for the detection of drugs and other chemicals and figuring out how bacteria cause disease and how to stop them*

laboratory will require students to be familiar with all issues related to laboratory audit, maintenance and development. Their career prospects are excellent.

Applicants for the Level 8 programme are considered on a merit basis and overall suitability for the programme.

### **Higher Certificate in Science – Applied Biology**

TA 301 Level 6

This two year Higher Certificate level 6 programme of study will introduce you to the fascinating world of the biological sciences. Topics covered include how the cell works, the nature of disease, genetics and microbiology.

It is not necessary for you to have studied Biology at Leaving Certificate. Obviously it would be advantageous but some of our graduates did not have Biology at Leaving Certificate! Our approach to teaching and learning ensures that such students are not disadvantaged in any significant way.

The knowledge and practical experience gained in this course will support you going forward into other academic courses or directly into a job in industry.

This two year course will provide approximately 400 hours of actual laboratory experience, a valuable level of experience for potential employers. The lecturers that will support you in your Certificate level course have a wide range of experience in research, education and industry and we take pride in being an approachable and student-focused team. You will study a range of science subjects over this two year programme. These will include Microbiology (the study of bacteria, fungi and viruses), Biochemistry (the chemistry of life) and Drug Delivery (how drugs are manufactured and

tested). This blend of fundamental and applied subjects will enhance your understanding of the relevance of the subjects to the real world and provide the basis for more advanced study in the add-on B.Sc. programme the following year.

On successful completion of your Higher Certificate studies, you may choose to progress onto the B.Sc. degree programme in Bioanalysis for a further year. Students may opt to take a year out of college between their Higher Certificate and their degree studies. This ladder system of qualification provides students with a highly flexible approach to their own career development, which they can tailor to suit their own particular needs. Beyond that, you may progress onto a B.Sc. Honours programme. Obtaining a B.Sc. Honours degree is necessary in order to progress to a Masters Degree or a Doctoral Degree.

Some of our past students have developed careers in hospital laboratories, in industry and in research. Graduates have stayed in ITT or moved onto other Institutes of Technology and Universities to complete Masters and Doctoral Level programmes. Two of our former Certificate level graduates have attended Harvard University!

### **Add-on Bachelor Degree in Science**

(Bioanalysis) Level 7

Graduates of the Higher Certificate in Science - Applied Biology can move on to the BSc in Bioanalysis, a one-year add-on programme. The programme will further develop student learning and skills in biology. Graduates find employment in a variety of industries ranging from biotechnology, to food, pharmaceutical, healthcare, hospitals and public service laboratories while others diversify into technical sales and marketing roles. Positions held

by current graduates include quality control/assurance analysts, production supervisors and managers, technicians, and research assistants.

### **Add-on Honours Degree (Bioanalytical Science) Level 8**

This programme is a one year add-on to the BSc in Bioanalysis. It gives students advanced level learning and training in modern bioanalytical sciences to prepare them for the challenges of the workplace or for advancement to postgraduate level studies at home or abroad. A project carried out over both semesters develops the students technical, project management and scientific writing skills. During this add-on year, students get a chance to develop a more in-depth knowledge of areas of exciting scientific advancement such as molecular biology (analysis and manipulation of genetic materials).

The scope of the course content ensures a very broad range of career options for our graduates. These include careers in the biopharmaceutical and biotechnology based industries, which are significant employers in the Dublin area. In addition, our graduates have established careers in the food industry, in national reference laboratories, in technical sales, in science teaching and in scientific research both nationally and internationally.

This qualification allows students to progress onto postgraduate research leading to MSc. or Ph.D. awards either at IT Tallaght or in other research institutions.

This programme is also recognised by the Registration Council for the purposes of secondary school teaching of Biology and therefore qualifies students to apply for the Higher Diploma in Education.

# Science (Applied Biology)

## Higher Certificate

### What will I study?

- Year 1** Learning to Learn at 3rd Level, Biology 1, Chemistry 1, Physics 1, Mathematics 1, Lab Skills 1- including Laboratory Practices & Procedures, Biology 2, Chemistry 2, Physics 2, Mathematics 2, Laboratory Skills 2.
- Year 2** Scientific Analysis 1, Statistics, Principles of Biochemistry, General Microbiology, Laboratory Skills 3, Scientific Analysis 2, Principles of Genetics, Pharmaceutical Microbiology, Biochemistry, Laboratory Skills 4.
- Year 3** **Follow-on Bachelor Degree Ordinary in Science (Bioanalysis) - 1 Year**  
Analytical Techniques 1, Good Manufacturing Practice and Quality Systems, Medical Microbiology, Pharmaceutical Biotechnology, Laboratory Skills 5, Analytical Techniques 2, Pharmacology, Food Microbiology, DNA Analysis 1, Laboratory Skills 6.
- Year 4** **Follow-on Honours Bachelor in Science Degree (Bioanalytical Science). 1 Year**  
Bioanalytical Techniques 1, Bioprocess Technology, Industrial Statistics, Scientific Communication and Student Project 1, Laboratory Skills 7, Bioanalytical Techniques 2, Immunodiagnosics, DNA Analysis II, Advanced Biopharma and Cell Technology, Student Project 2.

CAO Code TA 301

Course Level: 6

Length of course: 2 years

Follow-on Degrees:

Bachelor Degree in Science Degree (Bioanalysis). 1 Year

Bachelor in Science Degree (Bioanalytical Science). 1 Year

### Entry Requirements

Leaving Certificate examination with at least Grade O6 or better in five subjects including Mathematics and English or Irish.

No Leaving Cert Science subject is required for this programme

Recent CAO minimum points: 235

Points Range 235 – 470

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Qualified students welcome to join Degree programmes

Research opportunities at Post Graduate level

MSc and PhD

Honours Bachelor Degree recognised for teaching Biology in Ireland at Second Level

Links Scheme

Laboratory Techniques (CASLT) (with a pass in Level 5 Maths), Food (CASFX) (with a pass in Level 5 Maths and either Biology or Physics as elective modules)



CAO Code TA 311

Course Level: 7

Length of course: 3 years

Follow-on Degrees:

Bachelor of Science Degree

(Bioanalytical Science) 1 year- places may be limited on 1 year add on

## Entry Requirements

Leaving Certificate examination with at least ordinary level Grade O6 or better in five subjects. The subject list must include Mathematics and either English or Irish.

No Leaving Cert Science subject is required for this course

Recent minimum CAO points: 240

Points Range 240 – 400

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

# Bioanalysis

## Bachelor Degree of Science

This Level 7 BSc degree in Bioanalysis has been developed and has evolved over the years in direct consultation with key personnel drawn from a number of relevant companies, with past graduates, and with researchers, and academics.

Our principle objective is to provide a degree programme which clearly addresses the educational development needs of students and enables them to meet current and future needs of employers in the area of bioanalytical science. Bioanalytical science is the application of biological sciences to the study and analysis of biological samples allowing the detection of trace amounts of biological molecules, microorganisms, and chemicals that might be present in or contaminating a biological, environmental, or industrial sample. Bioanalytical techniques have widespread application in industry, public service laboratories, forensic analysis, the food industry and beyond.

The BSc in Bioanalysis has an established reputation amongst employers. The programme will build upon the strengths and learning you gain from your Higher Certificate in Science (Applied Biology) studies. Students may opt to take a year out of college between their Higher Certificate and their BSc studies. This ladder system of qualification provides students with a highly flexible approach to their own career development, which they can tailor to suit their own particular needs. Graduates are eligible to apply for entry to a Level 8 B.Sc. Honours degree (Bioanalytical Science) as a one year add-on at IT Tallaght.

The programme prepares students for work in a laboratory environment where analytical tests and research are undertaken but the career options available to graduates of this programme are many and varied. Graduates have found very good employment in a variety of industries ranging from biotechnology, to food, pharmaceutical, healthcare, hospitals and public service laboratories while others have diversified into technical sales and marketing. Positions held by them include quality control/assurance analysts, production supervisors and managers, technicians, and research assistants.

In the Honours Bachelor Degree programme in Bioanalytical science students develop their skills in the laboratory and deepen their conceptual knowledge of key issues in the bioanalytical area. Preparation for a management role in a bioanalytical laboratory will require students to be familiar with all issues related to laboratory audit, maintenance and development. Their career prospects are excellent.

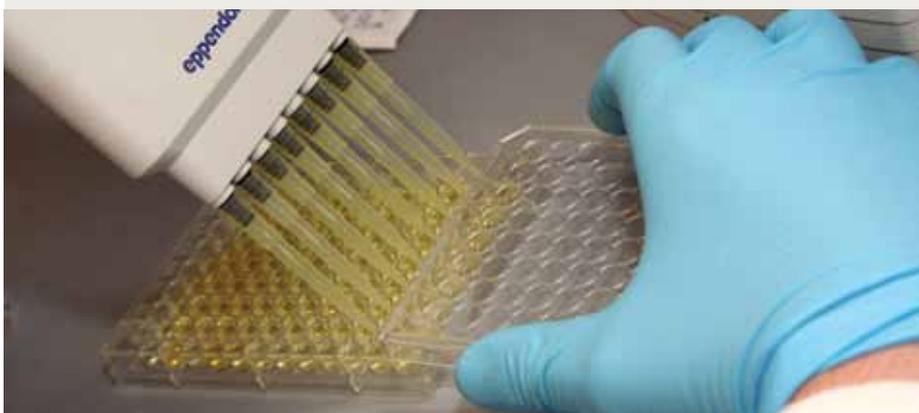
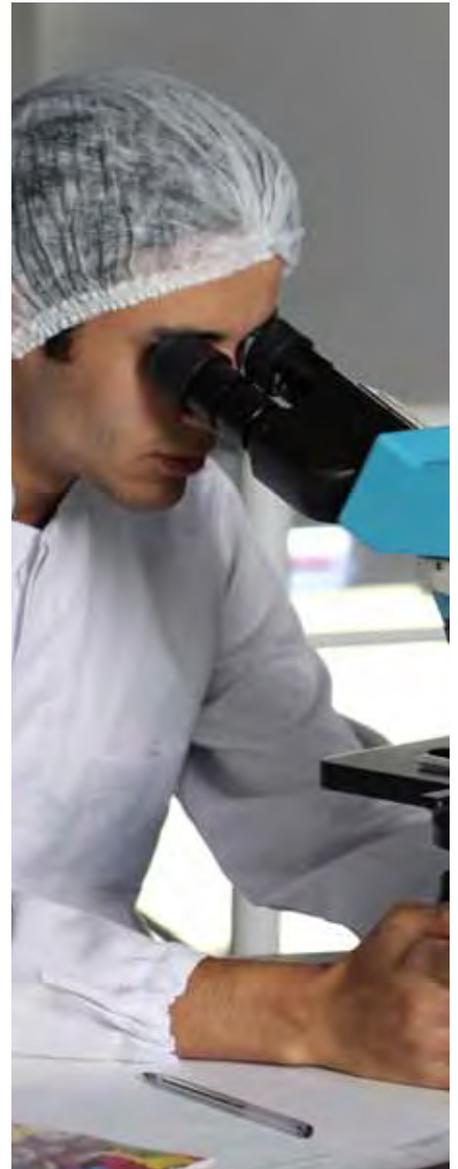
Applicants for the Level 8 programme are considered on a merit basis and overall suitability for the programme.

## Careers Prospects

Excellent prospects. Graduates can expect to establish careers in the biotechnology, biopharmaceutical, food production, environment, healthcare areas, and also to work in hospital, industrial and public service laboratories.

## What will I study?

- Year 1** Learning to Learn at 3rd Level, Biology 1, Chemistry 1, Physics 1, Mathematics 1, Lab Skills 1- including Laboratory Practices & Procedures, Biology 2, Chemistry 2, Physics 2, Mathematics 2, Laboratory Skills 2.
- Year 2** Scientific Analysis 1, Statistics, Principles of Biochemistry, General Microbiology, Laboratory Skills 3, Scientific Analysis 2, Principles of Genetics, Pharmaceutical Microbiology, Biochemistry, Laboratory Skills 4.
- Year 3** Analytical Techniques 1, Good Manufacturing Practice and Quality Systems, Medical Microbiology, Pharmaceutical Biotechnology, Laboratory Skills 5, Analytical Techniques 2, Pharmacology, Food Microbiology, DNA Analysis 1, Laboratory Skills 6.
- Year 4** **FOLLOW-ON Honours Bachelor of Science Degree (Bioanalytical Science) 1 year-places offered may be limited subject to number of applicants**  
Bioanalytical Techniques 1, Bioprocess Technology, Industrial Statistics, Scientific Communication and Student Project 1, Laboratory Skills 7, Bioanalytical Techniques 2, Immunodiagnosics, DNA Analysis II, Advanced Biopharma and Cell Technology, Student Project 2.



CAO Code TA 315

Course Level: 7

Length of course: 3 years

Follow-on Degrees:

Bachelor Degree Honours in DNA and Forensic Analysis-places offered may be limited depending on numbers

# DNA and Forensic Analysis

## Bachelor Degree Ordinary in Science

### Entry Requirements

Leaving Certificate examination with at least ordinary level Grade O6 or better in five subjects. The subject list must include Mathematics and either English or Irish.

No Leaving Cert Science subject is required for this course

Recent minimum CAO points: 285

Points Range 285 – 570

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Forensic science is the application of scientific knowledge and techniques in support of the legal process. There has been a huge increase in the application of DNA technologies in forensics but also in a wide range of industries and in the state laboratories.

This programme will provide graduates with a broad knowledge and understanding of the core biological, and chemical sciences. Practical and problem solving skills will be developed in the laboratory in pharmaceutical, biological and chemical & forensic analysis. Students will also develop both theoretical understanding and practical skills in DNA fingerprinting technology. The programme will provide graduates with the requisite multi-disciplinary knowledge, skills and competencies to be able to work effectively as analysts in the Biotechnology, Healthcare Chemical, Pharmaceutical and Forensic based laboratories.

The biotechnology, pharmaceutical and healthcare industries continue to grow and expand throughout the region and across the country. Expert group reports suggest a continuing shortfall in the numbers of suitable graduates throughout the coming years. The Biotechnology & Pharmaceutical industries are particularly strong in Ireland at present and further expansions are envisaged in the future. Graduates of this discipline will be ideally placed to work in these industries.

### What will I study?

**Year 1** Learning to Learn at Third Level, Biology 1, Chemistry 1, Mathematics I, Introduction to Forensic Science, Laboratory Skills 1 for Forensics, Biology 2, Chemistry 2, Mathematics 2, Physics, Laboratory Skills II for Forensics.

**Year 2** Statistics, Organic Chemistry, Chromatography & Evidence Searching, General Microbiology, Laboratory Skill III for Forensics, Spectroscopic Techniques, Principles of Genetics, Physical & Inorganic Chemistry, Biochemistry, Laboratory Skills IV for Forensics.

**Year 3** Analytical Techniques I, Forensic Genetics, Good Manufacturing Practice and Quality Systems, Organic Reactions and Mechanisms, Laboratory Skills V for Forensics, Materials and Trace Analysis, DNA Analysis I, Law and Ethics for Forensics, Pharmacology, Laboratory Skills 6 for Forensics.

**Year 4** **FOLLOW-ON Degree Bachelor Degree Honours in DNA and Forensic Analysis-places offered may be limited depending on numbers** Statistics for Forensics, Advanced Analytical Techniques and Impression Evidence, Forensic Toxicology, Inorganic Chemistry, Integrated Lab Techniques, Criminal Evidence, Evaluation and Presentation, DNA Analysis II, Organic & Polymer Chemistry, Drug Analysis, Project.

CAO Code TA 326

Course Level: 8

Length of course: 4 years

# DNA and Forensic Analysis

## Honours Bachelor Degree of Science

The final year in the Honours Degree will build on the analytical skills developed over the previous three years. These skills will be developed across a broad range of scientific disciplines including forensics, DNA technologies, diagnostics, rapid detection of microbial contaminants and the use of genetic markers for predicting disease. Students will also study crime scene techniques and expand their knowledge of criminology. There will be an opportunity to choose either a chemistry or biology elective to gain greater insight into areas of particular interest.

The Biotech and food industries requirements for graduates with well developed analytical and problem-solving skills will continue to grow as rapid methods of detection and diagnostic kits are further developed.

### What will I study?

- Year 1** Learning to Learn at Third Level, Biology 1, Chemistry 1, Mathematics I, Introduction to Forensic Science, Laboratory Skills 1 for Forensics, Biology 2, Chemistry 2, Mathematics 2, Physics, Laboratory Skills II for Forensics.
- Year 2** Statistics, Organic Chemistry, Chromatography & Evidence Searching, General Microbiology, Laboratory Skill III for Forensics, Spectroscopic Techniques, Principles of Genetics, Physical & Inorganic Chemistry, Biochemistry, Laboratory Skills IV for Forensics.
- Year 3** Analytical Techniques I, Forensic Genetics, Good Manufacturing Practice and Quality Systems, Organic Reactions and Mechanisms, Laboratory Skills V for Forensics, Materials and Trace Analysis, DNA Analysis I, Law and Ethics for Forensics, Pharmacology, Laboratory Skills 6 for Forensics.
- Year 4** Statistics for Forensics, Advanced Analytical Techniques and Impression Evidence, Forensic Toxicology, Inorganic Chemistry, Integrated Lab Techniques, Criminal Evidence, Evaluation and Presentation, DNA Analysis II, Organic & Polymer Chemistry, Drug Analysis, Project.

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better. A science subject is not required.

No Leaving Cert Science subject is required for this course

Recent minimum CAO points: 300

Points Range 300 – 500

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Post Graduate level

MSc and PhD

Careers Prospects Excellent

CAO Code TA 316

Course Level: 7

Length of course: 3 years

Follow-on Degrees:

Bachelor of Science Honours in Sports  
Science and Health 1 year Add on

# Sports Science and Health

## Bachelor Degree of Science

### Entry Requirements

Leaving Certificate examination with at least ordinary level Grade O6 or better in five subjects. The subject list must include Mathematics and either English or Irish.

No Leaving Cert Science subject is required for this course

Recent minimum CAO points: 360

Points Range 360 – 570

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

The level 7 BSc (Ord) Degree in 'Sports Science and Health' involves applying scientific and medical principles to sports, exercise, and the ability of the body to perform physically. The course covers a broad range of disciplines and can lead to many different educational and career opportunities.

'Sports Science and Health' is the scientific study of physiology and exercise science in relation to the ability of the human body to adapt to motion, movement, physical activity and health changes. Students who study 'Sports Science and Health' will find work in both clinical and academic settings. Alternatively, obtaining a degree in 'Sports Science and Health' can also lead to career opportunities in fitness instruction, scientific research, and health-related areas.

This degree course focuses on the medical aspects of physical activity. Professionals in 'Sports Science and Health' will obtain a full and thorough understanding of the identification, treatment and prevention of injuries that happen during everyday life, illness, physical activity, athletic training, and sporting events. Courses will involve the study of injury prevention, diagnosis, treatment, and management, and also understanding how illness and disease impact health, well-being and physical performance.

For most related professions, earning a Bachelor of Science (BSc) degree in 'Sports Science and Health' may be the starting point for working in the Sports and Healthcare fields. The BSc (Ord) in 'Sports Science and Health' will emphasize the general concepts of physiology, medical science, nutrition, health, and related training.

It is possible to enter a career in the sport and leisure industry in the public or private sector directly from this degree course. Potential Employment or Progression Opportunities may include:

**Fitness Centre/Leisure Centre Manager** - employed mainly in commercial public and private sector health clubs and gymnasia to manage the provision of physical fitness and lifestyle programmes.

**Lifestyle Consultant** - employed mainly in the private sector to provide physical fitness instruction and prescription of exercise/fitness programmes for individuals.

**Sports Administrator** - works within a governing body or the Sports Council incorporating a significant emphasis administrative and financial aspects.

**Sports Coach/Instructor** - This work can also form part of the work of a sports development officer or a recreation assistant in a sports centre.

**Sports Development Officer** - promotes various sports within the community, usually amongst particular target groups, or develops one sport on behalf of a local authority, governing body or professional association.

**Sports Therapist** - mainly concerned with the prevention and treatment of injury in sport and with improving and maintaining physical performance .

**Exercise Physiologist** - studies the acute and chronic physiological responses and adaptations resulting from physical activity. Exercise physiologists work and study in commercial, clinical and workplace settings to increase health, fitness and quality of life in the general population.

**Physical / Occupational Physiologist** - work with many different professionals to improve the performance of workers by enhancing their health and occupational abilities, preventing or rehabilitating workplace injuries and assisting in recovery from injuries or disease of the muscles, joints, nerves or bones.

**Medical / Scientific Researcher** - conducts studies from either a basic or applied science perspective such as ways to increase athletic performance or how to improve health and reduce disease.

## Career Prospects

A wide range of opportunities for a career in the sport and leisure industry in the public or private sector

## What will I study?

**Year 1** Learning to Learn at Third Level, Exercise Physiology, Chemical Science, Physical Education, Practical Skills for Sports Science & Health 1, Human Anatomy, Principles of Physics, Sports Coaching and Training, Fundamentals of Mathematical Science, Practical Skills for Sports Science & Health 2.

**Year 2** Sports Sample Analysis, Principles of Pharmacology, Principles of Sports Medicine, Applied Exercise Physiology, Practical Skills for Sports Science & Health 3, Biomechanics of Human Anatomy, Functional Biochemistry, Fundamentals of Behavioral Science, Motor Learning, Practical Skills for Sports Science & Health 4.

**Year 3** Nutritional Biology, Public Health Microbiology, Business Development, Physical Activity and Metabolic Health, Practical Skills for Sports Science & Health 5, Applied Behavioral Science, Clinical Immunology, Epidemiology of Injury, Ergonomics of Training, Practical Skills for Sports Science & Health 5, Optional – Vocational Skills.

**Year 4 FOLLOW ON DEGREE**  
**Bachelor of Science Honours in Sports Science and Health 1 year Add on-places may be limited depending on numbers of applicants**  
Nutrition Metabolism and Health, Performance Analysis, Current Issues in Behavioral Science, Physical Activity and Cardiovascular Health, Student Project 1, Current Issues in Exercise Physiology, Applied Biomechanics, Student Project 2, Exercise Health and Immune function.



CAO Code TA 327

Course Level: 8

Length of course: 4 years

# Sports Science and Health

## Honours Bachelor Degree of Science

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better. A science subject is not required.

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No Leaving Cert Science subject is required for this course

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Recent minimum CAO points: 365

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Points Range 365 – 480

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Recognised in Europe

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

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Research opportunities at Post Graduate level

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Level 8 Honours Degree is required for direct entry to MSc and PhD Research Programmes.

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The first three years of the BSc (Hons) in Sports Science and Health are common with the BSc (Ord) degree in Sport Science and Health. The additional year provides the opportunity for the students to develop their diagnostic, training and research skills. Successful graduates will have a qualification that allows them to pursue further studies to masters and doctorate level. The career opportunities available to sport and health scientists are expanding all the time and this expansion appears likely to continue for the foreseeable future. Potential employment for Honours graduates in Sports Science and Health include:

**Biomechanist** – Biomechanics is primarily concerned with enhancing and optimising the way we move. Sports biomechanics uses the scientific principles of mechanics to study the effects of various forces on health and sporting performance. Work may involve a diverse range of duties ranging from performance analysis through to in-depth 3D video kinematic analysis.

**Clinical Exercise Physiologist** – The role of a clinical exercise physiologist is a varied one; working as part of a multidisciplinary team of clinicians and allied health professionals our aim is to provide expert advice on exercise for persons with chronic diseases (coronary heart disease, diabetes, chronic obstructive pulmonary disease, etc).

**Health Promotion Specialist** – A physical activity and health promotion specialist is involved in developing and promoting initiatives to help health professionals encourage more people to take more activity as part of daily life. The position consists of liaising with key agencies within public health to raise the profile of physical activity by increasing awareness of the benefits to health from its participation.

**Performance Analyst** – Performance analysis as a discipline lies somewhere between notational analysis and sports biomechanics. As yet a conclusive definition for the area has yet to be formalised due to its recent inception. However, it involves the collection of statistical data and video footage in a reliable and consistent manner so that tactical and technical inferences can be made with regard to an athlete's or team's performance.

**Sport and Exercise Psychologist** - This branch of psychology and sport and exercise science is concerned with the behaviour and mental processes of people who are involved in sport or exercise. Sport psychologists work with sports participants across a range of both team and individual sports and from amateur to elite levels of competition. In contrast, an exercise psychologist is primarily concerned with the application of psychology to increase exercise participation and motivation levels in the general population and to ensure that exercisers gain the psychosocial benefits that exercise can offer.

**Strength and Conditioning Coach** – A strength and conditioning coach is involved in the physical and physiological development of athletes for elite sport performance. The job involves bridging the gap between the theory of training and applied training. Work typically involves helping an athlete/team prepare for a major event.

## Career Prospects

The career opportunities available to sport and health scientists are expanding all the time and include health promotion specialist, performance analyst, progression to teaching qualifications and further studies to masters and doctorate level.

## What will I study?

- Year 1** Learning to Learn at Third Level, Exercise Physiology, Chemical Science, Physical Education, Practical Skills for Sports Science & Health 1, Human Anatomy, Principles of Physics, Sports Coaching and Training, Fundamentals of Mathematical Science, Practical Skills for Sports Science & Health 2.
- Year 2** Sports Sample Analysis, Principles of Pharmacology, Principles of Sports Medicine, Applied Exercise Physiology, Practical Skills for Sports Science & Health 3, Biomechanics of Human Anatomy, Functional Biochemistry, Fundamentals of Behavioral Science, Motor Learning, Practical Skills for Sports Science & Health 4.
- Year 3** Nutritional Biology, Public Health Microbiology, Business Development, Physical Activity and Metabolic Health, Practical Skills for Sports Science & Health 5, Applied Behavioral Science, Clinical Immunology, Epidemiology of Injury, Ergonomics of Training, Practical Skills for Sports Science & Health 5.
- Year 4** Nutrition Metabolism and Health, Performance Analysis, Current Issues in Behavioral Science, Physical Activity and Cardiovascular Health, Student Project 1, Current Issues in Exercise Physiology, Applied Biomechanics, Student Project 2, Exercise Health and Immune function.



CAO Code: Not applicable. This is an add-on degree.

# Bioanalytical Science

## Honours Bachelor Degree of Science

Add-on – Level 8-places offered may be limited depending on the number of applicants

Bachelor Degree Honours in Science  
(Bioanalytical Science)

1 year add-on to the B.Sc. Bioanalysis (TA311)

Recognised in Europe

Research opportunities at Post Graduate level

MSc and PhD

Honours Bachelor Degree recognised for  
Teaching Biology in Second Level schools in  
Ireland

The principle objective with this programme is to provide students with advanced level learning and training in modern bioanalytical sciences and prepare them for the challenges of entering into the workplace or for advancement to postgraduate level studies at home or abroad. Major subject areas covered include microbiology, biochemistry, and molecular biology (analysis and manipulation of genetic materials).

The scope of the course content ensures a very broad range of career options for our graduates. These include careers in the biopharmaceutical and biotechnology based industries, which are significant employers in the Dublin area. In addition, our graduates have established careers in the food industry, in national reference laboratories, in technical sales, in science teaching and in scientific research both nationally and internationally. This qualification allows students to progress onto postgraduate research leading to MSc. or Ph.D. awards either at IT Tallaght or in other research institutions.

Embedded within this degree are the Higher Certificate in Applied Biology and the B.Sc. in Bioanalysis. This gives students the flexibility of stepping off at year 2 or 3 with a final qualification. The majority of students however elect to complete the 4 years of the B.Sc. (Hons) programme. Successful completion of the B.Sc. (Hons) programme is recognised as an entry point onto the Higher Diploma in Education for those interested in a teaching career at second level. This programme is also recognised by the Registration Council for the purposes of secondary school teaching of Biology.

### Careers Prospects

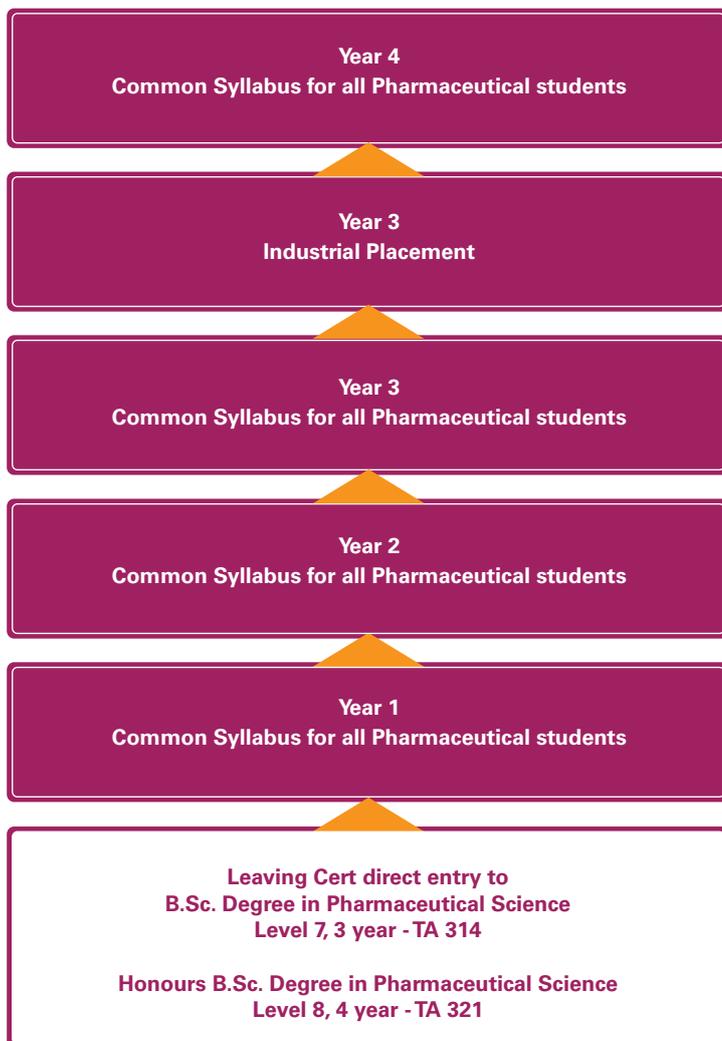
Excellent prospects. Graduates can expect to establish careers in the biotechnology, biopharmaceutical, food production and environmental sciences areas, or to work in hospital, industrial and public service laboratories.

### What will I study?

- Bioanalytical Techniques 1
- Bioprocess Technology
- Industrial Statistics
- Scientific Communication and Student Project 1
- Laboratory Skills 7
- Bioanalytical Techniques 2
- Immunodiagnostics
- DNA Analysis II
- Advanced Biopharma and Cell Technology
- Student Project 2



# The Pharmaceutical Centre at IT Tallaght



**Pharmaceutical manufacture and formulation is a rapidly expanding industry in Ireland. Nine out of ten of the top companies in the world have operations in Ireland.**

IT Tallaght houses an actual fully equipped mini pharmaceutical facility which is unique in Ireland's educational sector. Known as the National Pharmaceutical Education Centre, it is where students follow the very exacting procedures involved in making powders, tablets, creams, antibiotics, protein drugs, enzymes and the ingredients used in a range of medical treatments. The strict regulatory controls and quality assurance guarantees that operate in the industry are paralleled here. Student formulations and analysis are carefully monitored and each stage in the parallel production operates to very demanding industry standards.

It is an excellent preparation for students about to follow careers in a modern technologically driven industry that operates to very high standards, and that will attract a large number of young Irish scientists well into the future.



CAO Code TA 314

Course Level: 7

Length of course: 3 years

# Pharmaceutical Science

## Bachelor Degree of Science

### Entry Requirements

Leaving Certificate examination with at least ordinary level Grade O6 or better in five subjects. The subject list must include Mathematics and either English or Irish.

No Leaving Cert Science subject is required for this programme

Recent minimum CAO points: 280

Points Range 280 – 550

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

### What is Pharmaceutical Science?

The pharmaceutical sciences combine a broad range of biology and chemistry disciplines that are critical to the discovery and development of new drugs and therapies, for example the knowledge and skills required to design and make new anti-cancer and anti-viral agents. Students learn about drug development from discovery through to formulation. The course also highlights the importance of regulatory requirements in bringing new drugs to market. Over the three years of the course students are introduced to the technical, regulatory and management aspects of pharmaceutical development and manufacturing.

### Programme Outline

This course is of three years duration, with two semesters in each year. First second and 3rd year of the programme are common and focus on developing fundamental knowledge and skills in both biology and chemistry. For the final part of the course, i.e. semester 6 the Spring semester in year 3 the student completes a 6-8 month placement as part of the student industrial placement programme (SIPP). This placement gives the student a considerable advantage when seeking employment after completing the course. The majority of placements are based in Pharmaceutical companies in Ireland but there are some opportunities to work abroad as part of the Erasmus scheme.

### Career Opportunities

The pharmaceutical industry in Ireland is an international leader. Opportunities are excellent and graduates are in demand in the following areas: pharmaceutical, health-care, biopharmaceutical, medical devices, biotechnology, and research.



## What will I study?

- Year 1** Learning to Learn at Third Level  
Biology 1  
Chemistry 1  
Physics 1  
Laboratory Practices & Procedures  
Mathematics 1  
Laboratory Skills 1 including Laboratory Practices & Procedures  
Biology 2  
Chemistry 2  
Physics 2  
Mathematics 2  
Laboratory Skills 2
- Year 2** Drug Formulation and Regulatory Compliance  
Organic Chemistry  
Principles of Biochemistry  
Pharmaceutical Analysis  
Lab Skills 3 for Pharma Science  
API Process & Environmental Technology  
Pharmaceutical Microbiology  
Physical and Inorganic Chemistry  
Statistics  
Lab Skills IV
- Year 3** Aseptic Manufacture  
Pharmaceutical Biotechnology  
3D Organic Chemistry  
Lab Skills for Pharma Science  
Good Manufacturing Practice and Quality Systems  
Student Industrial Placement/Student Placement Alternative
- Year 4** **BSc Honours in Pharmaceutical Science -One year Add on to TA 314 places may be limited depending on the number of applicants**  
Systems Validation  
Bioprocess Technology  
Drug Synthesis  
Integrated Laboratory Techniques  
Industrial Statistics  
Clinical Statistics  
Project  
Advanced Biopharma and Cell Technology  
Manufacturing Technology  
Advanced Analytical Techniques



CAO Code TA 321

Course Level: 8

Length of course: 4 years

# Pharmaceutical Science

## Honours Bachelor Degree of Science

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better. A science subject is not required.

No Leaving Cert Science subject is required for this programme

Recent minimum CAO points: 280

Points Range 280 to 440

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits.

Research opportunities at Post Graduate level

MSc and PhD

The first three years are common with the Pharmaceutical Science course. The duration of the honours degree course is four years and includes a work placement for 6-8 months in Year 3, as part of the Student Industrial Placement Programme (SIPP). Many previous graduates have been employed on graduation by the company with which they completed their SIPP placement. Students are equipped to enter the pharma or Bio pharma industries after completion of this programme.

The course work is almost equally divided between practical laboratory classes and lecture classes. The programme is designed to help students deepen their knowledge of and develop practical skills in, chemical and biological industrial processes. Students learn how to apply these valuable skills in solving technical problems in industry. In addition they learn about the operation of the biopharmaceutical industry and the quality control and manufacturing systems employed by industry.

### Career paths

The pharmaceutical industry is involved in the making of drug molecules, drug ingredients, tablets, injections and creams which are used to treat a wide range of medical conditions. Ireland is a key location for the pharmaceutical and chemical industry in Europe. 16 of the top 20 companies in the world have operations in Ireland and have an ongoing need for a highly educated and skilled workforce. Honours graduates are also in a position to pursue research studies to M.Sc. or PhD level or can further their studies with a taught-masters in a relevant discipline.

### Career Opportunities

The pharmaceutical industry in Ireland is an international leader. Opportunities are excellent and graduates are in demand in the following areas: pharmaceutical, healthcare, biopharmaceutical, medical devices, biotechnology, and research.



## What will I study?

- Year 1** Learning to Learn at Third Level  
Biology 1  
Chemistry 1  
Physics 1  
Laboratory Practices & Procedures  
Mathematics 1  
Laboratory Skills 1 including Laboratory Practices & Procedures  
Biology 2  
Chemistry 2  
Physics 2  
Mathematics 2  
Laboratory Skills 2
- Year 2** Drug Formulation and Regulatory Compliance  
Organic Chemistry  
Principles of Biochemistry  
Pharmaceutical Analysis  
Lab Skills 3 for Pharma Science  
API Process & Environmental Technology  
Pharmaceutical Microbiology  
Physical and Inorganic Chemistry  
Statistics  
Lab Skills IV
- Year 3** Aseptic Manufacture  
Pharmaceutical Biotechnology  
3D Organic Chemistry  
Lab Skills for Pharma Science  
Good Manufacturing Practice and Quality Systems  
Student Industrial Placement/Student Placement Alternative
- Year 4** Systems Validation  
Bioprocess Technology  
Drug Synthesis  
Integrated Laboratory Techniques  
Industrial Statistics  
Clinical Statistics  
Project  
Advanced Biopharma and Cell Technology  
Manufacturing Technology  
Advanced Analytical Techniques



# Department of Computing



Course	CAO Code	Level	Length of Programme
		<b>Higher Certificate – Level 6</b>	
<b>Computing Information Systems</b>	TA 302	Higher Certificate in Science – Computing	2 Years
		Follow-on Bachelor Degree of Science – Computing	1 Year
		Follow-on Honours Bachelor Degree of Science – Computing	1 Year Post Bachelor Degree
		<b>Bachelor Degrees – Level 7</b>	
<b>Computing</b>	TA 312	Bachelor Degree of Science – Computing	3 Years
		Follow-on Honours Bachelor Degree of Science – Computing	1 Year – Post Bachelor Degree
<b>Information Technology Management</b>	TA 313	Bachelor Degree of Science – Information Technology Management	3 Years
		Follow-on Honours Bachelor Degree of Science – ITM	1 Year – Post Bachelor Degree
		<b>Honours Bachelor Degrees – Level 8</b>	
<b>Computing</b>	TA 322	B.Sc. (Hons) Computing Software Development	4 Years
	TA 323	B.Sc. (Hons) Computing IT Management	4 Years
	TA 329	B.Sc. (Hons) Computing Data Analytics	4 Years
	TA 328	B.Sc. (Hons) Computing French/German/Spanish	4 Years

*By studying computing you are taking a decision to become an expert in a field which is re-shaping our world and how we experience it.*

## Age of Computing

There is no doubt, we are living in the digital age, in the middle of a technological revolution where our experience of life is enriched by the power of information freely available at our fingertips. By studying computing you are taking a decision to become an expert in a field which is re-shaping our world and how we experience it. Study Computing in Tallaght and you will be studying programmes at one of the most industry connected Computing departments in Dublin. In 2018 over 80 Tallaght Computing students are spending 6 months on industry internships with a further 20+ taking on industry sponsored undergraduate projects.

## Interesting, rewarding careers

A world class hub of top Software and IT Companies now exists in Dublin with talented graduates from all around the world working in a vibrant international community. Salaries are excellent and there are great opportunities for advancement. In addition to the major multinationals there are over 600 IT and Software companies based in Dublin. Computing skills are needed in every type of business, not just the IT industry. Every organisation uses computers so naturally computer scientists can be found in places such as Hospitals, Schools, Government Offices as well as businesses and ICT Companies.

## Flexible Programmes, Current Technologies & Knowledge for the Future

Computing is a fast evolving space. When choosing a computing programme you need to be sure your programmes is current and evolving to deliver the skills, & knowledge needed allied to real experience of technology. In IT Tallaght Computing we take this as an essential element of our work. We consult with

industry partners such as Microsoft, IBM, SAP and Amazon AWS and over 40 other organisations. This way we make sure our programmes are delivering the key skills for now and for the future that Tallaght Computing graduates need.

We have developed four specialisations (Software Development, IT Management, Data Analytics & Languages. These specialisations provide real depth in their areas allied to a common essential set of skills around software, web, networking, database and security. The specialisations are in much demand and address real industry shortages.

The old idea of the Computer Scientist as a 'programmer' has moved on. Information Technology and its applications are all pervasive in modern life and the range of roles and skillsets required has expanded. Our offerings in IT Tallaght reflect this by offering you a choice of specialisations which have a common core. Even better you have an opportunity to change specialisations after Year – when you have a better understanding for the area and your particular strengths.

Careers in Computing/ IT require talent, creativity, team work and a positive attitude to learning. We have many, many successful graduates working in leading ICT companies in Dublin and around the world, enjoying rewarding, interesting careers. These graduates started, as you might, with good all round skills, a desire to have a career in an interesting and rewarding area but not necessarily with huge experience in Computing/ IT.

With a high quality base of knowledge in Computing and Information Technology an ever expanding range of careers are open to graduates. The range of Computing and Information Technology

programmes offered in IT Tallaght has expanded to reflect this, as ever, guided by advice from our industry partners.

- Computing with Data Analytics (TA329)
- Computing with Languages (TA328)
- Computing with Software Development (TA322)
- Computing with IT Management (TA323)

In all programmes we have:

- 6 months internship in Ireland / Abroad (Year 3)
- Transfer between specialisations at the end of Year 1

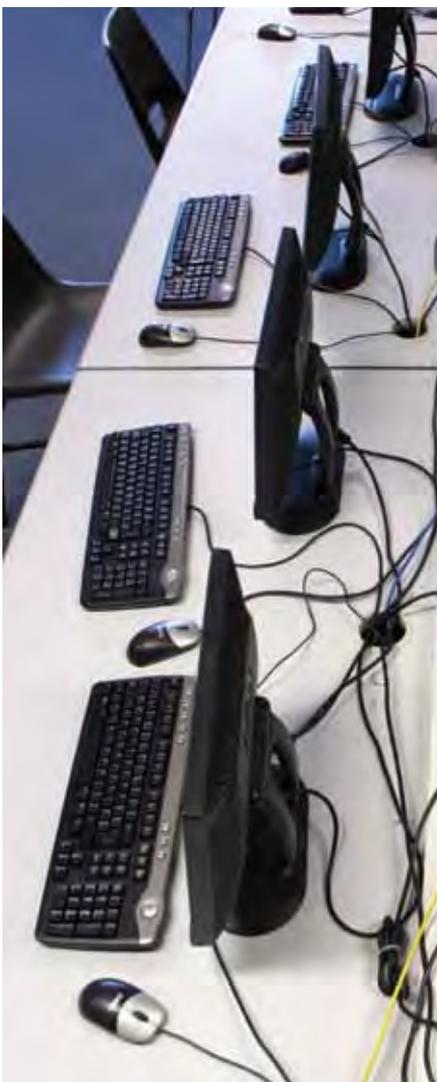
IT Tallaght has been supplying graduates to the ICT industry for over twenty years and its graduates are well recognised for their skills, knowledge and experience with industry practice. Particular strong points are recognised to be keeping programme in line with industry demands and giving students real hands on industry relevant experience. This year the programmes have been updated again reflecting latest technology trends and industry requirements in Cloud, Infrastructures, DevOps, Deep Learning, Security and IoT (internet of Things).

This year over 80 Department of Computing students spent six months in industry ranging across the ICT Sector (AWS, IBM, SAP, Ericsson, Ergo, Salesforce, Groupon, Workday), The public service (Depts. of Social Protection, Agriculture), the Health Sector (Tallaght Univ. Hospital, St. James Hospital, Health Service Executive). The combination of real experience and up to date knowledge means that IT Tallaght graduates are very successful in the marketplace with over 90% finding employment in a role directly related to their degree. Indeed many are offered

## Four themes, many career opportunities

– Computing

- With Software Development
- With Data Analytics
- With IT Management
- With Languages



positions after their third year placement and choose to enter the workforce at that point completing their honours degree in part-time mode.

### Software Development

The Software Development Programme focus on producing software developers who have knowledge of Algorithms and Data structures allied to industry design and delivery practices such as Agile Development and Continuous Integration and Deployment (DevOps). You will learn different development languages (eg Python, JAVA, C++, C#), different approaches (Object Oriented, Functional and Procedural), as well as different frameworks and regimes.

### Data Analytics

There is a skills gap in Ireland and internationally for Data Scientists with the ability to put create and develop for analysing information based on Machine Learning, Artificial Intelligence and Deep Learning. This four year degree specialisation, designed in consultation with major IT Companies such as SAP, AWS, IBM & Microsoft develops a unique mix of Computing, Machine/ Deep Learning and Data Science skills to address this gap. In addition to the common computing core you will

learn, Statistics & Data Analysis, Big Data Analysis & Programming, Machine Learning, Deep Learning, Artificial Intelligence, Social Media Analysis & Visualisation. This gives you real practical skills for putting systems together with the knowledge required to exploit advances in Machine Learning, AI and Deep Learning.

### IT Management

The IT resources operated by major companies such as AWS, Google, Microsoft are architected, developed, deployed and maintained by the type of IT Architecture, Security and Infrastructure expert produced by the IT Management programme. It graduates can be found in companies such as AWS, SAP and Ergo, taking on interesting roles and earning competitive salaries. There are also to be found in the Public sector, Hospitals and other smaller organisations where they play a role in designing, acquiring, managing and securing IT resources for the organisation. These students obtain specialist knowledge in database administration and management, cloud analysis, security, web and architecture. Many take the sought after 'AWS Cloud Architect Associate' certification which is covered in their programme.

*Studying computing or IT Management at IT Tallaght will develop your skills and potential giving you a real opportunity to have a rewarding and interesting career in the IT sector.*

## Languages

This programme is aimed at students who enjoy learning a language and who wish to combine this with their career development. It includes an opportunity to spend six months to one year abroad in a university or organisation. IT Tallaght Computing has international partners in France, Germany, Spain, Austria and Mexico and has active exchange programmes with these countries. ICT graduates who have experience of working abroad and competence in a language are a highly sought after combination for the many ICT companies who have based their international operations in Ireland.

## Is it Mathematical?

We use Mathematics as a good pointer to logical ability and wouldn't advise taking these courses unless you expect to score an O5 or higher in ordinary level mathematics. Having said that the Mathematical elements in Computing programmes are different to those offered in the leaving certificate. We have a strong record of supporting student to learn the essentials they need to progress in their programme.

Remember creating and deploying computer systems isn't an end in itself – computing power is needed for medicine, games, shopping, marketing, television, media and so on. Computing and IT graduates deliver systems to people in other areas so your communications and teamwork skills are vital.

## Why study Computing in IT Tallaght?

- Excellent Graduate Employment
- 6 month industry placement programme
- Strong formal links to major players in ICT sector

I am currently working as a Service Engineer at Microsoft, monitoring the health of SharePoint Online and mitigating customer impacting availability issues. It is a new role in IT, a cloud based role. In my role we need team work, communication, time management, ability to approach complex issues and break them down into different basic troubleshooting steps to establish a better understanding.

In my job I enjoy the diversity, working with people from all walks of life. The systems we are working are very important and can be impacted by global issues affecting many large customers. It is a well-paid role with good working conditions, though the work can be challenging.

I did a Level 5 QQI course before coming to college which helped me understand the area. The reward and return on investment of the BSc Honours is invaluable. The hard work has been more than worth it and although there are new things to study from time to time due to the nature of the industry, this is exciting and can have a direct positive impact on your work.

IT Tallaght really helped me get going, during my 6 month placement with Microsoft in 3rd year I was offered a 6 month probationary contract in a small company, I continued for the 4th year and started as an intern in Microsoft immediately after finishing.

After graduation, I worked as an intern for 12 months and then was offered a permanent position. One year on I received a promotion to a different level and I have been permanent for over 2 years now. I am still learning every day and I believe I have an excellent career ahead of me.

My advice is be confident. We have the skills and qualifications from the course to equip us for any starting position out there.



**Kirsty McCarthy**  
**B.Sc. Hons IT Management, 2015**

As a Cloud Support Associate at AWS Premium Support (EC2 Windows), I work as part of a multi-disciplinary Support Team assisting customers developing innovative and cutting edge services and technologies built on top of Amazon Web Services Cloud Platform. Day to day tasks involve analysing, architecting, troubleshooting and optimizing several different platforms and infrastructures leveraging multiple AWS Services.

In my job, I enjoy the day to day learning, helping businesses building highly scalable cloud environments. I use the excellent technical skill set developed in IT Tallaght, in a Windows Server environment and Virtual Desktop Infrastructure (VDI) deployment to troubleshoot customer's issues. Of course good team work and communications skills are also essential.

When people ask me about pro's and con's I can only think about the pros, studying computing gives you excellent graduate prospects. I worked for a few years as sales assistant in retail environment and also as a customer support agent in a call centre. I am really happy now to be working in an area where my knowledge and problem solving skills are being used and I can see a good career in front of me.

My current role came because I did a placement in Amazon AWS. IT Tallaght has a good link with AWS which is very useful for students. My advice is to be positive and open to change



**Bode Papoola**  
**B.Sc. Hons IT Management, 2018**

- o IBM mentorship
- o AWS Academy & Cloud Computing Competition
- o SAP Engagement
- o Microsoft partnership
- o Great locations near major ICT players.
- Flexible Programme offering – tailor your programme to your developing strengths
- Excellent industry experienced lecturers support you to succeed.
- Current Programme portfolio matches industry demand.

### **IBM Mentoring Programme**

In our IBM mentoring programme a number of our final year students completed their final year project under the mentorship of IBM. This involved visiting IBM one day per week, meeting their mentors and working on IBM systems. The experience for our students was great and the direct employment success of this programme has been excellent. Don't just take our word for it this is real graduate feedback from last year...

*"My advice to anybody given an opportunity to do a project with a company in the industry you are interested in working in: do it! It's a great opportunity and it will lead to future employment."*

*"Working with experienced IBMers, I was able to see how a large multi-national company creates large scale software solutions. By IT Tallaght and IBM linking up, I have a lot more advantage than others of getting a job due to my final year project working with IBM."*

*"For my fourth year project I chose to do a project with IBM. IBM gave the college*



*a list of things they were interested in and I chose an iPhone / Android app and java backend from that list. The project went great and I am now due to start a graduate role with IBM shortly in the area of mobile development."*

### **Work Placement and Internships**

The IT Management program option has established relationships with many organisations who know and trust the quality of IT Tallaght graduates.

### **Cloud Cover & Virtualised Networking**

In IT Tallaght we have been delivering cloud computing using Amazon's EC2 and Microsoft's Azure Cloud for a number of years. We are also a VMWare, EMC and Cisco academy and have virtualisation facilities for delivering real professional experience in this area.

### **Graphics, simulation and Parallel Computing**

Did you know that IT Tallaght was the first third level college in Ireland to receive the prestigious nVIDIA CUDA teaching centre designation? This recognition of our expertise in serious graphics and parallel computing is great as is the donation of high end graphics cards and computing power for our laboratories.

### **Finally**

Look the list of employers who we cooperate with for our work placement programme - we have over thirty placement partners for our IT Management programmes as well as research partners for our research programmes. If you want to join a programme where a real interest is taken in your career prospects join a Computing or IT Management programme in IT Tallaght.

### **A selection of Placement & Project Partners...**

Adecsys, Advanced Systems, AllOne, Ammeon, Bank Of Ireland, Bristol Myers Squibb, BWG, CareWorks, Colas, Dept of Social Protection, DHL, Dublin City Council, EIR, ERGO, Ericsson, Fidelity Investments, Future Finance, GreenIT, Groupon, HEANET, Hibernia Evros, HSE, IBM, Ivor Fitzpatrick Law Firm, Kavanagh Recycling, LedwidgeIT, MicroPro, Microsoft, Openet, OpenJaw, Relate Software, SAGE, Salesforce, SAP, Smurfit Kappa, South Dublin Co Co, St James Hospital, SIG, SureDatum, Tallaght Hospital, Teleticity, UCD, Version1.

# Department of Computing - Industry Connected

## Work Placement Programme

The Work Placement Programme in the Department of Computing has now been running for close to 15 years. From its humble beginnings it has grown from 13 B.Sc in ITMgt students on placement to now in 2018 where over 80 students across all our computing degree programmes are on placement.

Computing students can do a 6 month+ long work placement during their third year. This is an excellent opportunity to apply the skills and knowledge gained in the first two years of the course to practical problems in a real-world context. Each placement (Experiential Learning module) involves working full-time in an IT-related job. Students are visited by an academic tutor who ensures that everything is going well and assesses the academic work.

Some of the related jobs include

- Cloud Support Associate
- Junior Software Developer and Devops
- Software Tester
- Enterprise Product Support
- IT Service Delivery Support
- UI Designer
- Web Developer
- Network Admin roles
- Data Admin and Analysis roles
- IT Service Delivery Support
- Application Support roles
- Tech Support roles
- Service Desk roles
- IT Security



## The Placement Process



If interested or for more information, contact

**Sean McHugh**

☎ 3531 404 2841

✉ Sean.McHugh@it-tallaght.ie

## Bridging Computing and IT students into Work

All IT Tallaght Computing programmes have work placement contained within them. This provides valuable opportunities for students to gain industry experience and transferable skills.

Many students take up positions with their placement companies and

subsequently start their careers. The placement programme also keeps the Department of Computing closely in touch with what industry expects from its graduates.

SAP recruited 10% of Interns from IT Tallaght in 2018

AWS recruited 15% of interns & grads in IT Tallaght in 2018

## Our Placement Companies



# New Fully Funded Data Centre Technician Programme with Amazon Web Services

**This Programme Is Available Through Direct Application to IT Tallaght (Not available on CAO)**

AWS serve as a technical advisor and help local talent gain in-demand skills for well-paid technical careers through a new fully-funded Bursary Programme

This programme is due to commence End October 2018.

- Funded bursaries for qualifying candidates
- Curriculum co-designed between IT Tallaght & Amazon AWS
- Modules earn credit toward IT Tallaght B. Sc. IT Management

The Institute of Technology Tallaght (IT Tallaght) and Amazon Web Services (AWS) are offering a new Data Centre Technician Training Programme to help local talent fulfill their ambitions of building a career in technology. AWS will fund a bursary programme for 20 students, starting in September 2018, to develop skills in the latest cloud technologies and become equipped with the necessary knowledge to install, configure, maintain, secure, and repair a data centre's hardware and networking systems.

## Internships

During the programme students will have the opportunity to apply for paid internships at AWS' data centres in Ireland.

## Progress to Honours Degree

The academic credits earned on the programme also form part of IT Tallaght's B. Sc. IT Management which allows for the students to progress to full professional level qualification through the Institute's full-time or lifelong-learning programmes.

"AWS is proud to be a part of the local community in Ireland, and we are excited to support the development of the talented workforce in Tallaght and surrounding communities through this new Data Centre Technician Programme," said Mike Beary, Director of Human Resources, AWS Ireland. "This unique collaboration with a great educational institution right in our own backyard provides an opportunity for individuals to jump-start a new career and build a future in technology. This new project is just one of the many ways AWS is deepening our investment in the Irish economy through our local corporate offices, cloud infrastructure, and the continued support of local businesses innovating on AWS. IT Tallaght was the first College in Ireland to become an accredited AWS Academy, and we can't wait to see what students will accomplish through this new collaboration with an institution that stands to support the advancement of economic development of its local area."

The application period for the programme opens in September. The programme will begin in mid-October 2018. To register your interest please email your name and contact details to:

[Lifelonglearning@it-tallaght.ie](mailto:Lifelonglearning@it-tallaght.ie) with the subject line 'Data Center Technician Certificate'



# MSc Applied IT Architecture

International Association of Software Architects (IASA) accredited IT Architecture Programme

Winner of Tech Excellence Award 2018 for Professional Development.

In conjunction with Technology Ireland Skillnet.

## Modules:

Architecture Design, Architecture in Practice, Business Technology Strategy, Human Skills for the IT Architect, IT Environment, Quality Attributes for the IT Architect, Research Methods & Project.

# MSc Computing with DevOps

Following consultation with major industry partners.

In conjunction with Technology Ireland Skillnet.

## Modules:

IT Automation, Continuous Software Delivery & Deployment Integration, Business Technology Strategy, Human Skills, Enterprise Architecture Design, Enterprise Deployment, , Research Methods & Project.



CAO Code TA 302

Course Level: 6

Length of course: 2 years

Follow-on Degrees

Follow-on Bachelor Degree in Science Degree (1 year).

Follow-on Honours Bachelor in Science

## Entry Requirements

Leaving Certificate examination with at least Grade O6 or better in five subjects in including Mathematics and English or Irish. (Grade O5 in ordinary level Mathematics or higher is recommended but is not a requirement).

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Recent minimum CAO points: 200

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Points Range 200 – 320

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Recognised in Europe

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on an individual basis. However an equivalent to ordinary level mathematics will be sought for admission. Contact us for more information.

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Qualified students welcome to apply for entry to Degree courses

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Research opportunities at Post Graduate level

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MSc and PhD

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# Computing – Information Systems

## Higher Certificate in Science

First year opens the inner world of computing to students. Website design, code software, hardware, operating systems, communications, applications, security, computers and business, computers and leisure and all the background that students need to follow a career in this vital area that is so strongly linked to business and pleasure.

From Second Year on students produce projects often tailored to a student's personal interest. Students have produced web-based applications, network applications and computer games of a very high standard. Continues to amaze us!

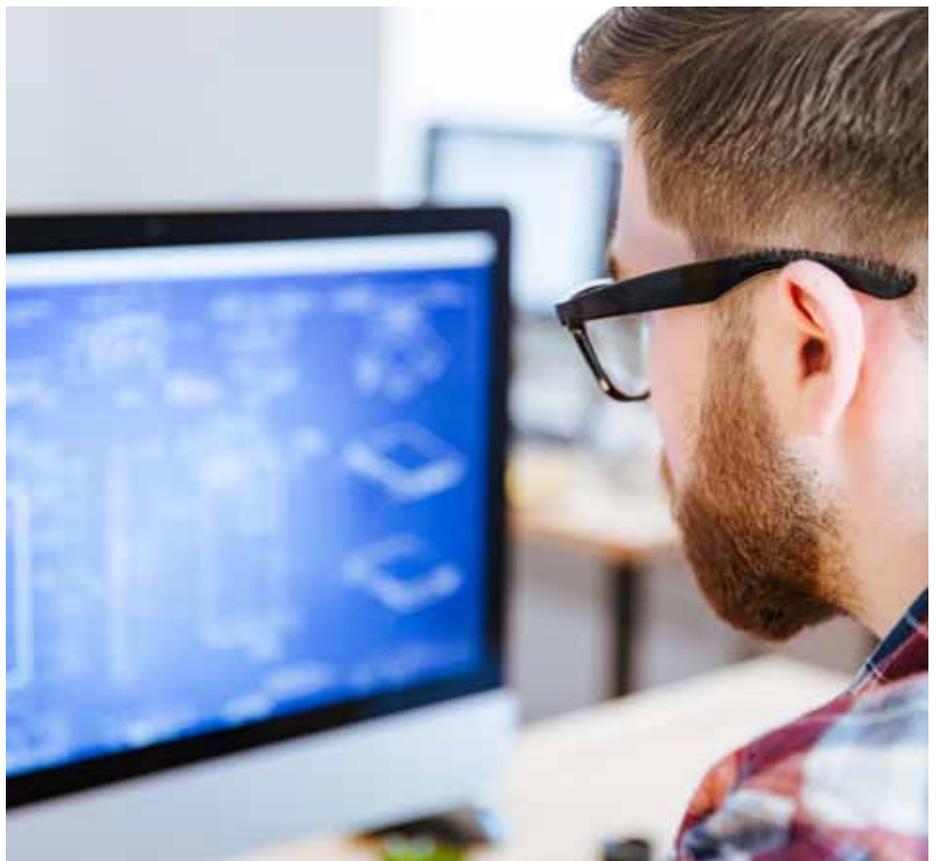
Career prospects are good. Computing related qualifications are on the wanted list among employers, with attractive salaries, conditions and progression opportunities on offer.

No previous, serious computing experience required

Students needn't arrive as experts. They learn to become professionals with us!

## Career Opportunities

Typical starting positions include junior roles in IT Support, Network Support, Software Testing, New system deployment.



## What will I study?

Higher Certificate in Science in Computing TA302							
Sem	Software Dev	Analysis & Design		Databases	Computer Science	Operations	Management
Year 4	Enterprise Applications Development 2	Game Design & Development ( E )	Project	Applied AI & Deep Learning ( E )	Computational Theory	Enterprise Performance Architecture	Public Cloud Arch ( E )
	Enterprise Application Development 1	Interactive Design & Visualisation	Project	Applied Machine Learning ( E )	DevOps: CI & Deployment ( E )	Security for Cloud & IoT ( E )	Information Management
Progress to Add-on Honours Degree							
Year 3	Experiential Learning						
	Datastructures & Algorithms	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Data Analysis ( E ) Adv. Routing & Switching ( E )	Operating Systems	Innovation & Entrepreneurship ( E )
Progress to Add-On Level 7 B. Sc. with Placement							
Year 2	Software Development 4	Database Admin & Analysis	Project	Information Security	Management Science	Routing & Switching Ess.	
	Software Development 3	Software Quality Assurance & Testing	Client Side Web Development	Database Technologies	Discrete Maths 2	Network Fundamentals	
Transfer to stream of Choice							
Year 1	Software Development 2	Systems Analysis		Database Fundamentals	Statistics	Operating Systems Fundamentals	Social Media Communications
	Software Development 1	Critical Skills Development	Visual Design & User Experience	Business & Information Systems	Discrete Maths 1	Computer Architecture	



CAO Code TA 312

Course Level: 7

Length of course: 3 years

Follow-on Degrees

Follow-on Honours Bachelor of Science Degree (Computing). 1 year.

# Computing

## Bachelor Degree of Science

### Entry Requirements

Leaving Certificate with a minimum of Grade O6 or better in five subjects including English or Irish and Mathematics. (Grade O5 in ordinary level Mathematics or higher is recommended but is not a requirement).

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Recent minimum CAO points: 200

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Points Range 200 – 530

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Recognised in Europe

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on an individual basis. However an equivalent to ordinary level mathematics will be sought for admission. Contact us for more information.

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Research opportunities at Post Graduate level

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MSc and PhD

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This three year programme is aimed at giving you the skills and knowledge necessary to work at a technical level in the computing industry. In this programme you will learn not only the latest coding techniques but also how to specify and design systems for business, for the web, for hospitals, for the future. As part of this programme you will work in a team environment to develop a number of software projects.

Typical roles obtained by graduates of this programme include junior systems developers, software testers, IT support, database administrators, junior systems analysts and network engineers. Salaries and careers prospects for computing graduates are excellent with most graduates reporting promotion within two years of taking up a position.

This programme covers a range of material from how to design and develop IT systems to how to develop for the web and how to link together computing systems. As a graduate of this programme you can look forward to obtaining lucrative and interesting employment in Ireland's information and communications technology (ICT) sector. The ICT sector in Ireland employs over 100,000 people with seven of the top ten IT companies in the world located in Ireland. The Irish Government's Expert Group for Predicting Future Skills Needs currently reports that computing graduates are in short supply in Ireland and that this situation is likely to continue. Now is your chance to choose a programme which can open doors to a long term interesting and rewarding career.

Graduates of the B. Sc. in Computing may also proceed to a B. Sc. (Hons) in Computing. It is also interesting to note that this programme shares a common first year with the B. Sc. (IT Management) programme and that student are in a position to transfer from the Computing stream to the IT Management programme (subject to places being available) at the end of year 1 should they feel that this stream suits their skills better.

No previous, serious computing experience required – this programme will develop your professional computing skills.

### Career Opportunities

Typical roles include Web Developer, Webmaster, Junior Analyst, Junior Developer, Junior Network Engineer and Database and information system support.

## What will I study?

B. Sc. in Computing with Software Development TA312							
Sem	Software Dev	Analysis & Design		Databases	Computer Science	Operations	Management
Year 4	Enterprise Applications Development 2	Game Design & Development ( E )	Project	Applied AI & Deep Learning ( E )	Computational Theory	Enterprise Performance Architecture	Public Cloud Arch ( E )
	Enterprise Application Development 1	Interactive Design & Visualisation	Project	Applied Machine Learning ( E )	DevOps: CI & Deployment ( E )	Security for Cloud & IoT ( E )	Information Management
Progress to Add-on Honours Degree							
Year 3	Experiential Learning						
	Datastructures & Algorithms	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Data Analysis ( E ) Adv. Routing & Switching ( E )	Operating Systems	Innovation & Entrepreneurship ( E )
Year 2	Software Development 4	Database Admin & Analysis	Project	Information Security	Management Science	Routing & Switching Ess.	
	Software Development 3	Software Quality Assurance & Testing	Client Side Web Development	Database Technologies	Discrete Maths 2	Network Fundamentals	
Transfer to stream of Choice							
Year 1	Software Development 2	Systems Analysis		Database Fundamentals	Statistics	Operating Systems Fundamentals	Social Media Communications
	Software Development 1	Critical Skills Development	Visual Design & User Experience	Business & Information Systems	Discrete Maths 1	Computer Architecture	



CAO Code TA 313

Course Level: 7

Length of course: 3 years

Follow-on Degrees

Follow-on Honours Bachelor of Science Degree (Computing). 1 year.

# Information Technology Management

## Bachelor Degree of Science

### Entry Requirements

Leaving Certificate with a minimum of Grade O6 or better in five subjects including English or Irish and Mathematics. (Grade O5 in ordinary level Mathematics or higher is recommended but is not a requirement).

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Recent minimum CAO points: 200

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Points Range 200 – 370

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Recognised in Europe

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Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits. However an equivalent to ordinary level mathematics will be sought for admission. Contact us for more information.

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Research opportunities at Post Graduate level

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MSc and PhD

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This three year programme provides you with the skills and knowledge to manage the Information Technology infrastructure in an organisation. In the modern world nearly every business is dependent on its use of information technology for its survival.

How is your on-line bank account safe? How long would an airline last if their booking system crashed regularly? Why did Amazon and eBay thrive while others have disappeared? How do you keep your Web presence refreshed and interesting so that customers will buy? What impact is social media having on business?

Whether its updating your status, sending txts or sharing photos and music, banking or health systems, business or industry all these organisations and activities need information technology professionals to manage, plan and secure their IT systems.

The range of careers open to you include database administration, web developer, business analyst, network support, systems support engineer. An important element of this programme is the work placement which helps give you real preparation for working in the IT sector.

It is important to note that IT professionals often work as part of a team, make presentations and are called on to give advice on new and emerging technologies. These abilities are addressed by the group working and presentation elements of the programme as well as by the work placement which forms a substantial element of this programme.

There is currently a shortage of graduates with information technology skills and this is predicted to continue over the foreseeable future. Over the course of this programme you will obtain knowledge of information systems, networking, web and interactive media development as well as business and service management knowledge. This combination of real technical knowledge allied to business and management skills is highly sought after in the marketplace.

You may also on completion of this programme proceed to the B. Sc. Honours in IT Management on offer here in IT Tallaght. It is also interesting to note that this programme shares a common first year with the B.Sc. (Computing) stream and that student are in a position to transfer from the IT Management programme to the Computing programme (subject to places being available) at the end of year 1 should they feel that this stream suits their skills better.

Students needn't arrive as experts. They learn to become experts with us!

### Career Opportunities

Junior business analyst, network engineer, information system support, web developer, IT security manager, IT support manager, Computing services manager.

## What will I study?

TA 322 – BSc Honours Computing with ITMngt								
Sem	Analysis & Design		Databases	IT Architecture		Mathematics	Management	Software Dev
Year 4	E Learning ( E ) Public Cloud Architecture ( E )	Project	Applied AI & Deep Learning ( E )	Enterprise Performance Architecture	Adv. Cloud Prov. & Networking ( E )	Operations Research	IT Governance & Quality	User Experience Design ( E )
	Interactive Design & Visualisation	Project	Social Media Analysis ( E )	Security for the Cloud & IoT	Private Cloud Architecture	Applied Machine Learning ( E )	Information Management	DevOps, CI & Deployment ( E )
Progress to Honours Degree								
Year 3	Placement/ Experiential Learning							
	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Adv. Routing & Switching	Operating Systems		Innovation & Entrep'ship ( E )	Data Analysis ( E )
Year 2		Project	Database Admin & Analysis	Routing & Switching Ess.	Information Security	Management Science	IT Service Management	
	Software Quality Assurance & Testing	Client Side Web Development	Database Technologies	Network Fundamentals	IT Scripting & Automation	Discrete Maths 2		
Transfer to Stream of Choice								
Year 1	Systems Analysis		Database Fundamentals	Operating Systems Fundamentals		Statistics	Social Media Communications	Software Development 2
	Critical Skills Development	Visual Design & User Experience	Business & Information Systems	Computer Architecture		Discrete Maths 1		Software Development 1



CAO Code TA 322

Course Level: 8

Length of course: 4 years

# Computing

## Degree Options:

Computing with Software Development,  
Computing with IT Management,  
Computing with Data Analytics

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better.

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Recent minimum CAO points: 250

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Points Range 250 – 410

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Recognised in Europe

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Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits. However an equivalent to ordinary level mathematics will be sought for admission. Contact us for more information.

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Research opportunities at Post Graduate level

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MSc and PhD

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### New Opportunities & New Programme Options.

Ireland has developed as a significant global hub for ICT. With over 105,000 people employed in the Technology sector in Ireland and exports worth €72 billion per annum this is a thriving, exciting sector with a real global perspective. Many of the big names that have significant bases around Dublin are familiar to us names – Google, Microsoft, IBM, LinkedIn, but there is much more strength in depth to this sector in Ireland. Did you know that 9 of the top 10 global software companies, 10 of the top 10 global ICT companies, 4 of the top 5 IT Services companies and the top 10 born on the internet companies all have significant bases in Ireland. There are over 600 technology companies operating in Ireland - you may not be familiar with SAP, fourth largest software company in the world, but they employ over 1,000 people in Citywest, across innovation, research and development and technical consultancy.

Over recent years, the discipline areas of Information Technology, Computing and Computer Science have expanded in the scope and range of knowledge contained within them. The rise to prominence of big data, social media, mobile technology, information security not to mention new cloud based architectures and infrastructures for delivering information technology has meant that increased demand for Computing and IT graduates with a broader range of specialisations and skills sets.

Programme material has been updated to position graduates for existing and emerging roles. Following detailed consultation with leading industry partners such as

- IBM
- Microsoft
- SAP

New course specialisations have been developed. You may now specialise in a wider range of fields than before with

- Computing with Data Analytics now joining the existing
- Computing with Software Development
- Computing with IT Management.

The traditional strengths of IT Tallaght Computing programmes are maintained with confidence and competence built through real hands on experience with current technologies and current industry practice. The focus on the first couple of years is in acquiring the core computing skills and knowledge needed to be able to work in the industry. We recognise that many of us only realise which area we love the most through actually engaging in the area so students on any of the Computing/ IT Management programmes may switch specialisations at the end of year 1.

- Single Entry – multiple options.
- Now 3 specialisations available
- Potential for 6 month placement in all programmes
- Erasmus semester abroad available to all streams.

## IT Tallaght Department of Computing – Industry connections.

- Over 70 software, business analysis, IT, infrastructure and other internships in business/ industry and other organisations in 2016.
- Final year project mentorship scheme with IBM
- University Alliance Internships placements with SAP Ireland
- Ergo Graduate Development Scheme.

## B. Sc. Honours (Computing – Software Development Option)

The Software Development specialisation focuses on the track of the existing the computing programme and is focused on servicing the strong demand for software developers. The Department has strong formal linkages with IBM, through its mentorship programme, and has consulted as well with Openet, Version1, Ergo and other software graduate employers. The addition of a six month placement option in this programme opens new placement opportunities and responds to a growing demand from students.

## TA 322 B. Sc. Honours (Computing – Information Technology Management Option)

In the IT Management Specialisation a special module on IT Automation is included to open the projected opportunities for specialists to manage, test and maintain cloud applications to IT Management graduates. Based on feedback from Microsoft, Amazon and IBM the demand for these graduates is projected to be strong.

## TA 322 B. Sc. Honours (Computing – Data Analytics Option)

The Department of Computing also has a strong research record and company engagements in the area of data analytics and has decided to make explicit its offering in this area through the establishment of a Computing with Data Analytics Specialisation. SAP, who are the second most frequent destination for IT Tallaght Computing & IT Management graduates have expressed particularly strong support for this programme.



CAO Code TA 328

Course Level: 8

Length of course: 4 years

# Computing with Language (French/German/Spanish)

## Bachelor of Science (Honours)

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better.

Leaving Certificate French O5 or better recommended for French stream. German/Spanish may be taken from beginner level.

Recent minimum CAO points: New programmes

Recognised in Europe

Mature students welcome

Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits. However an equivalent to ordinary level mathematics will be sought for admission. Contact us for more information.

Research opportunities at Post

Graduate level

MSc and PhD

Honours Bachelor Degree matches Teaching Council Subject Requirements for Computer Studies

This programme has been designed in consultation with the lecturing team in Computer Science and the Language lecturing team for French, German & Spanish. The language component of this programme will be taught in common with existing language provision in the institute but course materials and language activities are mapped against the core content subject areas to ensure that learners in the Computing with Language group retain their own identity.

Students study the general language and communication skills for the first two academic years. Fluency and competence in the language really comes with the period spent abroad. For those with the interest and strength in the language a full year abroad at the end of year two is a possibility. Students taking a full year abroad will need to progress their studies in the partner institution along similar technical topics to those covered in Semester 5. For those who are less confident in their language semester 5 will have additional preparation outside of normal classes to help prepare students for the period abroad.

The Computing with Language programme is a response to the growing demand for graduates with both IT and language skills in the ICT sector where employment and activity has grown substantially and remains vibrant. Language skills and recruitment requirements point to a high demand for graduates with a minimum of two languages (English plus one).

The programme is intended to meet the demands of business and industry, the economy and society. Language skills are now considered a basic competence for EU citizens generally and essential when working in a multicultural professional environment. Having a degree of fluency in a second language in such an environment demonstrates a level of cultural openness and adaptability, which is attractive and gives graduates a competitive edge and enhanced employability. Therefore this course meets market needs on a local and global level, preparing computing graduates who are good communicators with a high level of language and cultural awareness.

This is a new degree option designed to address the need for Level 8 computing graduates who have a language competence. It has been designed in consultation with leading companies including SAP Ireland and Salesforce.com. The combination of computing skills with language skills opens a wide range of interesting roles. One major employer has stated: 'When I see a good CV that includes a period abroad I see someone who has challenged themselves and proved their ability to be independent. I tend to reach for those first even if the foreign language isn't essential to the role.'

In 2015 over 90% of IT Tallaght Level 8 Department of Computing graduates found employment in ICT Sector roles within 3 months of graduating with 5% going on to further study. Salaries ranged from €22k to €52k with typical salaries in the region of €35k for good development roles. IBM was the single largest employer closely followed by SAP and Ergo Systems. Other employers were Sage, Intel, Bearing Point, PaddyPower, Microsoft, Dell, Guidewire, Allnone, Dell, ERS, Telecty.

CAO Code TA 329

Course Level: 8

Length of course: 4 years

# Data Analytics

## Bachelor of Science (Honours)

If you are curious about the world, like analysing information and discovering new trends then this may be the programme for you. Especially, if you have a rational approach to solving problems, like basing opinions on information, understanding the limits of information and drawing real conclusions from data.

In the modern world where almost everything can be a source of data and data storage is cheap there is a shortage of graduates with the skills and modern toolsets to extract, combine and transform this data into useful information. It's not just about statistical knowledge it is also about tying together diverse sources of data as well visualising and presenting this data to communicate clearly.

There is a skills gap in Ireland and internationally for Data Scientists with Computing and Business Intelligence skills. This four year degree programme, designed in consultation with major IT Companies such as SAP, IBM & Microsoft develops a unique mix of Computing, Business Intelligence and Data Science skills to address this gap.

The IT Tallaght Department of Computing Department hallmark is to produce graduates who can 'Do!' not 'Talk about'. On successful completion of this programme you will have sufficient knowledge and skills to be an effective graduate team member in the areas of Computing, Business Intelligence and Data Analytics.

In this programme you will use and learn:

- Statistics & Data Analysis
- Big Data Analysis & Programming
- Software Development, Web Programming & Scripting
- Business Intelligence, Advanced Database Structure and Knowledge
- Social Media Analysis & Visualisation
- Data Mining and Intelligent Agents for Knowledge Discovery

As with all IT Tallaght Computing programmes the programme contains an opportunity to spend six months on internship with an enterprise in Ireland or abroad. Fully integrated into programming in the Department of Computing are modern agile practices as well as current developments such as NoSQL, Cloud Computing for Data Analytics and Internet of Things. This is a new degree option designed to address the need for Level 8 data Analytics skills as identified by the Expert Groups for Future Skills Needs.

### Entry Requirements

Leaving Certificate Examination which must include Mathematics and English or Irish with a minimum of two subjects at Higher Level Grade H5 or better and a minimum of four other subjects at Ordinary Level Grade O6 or better.

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Recent minimum CAO points:

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New programmes Recognised in Europe Mature students welcome

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Mature applicants (23 years of age) may not be required to meet the minimum entry requirements but may be considered on their merits. However an equivalent to ordinary level mathematics will be sought for admission. Contact us for more information.

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Research opportunities at Post

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Graduate level

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MSc and PhD

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Honours Bachelor Degree matches Teaching Council Subject Requirements for Computer Studies

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## TA 322 – BSc Honours Computing with ITMngt

Sem	Analysis & Design		Databases	IT Architecture		Mathematics	Management	Software Dev
8	E Learning ( E ) Public Cloud Architecture ( E )	Project	Applied AI & Deep Learning ( E )	Enterprise Performance Architecture	Adv. Cloud Prov. & Networking ( E )	Operations Research	IT Governance & Quality	User Experience Design ( E )
7	Interactive Design & Visualisation	Project	Social Media Analysis ( E )	Security for the Cloud & IoT	Private Cloud Architecture	Applied Machine Learning ( E )	Information Management	DevOps, CI & Deployment ( E )
6	Experiential Learning							
5	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Adv. Routing & Switching	Operating Systems		Innovation & Entrep'ship ( E )	Data Analysis ( E )
4		Project	Database Admin & Analysis	Routing & Switching Ess.	Information Security	Management Science	IT Service Management	
3	Software Quality Assurance & Testing	Client Side Web Development	Database Technologies	Network Fundamentals	IT Scripting & Automation	Discrete Maths 2		
2	Systems Analysis		Database Fundamentals	Operating Systems Fundamentals		Statistics	Social Media Communications	Software Development 2
1	Critical Skills Development	Visual Design & User Experience	Business & Information Systems	Computer Architecture		Discrete Maths 1		Software Development 1

## TA 322 – BSc Honours Computing with Software Development

Sem	Software Dev	Analysis & Design		Databases	Computer Science	Operations	Management	
8	Enterprise Applications Development 2	Game Design & Development ( E )	Project	Applied AI & Deep Learning ( E )	Computational Theory	Enterprise Performance Architecture	Public Cloud Arch ( E ) Algorithm Analysis ( E )	
7	Enterprise Application Development 1	Interactive Design & Visualisation	Project	Applied Machine Learning ( E )	DevOps: CI & Deployment ( E )	Security for Cloud & IoT ( E )	Information Management	
6	Experiential Learning / Project							
5	Datastructures & Algorithms	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Data Analysis ( E ) Adv. Routing & Switching ( E )	Operating Systems	Innovation & Entrepreneurship ( E )	
4	Software Development 4	Database Admin & Analysis	Project	Information Security	Management Science	Routing & Switching Ess.		
3	Software Development 3	Software Quality Assurance & Testing	Client Side Web Development	Database Technologies	Discrete Maths 2	Network Fundamentals		
2	Software Development 2	Systems Analysis		Database Fundamentals	Statistics	Operating Systems Fundamentals	Social Media Communications	
1	Software Development 1	Critical Skills Development	Visual Design & User Experience	Business & Information Systems	Discrete Maths 1	Computer Architecture		

*All programmes are high quality programmes aimed at producing professionals ready to work in the active ICT sector in Ireland.*

### TA 329 – BSc Honours Computing with Data Analytics

Sem	Analysis & Design		Data & Analysis	IT Architecture		Mathematics	Management	Software Dev
8	E Learning ( E ) User Experience Design ( E )	Project	Applied AI & Deep Learning	Enterprise Performance Architecture ( E )	Data Analysis & Programming	Operations Research ( E )	IT Governance & Quality	Data Analysis & Programming
7	Interactive Design & Visualisation	Project	Social Media Analysis	Security for Cloud & IoT ( E )		Applied Machine Learning	Information Management	
6	Experiential Learning							
5	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Data Structures & Algorithms ( E )	Operating Systems	Data Analysis	Innovation & Entrep'ship ( E )	Advanced Routing & Switching ( E )
4		Project	Database Admin & Analysis	Routing & Switching Ess.	Information Security	Management Science	IT Service Mng't ( E )	Software Development 4 ( E )
3	Software Quality Assurance & Testing	Client Side Web Development	Database Technologies	Network Fundamentals	IT Scripting & Automation ( E )	Discrete Maths 2		Software Development 3 ( E )
2	Systems Analysis		Database Fundamentals	Operating Systems Fundamentals		Statistics	Social Media Communications	Software Development 2
1	Critical Skills Development	Visual Design & User Experience	Business & Information Systems	Computer Architecture		Discrete Maths 1		Software Development 1

### TA 328 – BSc Honours Computing (with Language)

Sem	Software Dev	Analysis & Design		Databases	Computer Science	Operations	Language
8	Enterprise Applications Development 2	Computational Theory (E)	Project	Applied AI & Deep Learning (E)	Computational Linguistics	Enterprise Performance Architecture	French/ Spanish/ German
7	Enterprise Applications Development 1	Interactive Media & Data Visualisation	Project	Social Media Analysis & Info Integration		Information Management	SW Localisation
6	Study/Work Placement Abroad						
5	Data Structures & Algorithms	Cloud Services & Distributed Computing	Server Side Web Development	Big Data Technologies	Data Analysis	Operating Systems	French/ Spanish/ German
4	Software Development 4		Project	Database Admin & Analysis	Management Science	Social Media Comms	French/ Spanish/ German
3	Software Development 3	Software Quality and Test	Client Side Web Development	Database Technologies	Discrete Maths 2		French/ Spanish/ German
2	Software Development 2	Systems Analysis		Database Fundamentals	Statistics	Operating Systems Fundamentals	French/ Spanish/ German
1	Software Development 1	Critical Skills Development	Visual Design & User Experience		Discrete Maths 1	Computer Architecture	French/ Spanish/ German

# The International Perspective

**The Institute has developed co-operation with over forty higher education institutions throughout Europe.**

The International Office at IT Tallaght offers a warm welcome to our International partners from Nanjing, Shanghai and Hong Kong in China, Indonesia, Vietnam, Malaysia, Canada, South Africa, United States of America, Brasil and Europe.

We aim to make every student's time in IT Tallaght a pleasant and rewarding one, we will help you settle into life in Dublin and your studies at college.

Currently IT Tallaght does not accept direct application for 1st year entry into its undergraduate programmes. International students who wish to apply for 1st year undergraduate programmes should apply directly through The Central Applications Office – [www.cao.ie](http://www.cao.ie).

Non-EU applicants should email [international@it-tallaght.ie](mailto:international@it-tallaght.ie)  
Postgraduate applicants should email [international@it-tallaght.ie](mailto:international@it-tallaght.ie)

## ERASMUS

The Institute has developed co-operation with over forty higher education

institutions throughout Europe. While many programmes are geared to career opportunities based at home, many graduates will find themselves working in an international environment and some may choose to gain experience abroad. The Institute has developed co-operation with over forty higher education institutions and organizations throughout Europe. A year abroad in one of our partner institutions can be an integral part of some programmes whether it is to pursue academic or work placement opportunities.

## The International Office

The International Office strives to encourage vision and quality in the Institute's international activity by disseminating information on opportunities for students to study abroad, to promote partnerships with industrial, social, cultural and educational institutions outside the European Union. It provides support to international students on campus and seeks to develop an international outlook among students and staff.

### Erasmus Co-ordinator:

Tara McKiernan B.A., M. Phil.

✉ [tara.mckiernan@it-tallaght.ie](mailto:tara.mckiernan@it-tallaght.ie)



# Applying for a place at IT Tallaght

Application for entry to the full-time first year of any Higher Certificate, Bachelor Degree and Honours Bachelor Degree programmes must be made through the Central Applications Office (CAO) mechanism. [www.cao.ie](http://www.cao.ie)



## Standard Applicants to Higher Certificate and Bachelor Degree Programmes – Level 6 and 7

To be eligible for entry to any of the Higher Certificate and Ab-Initio Bachelor Degree programmes you must obtain at least grade O6 in five subjects in the Leaving Certificate at ordinary level including English or Irish and Mathematics. For the purpose of meeting minimum entry requirements only, results from any number of sittings of the Irish Leaving Certificate may be combined, see special Maths requirement for Bachelor Degrees in Engineering. Results from comparable examinations in other EU Countries are also accepted. Instruction is through English and applicants who do not have Leaving Certificate English will have to provide evidence of equivalent competence.

## Bonus Points for Mathematics awarded:

A bonus of 25 points will be allocated to students who achieve a grade H6 or above in higher level mathematics. This means that the maximum cumulative Leaving Certificate points total will increase from 600 to 625 (existing maximum points plus bonus points).

## Foundation Level Mathematics

- A pass in Foundation Level Mathematics at F2 level or higher will be considered as meeting the minimum entry requirements for courses which currently require a minimum entry level H7/O6 in Ordinary Leaving Certificate Mathematics.
- Students with Foundation Level Mathematics at F2 level or higher must have passed four other subjects with a minimum grade of H7/O6 for the Higher Certificate (Level 6) and Bachelor Degree (Level 7) Programmes.

- Students with Foundation Level Mathematics at F2 level or higher must have passed five other subjects with a minimum grade of H7/O6 for the Honours Bachelor Degree (Level 8) Programmes.
- Foundation Level Mathematics may be used for the purpose of determining Leaving Certificate points and where it is so used the following scale will apply:

<b>F1</b>	<b>F2</b>
<b>20</b>	<b>12</b>

## Foundation Level Irish

A grade F3 in Foundation Level Irish is acceptable for meeting the minimum entrance requirements for all Higher Certificate Programmes. Students with a F3 in Foundation Level Irish must have passed five other subjects with a minimum grade of O6 including Maths.

## Standard Applicants for Honours Degree Programmes – Level 8

These programmes allow for direct Leaving Certificate entry. The minimum entry requirement for an Ab-Initio Level 8 Honours Degree programme is normally Grade H5 in two Higher Level papers, together with Grade O6 in four other subjects of the Leaving Certificate Examination. Other programme specific admission criteria may also apply. For further details please refer to the programme information.

## Selection of Applicants

For Applicants, selection is based on points. Points are calculated by adding together the points scored in the best six subjects in a single sitting of the Leaving Certificate Examination.

## Higher Education Links Scheme QQI-FET applicants

IT Tallaght participates in the links scheme which facilitates entry of QQI-FET Level 5 and 6 graduates.

### **New CAO points system from 2017**

From 2017, a new grade scheme will be introduced for the Leaving Certificate. The new grade scheme and the points associated with each grade are shown below.

### **Can I apply with a Leaving Certificate from 2016 or earlier?**

Yes. All students applying through the CAO from 2017 will be awarded points under the new scale, no matter when they sat the Leaving Certificate.

The points available under the new scale cannot be compared with the points awarded in previous years. Full details of the points awarded to pre-2017 Leaving Certificate students can be found on [www.transition.ie](http://www.transition.ie).

The current equivalence between the points awarded for QQI Further Education and Training will be maintained in line with the new scale. Full details of the revised points for these awards can be found at [www.transition.ie](http://www.transition.ie). A useful 2017 points calculator is available at <http://www.careersportal.ie/courses/calculator/pointsCalculator.html#/>

The Institute reserves a number of places on each programme for qualified applicants. Entry is possible through the CAO mechanism. Applicants are judged solely on their Level 5 Certificate performance and are treated separately by the CAO. Entry is competitive – the highest scoring candidates are offered places until the quota is exhausted. Applicants should indicate on their CAO Application Form whether they wish to be considered for this entry route

A record of achievement does not meet the minimum entry requirements.

All QQI-FET 5 and QQI-FET 6 awards will be scored to deliver a maximum of 390 CAO points.

### **Mature and Non Standard Applications**

The Institute encourages applications from Mature and Non Standard applicants. Such applicants must apply through the CAO system and must clearly state all relevant details on the CAO Application. They should include all relevant supporting documentation including, where appropriate, testimonials from employers, when applying. Certified transcripts and English translations of qualifications not issued in English must also be furnished with the application. In a number of cases applicants for mature or non standard entry may be required to attend an interview and/or assessment.

A person who, by 1 January of the year he/she seeks admission, has reached the age of 23 years, will be regarded as a Mature Applicant. Mature Applicants may not be

required to meet the minimum entry requirements specified for standard applicants. Mature Applicants will be considered on their merits, taking into account their work and life experience. Knowledge and skills gained through experiential learning may be considered, in the context of the curriculum of the programme for which they have applied. Particular consideration will be paid to applicants who demonstrate a special interest in a relevant subject area or who have demonstrated their commitment by undertaking some preparatory programme work and/or examinations. Candidates are judged on their individual merits. With increasing applications from mature candidates it is necessary to rank applicants for available places. It is important therefore, that full use is made of the CAO Application to ensure that all relevant information and documentation on achievements are included. Mature applicants may be invited for interview and or assessment.

### **Non Standard Applicants**

These are applicants who are not of mature years but who wish to have taken into account qualifications and/or achievements additional to, or alternative to, the Leaving Certificate. Such qualifications may have been gained from other full or part-time study.

### **International Students**

The Institute encourages applications from international students. Applicants interested in joining year one of an undergraduate programme should apply directly to the Central Applications Office, Tower House, Eglinton Street, Galway, Ireland: 00353 91 509800. [WWW.CAO.ie](http://WWW.CAO.ie)

*To be eligible for entry to any of the Higher Certificate and Ab-Initio Bachelor Degree programmes you must obtain at least grade O6 in five subjects in the Leaving Certificate at ordinary level including English or Irish and Mathematics.*

### Applicants presenting with school examinations other than the Irish Leaving Certificate Examination, QQI-FET Qualifications, or Gc(S)E Examinations

The results of school leaving examinations other than the above mentioned are scored so that applicants can be assessed in the same way as other applicants in the points system. In order to gain entry applicants must meet 1) the minimum entry requirements, 2) the English language requirement, 3) any specific subject requirements and 4) the points requirements for the course. Further details of how this comparison is made are available on our website in the "How to Apply / CAO" section [www.it-tallaght.ie/admissions](http://www.it-tallaght.ie/admissions)

The offer of a place does not confer any legal status as an applicant. All foreign applicants who have been offered places will be required to complete all the normal legal requirements (as laid down by the Department of Justice, Equality and Law Reform and the Department of Foreign Affairs) to gain access to education in this country

before acceptance and registration requirements can be brought to a conclusion.

Applicants must apply through the CAO system.

### Disability/Specific Learning Difficulty

The Institute is an equal opportunities institution and welcomes and encourages applications from students with special needs. It is Institute policy to attempt to provide appropriate support for its students with physical disability or specific learning problems within the limits of available resources. The building and approaches have been carefully designed to ensure ease of access. Those with special needs should contact the Institute's Disability Service well in advance to discuss any special requirements that they might have in the event that they are admitted. The Institute is committed to supporting students with special needs to progress through their studies. Each student has different needs. The Institute is continually working to provide adequate resources and systems including



additional tuition, dedicated equipment, specific examination accommodations, sign language interpreters, readers and personal assistants.

### Leaving Certificate Vocational Programme

IT Tallaght treats the links modules as a single subject and awards points as follows:

Distinction	66
Merit	46
Pass	28

This is automatically computed by the CAO and will count if it is one of your six best subjects.



#### *Subject to change*

Foundation Level Mathematics may be used for the purpose of determining Leaving Certificate points and where it is so used the following scale will apply:

F1	F2
20	12

## CAO Application

Please note that it is the applicant's own responsibility to ensure that the application is submitted accurately and on time. In any one year, you may not present more than one application (either online or paper).

### Application Dates:

Closing date: 1st Feb 2019

Applicants should avoid submitting an application close to a Closing Date. The Closing Date cannot be extended.

### Applications must be made to:

The Central Applications Office

Tower House

Eglinton St Galway Ireland

Tel: +353 91 509800

Fax: +353 91 562344

Web: [www.cao.ie](http://www.cao.ie)



## Leaving Certificate Applied

The Leaving Certificate Applied (LCAP) was designed primarily to prepare students for the transition from school to working life. It is not intended for direct transfer into third level education. However students with the LCAP who have completed a QQI-FET 5 awards can be considered for entry.

## Advanced Entry

Applicants who already possess third level qualifications may be admitted to the more advanced steps of a Higher Certificate, Ordinary Degree or Honours Degree programmes. Such applicants should have the appropriate educational background and level of achievement which is closely related/cognate with the standard of the programme for which they have applied. Such applicants do not apply through CAO but should apply on-line to [www.applyfulltimeit-tallaght.ie](http://www.applyfulltimeit-tallaght.ie)

## Deferred Entry

If an applicant is offered a place on a programme through the CAO mechanism it is possible to defer entry for one year. An applicant wanting to avail of this facility should:

1. Refer to CAO Handbook.
2. Do NOT accept the offer in the manner shown on the offer notice. Do NOT make any payment.
3. Write immediately after receiving the offer to: Admissions Office, Institute

of Technology Tallaght, Tallaght, Dublin 24, stating reasons for seeking a deferral and enclosing section C of the CAO offer.

4. The Letter should be received in the Admissions Office at least two days before the reply date shown on the CAO offer notice.
5. The Institute will communicate the decision to the applicant. If the deferral is not granted the offer may still be accepted for the current year.
6. A deferral is only granted for the programme accepted by the applicant. In the event of the programme not being available in the year that the applicant proposes to take up the place, the applicant will not automatically be entitled to a place on any other programme. An applicant to whom a deferral is granted must re-apply for the programme directly to the CAO by the 1st February of the succeeding year, placing the deferred programme as the first and only preference on the Application Form.
7. Deferrals will generally not be granted to allow applicants repeat the Leaving Certificate or to take up other third level places.
8. Deferral is valid for one year only. Applicants who receive permission to defer entry to a programme must pay the normal CAO application fee.

### Leaving Certificate Points System 2018

Higher	H1	H2	H3	H4	H5	H6	H7	H8
Points	100	88	77	66	56	46	37	0
Ordinary	O1	O2	O3	O4	O5	O6	O7	O8
Points	56	46	37	28	20	12	0	0

# Competence in English

Classes for full-time programmes are generally taught in English. If English is not your first language you must demonstrate to IT Tallaght that you speak and write English competently. This will ensure that you will get the best out of the programme you join. There are a number of ways you can show you are competent in English:

If you have studied English in school: When completing your CAO application form provide evidence that you have studied and passed English as part of a school Leaving Certificate or matriculation programme

- Provide the original of your school or matriculation certificate.

- If the certificate is not English you must also provide a certified English translation.

If you have not studied English in school: Provide evidence that you have successfully completed a recognised examination in English competency. The recognised English competency examinations are listed in Table 1. If you have completed an examination in English competency that is not listed here you should:

- Provide the original of your certificate or transcript. The document should state the qualification obtained, the level of the award and the awarding body.

- If the certificate is not in English you must also attach a certified English translation of the certificate or transcript.

IT Tallaght will consider your evidence and may ask you to complete a test to determine how well you speak and write English.

If you require any further information please contact:

## Admissions Office

 +353 1 404 2526

**Table 1**

General or Academic English	Title of Award		Level Required
Academic	IELTS	International English Language Testing System	6
Academic	ETAPP	English Test for Academic and Professional Purposes	C1
Academic	TOEFL	Test of English as a Foreign Language	PBT 550 ITB 80 CBT 213
Academic	British Council UCLES/IDP	University of Cambridge Local Examinations Syndicate	6
Academic	JMB University Entrance test in English (Overseas)	Joint Matriculation Board Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham	Pass
Academic	AEB	Associated Examining Board	C
Academic	OEB -English as a Foreign Language (Higher Paper)	Oxford Examining Body	Pass
General	TIE	Test of Interactive English (TIE) Ireland	C1
General	CoE	Council of Europe Framework	C1
General	Trinity College (UK)	Trinity College (UK)	10 ISE – Level III
General	TOEIC	Test of English for International Communication	750
General	London Tests of English (Edexcel)	Pearson Language Assessment	Level 4
General	Cambridge ESOL		
	CAE	Certificate in Advanced English	Grade C
	CPE	Certificate of Proficiency in English	Grade C
General	Pitman UK	Pitman UK	Level 5 (Advanced)
General	ARELS/Oxford UK	Association of Recognised English Language Services	Higher – Good
General	IT Tallaght EFL	Modular Credit (5)	Pass

# Internal Student Transfer Policy and Procedure



## Policy

For the purposes of this policy, an internal transfer is where a registered first year student having entered a full –time course through the CAO process, transfers to the first year of another full –time CAO advertised course.

This internal transfer policy is not an alternative method of admission which by-passes and undermines the central admissions system.

There can be many varied and legitimate reasons why first year students seek an internal transfer from one course to another. The Institute will endeavour to facilitate such transfers by registered students subject to the following:

- All internal transfers will take place with due regard to equity of treatment of students, including current school leavers and in accordance with the Institute’s commitments to the CAO process. As a participant in the CAO process the Institute has signed up to and abides by the Memorandum of Understanding which governs the admission of first year students.
- The student concerned has access to advice and counsel from the Head of Department or Nominee prior to submitting an application to transfer.
- availability of places in the first year of the course onto which they wish to transfer.

The following is the procedure to be followed:

## Procedure

1. The Institute will consider a request for a transfer of course from a first year student only in very exceptional circumstances.
2. The proposed transferee must meet the entry requirements and have the minimum of the cut off points for the new course to which s/he wishes to transfer to.
3. The transfer may only take place after the official close of the CAO offers process and is subject to the availability of a place.
4. Any such request must receive the prior approval of the Head of School and the Registrar, both of whom must be satisfied that the transferee will be able to make good any academic deficit arising from joining the new course late.
5. This arrangement only applies to first year full time students who enter the Institute via the CAO process.
6. The CAO will be informed of any such transfers.
7. The application, reasons for transfer and decision will be recorded in writing and the record maintained in the Office of the Registrar.



# Fees and Grants



Welcome to the Institute of Technology Tallaght Fees and Grants Section. This section will provide you with some helpful information regarding fees for full-time students at this Institute. The information provided in this section should only be used as an indicator. Please refer to our website at [www.it-tallaght.ie/fees](http://www.it-tallaght.ie/fees) for more detailed information and updates regarding fees and charges at Institute of Technology, Dublin.

All students admitted to the Institute of Technology Tallaght will be assessed for their fee status. This assessment will determine whether or not tuition fees are due for this and subsequent academic years. It is the student's responsibility to inform us if their residency/nationality changes during their studies at this Institute. We will then re assess your fee status after such changes have been brought to our attention.

## Student Contribution Charge

This charge is determined by the Department of Education and Skills. All students are required to pay this charge except students who are approved for the student grant. Students who are approved for the student grant may have some or all of this charge paid on their behalf by Student Universal Support Ireland (SUSI). For more information about the student grant please see [www.studentfinance.ie](http://www.studentfinance.ie) and [www.susi.ie](http://www.susi.ie).

IT Tallaght's Student Fees Policy is designed to ensure that students are not denied access to services while they are awaiting the status on their grant application. All full-time students at IT Tallaght who have applied for a grant are able to register and are given full access to IT Tallaght services including student ID cards, Moodle access, library facilities and student services. Students must provide proof of their grant application to the Registrar's Office upon registration.

Students who are not eligible for a maintenance grant and are paying the student contribution charge themselves will be invoiced for the full fee in September. Where a student cannot pay the full student contribution charge in September, the college will agree to this amount being paid in two instalments i.e. 50% to be paid upon registration in September and 50% to be paid before 31st January.

## Tuition Fees

There are 3 categories of Tuition Fees:

- 1. Free Tuition Fees**
- 2. EU Tuition Fees**
- 3. Non EU Tuition Fees**

### 1. Free Tuition Fees: students do not pay any tuition fees.

- If you are an Irish or EU citizen and have not previously attended a Third Level Institution/University you will probably be in this category. For Level 8 Programmes only there is also a residency criteria: a student must have been resident in the EU for 3 of the last 5 years. Certain exemptions may apply to students where specific residency criteria apply.
- Free tuition fees may also apply to students with specific residency status, (i.e. Official Refugee Status, students who hold Stamp 4 EUFAM, students who are here under Family Reunification). It is important that you familiarise yourself with the Full-time Student Detailed Fee Information Document which is on the fees section on our website at [www.it-tallaght.ie/fees](http://www.it-tallaght.ie/fees) to see if you fall under the Free Tuition Fees category.

### 2. EU Tuition Fees: students must pay the EU rate of Tuition Fees.

- If you are a Non-EU national, or if you have previously attended a Third Level Institution/University, you will probably be in this category.

- If you hold a Stamp 2 or 2A Student Visa, and are under 23 years of age, you will probably be in this category.
- Students repeating a year will be in this category (based on a pro rata basis).

### 3. Non-EU Tuition Fees: students must pay the Non-EU rate of Tuition Fees.

- If you hold a Stamp 2 or 2A Student Visa, and are over 23 years of age, you will be in this category.

For more detailed information about these categories of Tuition Fees see: [www.it-tallaght.ie/fees](http://www.it-tallaght.ie/fees)

## Fees Refund Policy

If a student officially withdraws from a programme before certain dates as outlined in our Student Fees Policy, a refund of some fees may be possible. Where students withdraw from a programme prior to 31st October, the student contribution/tuition fees already paid to the Institute is refunded less an administrative charge. Please see our website for further details. Refunds will not be given thereafter. Requests for fee refunds should be made in writing to the Registrar. The date of receipt of the written request will be taken as the applicable date for consideration of refund requests.

## Special cases:

For any CAO applicants, fees paid are refunded or transferred where a student subsequently takes up an offer from another Higher Education Institution or takes up an Apprenticeship or re-attends second level in the same academic year providing we are notified by 31st October. No administrative charges apply.

Where a student has to withdraw from a programme in exceptional circumstances, which includes certified

serious illness, having registered and paid the applicable fee, a partial refund may apply. Detailed medical certificates or supporting documentation must accompany any refund request. No refund requests will be considered unless supported by documentary evidence

### Contact Details:

✉ [fulltimefees@it-tallaght.ie](mailto:fulltimefees@it-tallaght.ie)  
 Sinead Reddy 📞 4042061  
 Martina King 📞 4042053  
 Declan O'Brien 📞 4042524

## Maintenance Grants

For eligible students, the grant is there to help with the various costs associated with participating in full-time Higher Certificate, Bachelor Degree and Honours Degree Programmes. Family and/or personal income is a key factor that will be assessed when you apply for a student grant but there are also other conditions.

The awarding body responsible for processing grant applications is Student Universal Support Information (SUSI). [www.susi.ie](http://www.susi.ie) or [www.studentfinance.ie](http://www.studentfinance.ie) can help you to assess whether you are eligible and guide you in starting the process. For information on how the various grant schemes operate, including where to apply see [www.studentfinance.ie](http://www.studentfinance.ie)

### Contact Details:

Eileen Molloy 📞 4042123  
 ✉ [eileen.molloy@it-tallaght.ie](mailto:eileen.molloy@it-tallaght.ie)

## Access Scholarships

### South Dublin County Council/ IT Tallaght Scholarships:

Valued at €5,000 each over two years, Scholarships are awarded each year to eight students from Designated Disadvantaged Schools and Further Education Centres in Tallaght and

Clondalkin, who achieve high points in the Leaving Certificate.

## Student Assistance Fund

The Student Assistance Fund is provided by the Government under the National Development Plan and is ESF aided. It aims to tackle disadvantage by providing financial support to students most in need. Assistance can be provided for items, including: Books and class materials, food, travel, rent etc. Contact the Access Office to find out more. Applicants must complete an Application Form and may be asked to attend an interview.

## 1916 Bursary Scholarship

Bursaries are targeted at students who are from socio-economically backgrounds and are from one or more of the following:

- First-time, mature student entrants;
- Students with a disability-particularly students with a physical/mobility impairment, students who are deaf/hard of hearing and students who are blind or have a visual impairment;
- Irish Travellers;
- Further education award holders;
- Lone parents;
- Ethnic minorities (including programme refugees);
- Students who are, or were, in the care of the State.

Each student that is awarded the 1916 Bursary can receive up to €5000 for each year of their undergraduate programme of study.

# Department of Lifelong Learning at IT Tallaght

Almost all the higher certificate and degree and postgraduate courses at IT Tallaght are also available to study part-time. IT Tallaght is committed to lifelong learning and aims to provide flexible and accessible lifelong learning opportunities to those who wish to acquire new knowledge and skills. In addition the Institute also offers a variety of programmes leading to the awards of Professional Institutes such as the Institute of Accounting Technicians in Ireland (IATI) and the Institute of Professional Auctioneers and Valuers (IPAV).

IT Tallaght's flexible part-time provision has been continuously growing over the last few years. The number of part-time students has increased over the last number of years. In 2017/18, 2700 part-time students were registered with the Institute. When compared to other Institutes of Technology, IT Tallaght has the highest percentage of part time students when total fulltime and part-time numbers are compared)

Much of the institute's success in attracting part-time learners is due to the flexible nature of our provision that includes

- Range of Awards Available
- Flexibility of Attendance
- Blended Learning
- Recognition of prior learning

## Range of Awards Available

### Minor Supplemental and Special Purpose Awards

IT Tallaght recognised that some people would like to return to education and work towards an accredited award, but their work, home and family commitments mean they are unable to commit to a course that might take two years or more. However they could start their lifelong learning journey if they could commit for a shorter time.

IT Tallaght offers, along with a wide range of major awards, new 'minor', 'supplemental' and 'special purpose' awards that have been introduced as part of the National Framework of Qualifications to develop access and progression routes for these individuals. These awards recognise the successful completion of a smaller amount of learning.

## Individual Module Accreditation

Students can opt to complete individual modules and accumulate credits toward a minor or major award. (This is possible through the Accumulation of Credits and Certification of Subjects (ACCS) Scheme). Subjects successfully completed are certified individually.

## Flexibility of Attendance

IT Tallaght offers a number of courses that have been designed to provide flexibility in attendance times and rate of study. The principle is that the students may construct a convenient timetable around other aspects of their working and personal lives. The timetable offered is spread across the whole week with repeated classes during the day and evening and at both ends of the week. The student can choose which classes to attend providing him/her flexibility to juggle other life and work commitments.

## Blended Learning

A number of departments in the Institute now offer blended learning opportunities for part-time students. A range of courses are currently offering students the opportunity to complete a range of modules through distance learning.

## Recognition of prior learning

Many adults returning to study part-time have developed knowledge and skills from their work, life or leisure experience. IT Tallaght participates in a

number of initiatives to recognise and accredit this prior learning (known as RPL). This scheme allows students to an exemption from modules on their programme when they can demonstrate institute-level learning from their experience.

Full details of part-time provision at IT Tallaght are available in our website at [www.it-tallaght.ie/PartTimeCourses/](http://www.it-tallaght.ie/PartTimeCourses/)

## Department of Lifelong Learning Contact Details:

✉ [lifelonglearning@it-tallaght.ie](mailto:lifelonglearning@it-tallaght.ie)

☎ +353 1 404 2101

## In person:

Part-time Student Information Desk,  
Department of Lifelong Learning,  
Institute of Technology Tallaght, Tallaght,  
Dublin 24



# Guidance Counsellor Quick Guide



## Access Initiatives

The Access Office supports the participation of students who enter full-time undergraduate programmes at the college from a local DEIS school or by the mature access route. Our Access Officer is available to students who fall into either category for confidential one-to-one advice. We also offer a range of post-entry supports including a book scheme and a laptop loan programme.

For students who have participated on the ACE Programme (West Tallaght), CHEAP (Clondalkin) or Aspire2 (Ballyfermot) we reserve 3 places for each of the respective schools across all of our full-time undergraduate programmes.

## HEAR

IT Tallaght is joining HEAR in September 2019.

The Higher Education Access Route (HEAR) is a college and university scheme which offers places on reduced points and extra college support to school leavers from socio-economically disadvantaged backgrounds who are resident in the Republic of Ireland.

HEAR has been set up by a number of colleges and universities as evidence shows that long-term poverty can have a negative effect on how well a student does at school and whether they go on to college.

<http://accesscollege.ie/hear/>

## Applying for a place at IT Tallaght

Application for entry to the full-time first year of any Higher Certificate, Bachelor Degree and Honours Bachelor Degree programmes must be made through the Central Applications Office (CAO) mechanism. [www.cao.ie](http://www.cao.ie)

## Advanced Entry to Year 2, 3 or 4

Applicants who already possess third level qualifications may be admitted to the more advanced steps of a Higher Certificate, Ordinary Degree or Honours Degree programmes. Such applicants should have the appropriate educational background and level of achievement which is closely related/cognate with the standard of the programme for which they have applied. Applications must be made through the Central Applications Office (CAO) mechanism. [www.cao.ie](http://www.cao.ie)

## Minimum Entry Requirements for IT Tallaght



## New leaving Cert Points system

Leaving Certificate Points System 2018								
Higher	H1	H2	H3	H4	H5	H6	H7	H8
Points	100	88	77	66	56	46	37	0
Ordinary	O1	O2	O3	O4	O5	O6	O7	O8
Points	56	46	37	28	20	12	0	0

### Foundation Level Mathematics

A pass in Foundation Level Mathematics at F2 level or higher will be considered as meeting the minimum entry requirements for courses which currently require a minimum entry level O6 in Ordinary Leaving Certificate Mathematics except in Engineering courses. A pass in Foundation Level Mathematics at F3 will be considered as meeting the entry requirements for TA 022 (Hons) Bachelor of Arts – Creative Digital Media. For more information please refer to page 149

### Bonus Points for Mathematics awarded:

A bonus of 25 points will be allocated to students who achieve a grade H6 or above in higher level mathematics. This means that the maximum cumulative Leaving Certificate points total will increase from 600 to 625 (existing maximum points plus bonus points).

### Internal transfer Year 1

The Institute will consider a request for a transfer of course from a first year student only in very exceptional circumstances.

The proposed transferee must meet the entry requirements and have the minimum of the cut off points for the new course to which s/he wishes to transfer to.

The transfer may only take place after the official close of the CAO offers process and is subject to the availability of a place.

### Internal Transfer Year 2

The Institute will consider a request for a transfer of course from a second year student where there is commonality in programmes. Some bridging modules may need to be completed before the transfer can be approved.

### Continuous Based Assessment

The modules on the IT Tallaght's programmes are not all 100% examination at the end of each semester. Most Modules are broken down into part CA / Project /Practical.



# IT Tallaght Minimum Entry Requirements

Course Code / Name	English	Irish	Language	Maths	Other	Min. subjects
<b>Level 8 Programmes</b>						
TA022 Creative Digital Media	06/H7 En or Ir			F3/06/H7		2H5 & 406/H7
TA023 Advertising and Marketing Communications	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA025 Social Care Practice	06/H7 En or Ir			F2/06/H7	Garda Vetting	2H5 & 406/H7
TA026 International Hospitality and Tourism Management	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA121 Accounting and Finance	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA122 Management	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA123 Marketing Management	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA125 International Business	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA221 Electronic Engineering	06/H7 En or Ir			04/H7		2H5 & 306/H7 & 04/H7 in Maths
TA222 Mechanical Engineering	06/H7 En or Ir			04/H7		2H5 & 306/H7 & 04/H7 in Maths
TA223 Sustainable Energy and Environmental Engineering	06/H7 En or Ir			05/H7		2H5 & 306/H7 & 05/H7 in Maths
TA224 Biomedical Design	06/H7 En or Ir			04/H7		2H5 & 306/H7 & 04/H7 in Maths
TA225 Automation Engineering	06/H7 En or Ir			04/H7		2H5 & 306/H7 & 04/H7 in Maths
TA226 Engineering Software	06/H7 En or Ir			04/H7		2H5 & 306/H7 & 04/H7 in Maths
TA321 Pharmaceutical Science	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA322 Computing	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA326 DNA and Forensic Analysis	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA327 Sports Science and Health	06/H7 En or Ir			F2/06/H7	Garda Vetting	2H5 & 406/H7
TA328 Computing with a language	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
TA329 Data Analytics	06/H7 En or Ir			F2/06/H7		2H5 & 406/H7
<b>Level 7 Programmes</b>						
TA014 Advertising and Marketing Communications	06/H7 En or Ir			F2/06/H7	Portfolio	506/H7
TA015 International Hospitality and Tourism Management	06/H7 En or Ir			F2/06/H7		506/H7
TA111 Accounting and Finance	06/H7 En or Ir			F2/06/H7		506/H7
TA113 Management	06/H7 En or Ir			F2/06/H7		506/H7
TA114 Marketing	06/H7 En or Ir			F2/06/H7		506/H7
TA116 International Business	06/H7 En or Ir			F2/06/H7		506/H7
TA117 Digital Marketing	06/H7 En or Ir			F2/06/H7		506/H7
TA213 Mechanical Engineering	06/H7 En or Ir			04/H7		406/H7 & 04/H7 in Maths
TA215 Sustainable Energy & Environmental Engineering	06/H7 En or Ir			05/H7		406/H7 & 05/H7 in Maths
TA216 Electronic Engineering	06/H7 En or Ir			04/H7		406/H7 & 04/H7 in Maths
TA218 Biomedical Design	06/H7 En or Ir			04/H7		406/H7 & 04/H7 in Maths
TA 219 Engineering Software	06/H7 En or Ir			04/H7		406/H7 & 04/H7 in Maths
TA311 Bioanalysis	06/H7 En or Ir			F2/06/H7		506/H7
TA312 Computing	06/H7 En or Ir			F2/06/H7		506/H7
TA313 Information Technology Management	06/H7 En or Ir			F2/06/H7		506/H7
TA314 Pharmaceutical Science	06/H7 En or Ir			F2/06/H7		506/H7
TA315 DNA and Forensic Analysis	06/H7 En or Ir			F2/06/H7		506/H7
TA316 Sports Science and Health	06/H7 En or Ir			F2/06/H7	Garda Vetting	506/H7
<b>Level 6 Programmes</b>						
TA006 Culinary Arts	F3/06/H7 Ir or 06/H7 En			F2/06/H7		506/H7
TA106 Business (Common Entry)	F3/06/H7 Ir or 06/H7 En			F2/06/H7		506/H7
TA201 Electronic Engineering	F3/06/H7 Ir or 06/H7 En			05/H7		406/H7 & 05/H7 in Maths
TA203 Mechanical Engineering	F3/06/H7 Ir or 06/H7 En			05/H7		406/H7 & 05/H7 in Maths
TA301 Applied Biology	F3/06/H7 Ir or 06/H7 En			F2/06/H7		506/H7
TA302 Computing	F3/06/H7 Ir or 06/H7 En			F2/06/H7		506/H7



## OPEN EVENTS

- OPEN DAY      FRIDAY, NOVEMBER 9TH (10-3PM)
- OPEN DAY      SATURDAY, NOVEMBER 10TH (10-1PM)
- OPEN EVENING    TUESDAY, JANUARY 22ND (4-8PM)



Institiúid Teicneolaíochta Tamhlacht  
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