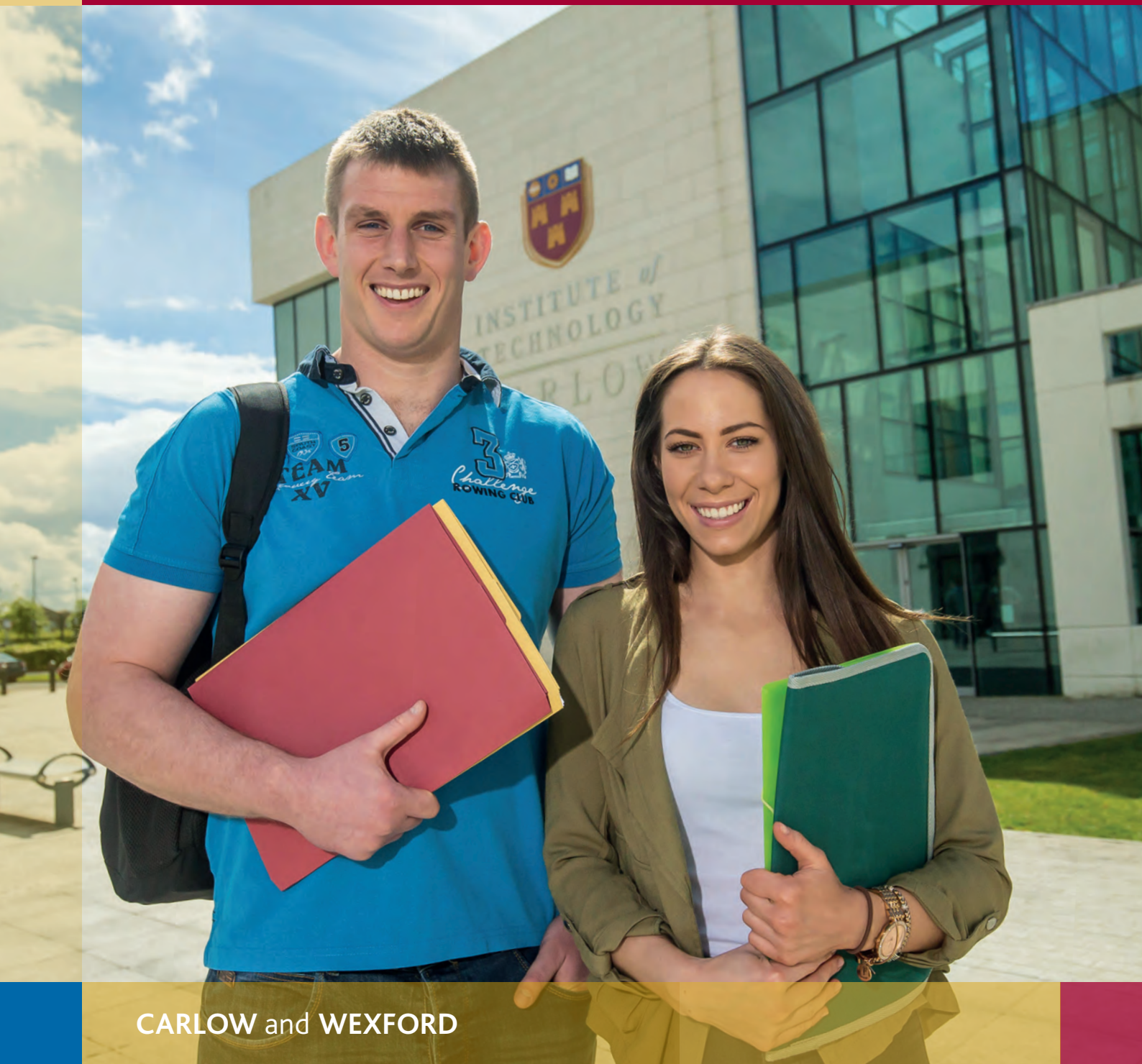
INSTITUTE of TECHNOLOGY CARLOW
Institiúid Teicneolaíochta Cheatharlach

UNDERGRADUATE
PROSPECTUS 2018

INSTITUTE of TECHNOLOGY CARLOW



CARLOW and **WEXFORD**

Engage
Learn
Challenge
Innovate

INSTITUTE of TECHNOLOGY CARLOW
Institiúid Teicneolaíochta Cheatharlach

Engage with Society, Learn through Engagement, Challenge through Learning and Lead through Innovation

The mission of Institute of Technology Carlow to Engage, Learn, Challenge and Innovate is articulated through an educational environment and context where learners pursue studies in higher education and research up to doctoral level.

Through a culture of enquiry, innovation and excellence we challenge our learners, staff, global collaborative partners and other stakeholders to create, apply and share knowledge and values in a supportive and vibrant university-level Institute.

Engagement with business, government, community and voluntary sectors defines the Institute of Technology Carlow's leadership role in the development of our region and nation.

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OPEN DAYS

Carlow Campus – 16 November 2017

Wexford Campus – 17 November 2017

LIFE AT INSTITUTE OF TECHNOLOGY CARLOW

Your Success Is Our Success

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WELCOME FROM THE PRESIDENT

Institute of Technology Carlow Prospectus 2018-2019

Your choice of higher education institution and programme of study are two of the most challenging and important decisions you will make in the foreseeable future. It is important you choose wisely and I am delighted that you have decided to explore the many opportunities open to you at Institute of Technology Carlow.

An unwavering commitment to a high quality student experience is the driving force behind Institute of Technology Carlow's many accolades. This is evidenced by the most recent Irish Survey of Student Engagement which reaffirms our students' high satisfaction ratings for access to faculty staff, with the career inspired nature of the learning and for the high quality physical facilities and support services. The Institute was again placed in the top tier of high performing Irish higher education institutions in 2016 by the Higher Education Authority.

The Institute is home to:

- the best aerospace education facility in the country
- pioneering software, games development and cybercrime/IT courses
- renowned information technology facilities
- innovative courses in agri-food including brewing and distilling
- internationally-celebrated sports courses and facilities
- multi-disciplinary courses in the creative and cultural sectors
- a dedicated multi-million euro research and innovation centre
- distinguished postgraduate research courses and
- a huge roll-call of sporting and academic title wins, amongst other honours.

The courses at Institute of Technology Carlow span the Sciences, Health, Computing, Engineering, Business and Humanities disciplines. Our courses are designed to offer you the very best teaching and academic modules on offer. Our courses are designed to bring you into direct contact with industry and employers so that you will be amongst the 92% of our graduates who are in full employment within five months of completing your examinations. Our courses are designed to encourage an eagerness to learn that will remain with you for the rest of your life.

Outside the lecture halls and laboratories, we are proud of the culture at Institute of Technology Carlow that puts our students at the heart of everything we do. Our culture of openness, respect and inclusion, whilst offering first-class facilities and amenities on our modern and dynamic campus, allows our students to flourish, make life-long friends and memories that last a lifetime.

Over 50,000 alumni chose Institute of Technology Carlow and are enjoying successful careers in all walks of life. More than 7,500 current learners are pursuing their hopes and ambitions at this Institute. Let our Institute be the gateway to your future.

Dr Patricia Mulcahy, BSc (Hons), PhD, CBiol, FIFSTI
President

At Institute of Technology Carlow we strive to ensure every student reaches their full potential by getting involved in student life, applying their talents, learning new ones and developing academically, personally and socially.

The next few pages will give you a taste of how to get the best out of your time at Institute of Technology Carlow.

Check out our graduate profiles on pages 51, 66, 85, 121, 147 and 166.

Our website is also packed with the latest information, videos and events that make up life at Institute of Technology Carlow.

www.itcarlow.ie

THE INSTITUTE **BY NUMBERS...**

Buildings and Facilities

The Institute's €150m master plan has, to date, delivered:

FLOOR SPACE INCREASE BY **40%**

4 NEW BUILDINGS SINCE **2012**

2,000+
Major Award Graduates Annually

no.1
Highest % of **Lifelong Learners** (WTE) in the **Higher Education Sector**

Finding Jobs (in employment)

Institute of Technology Carlow

- **Level 8 graduates** 84%
- **Level 9 graduates** 94%

Higher Education Sector Average

- **Level 8 graduates** 58%
- **Level 9 graduates** 78%

no.1 in the **TECHNOLOGICAL SECTOR** for **UNDERGRADUATE PROGRESSION**

377 points
3rd highest median CAO points in the Technological Sector

88 different nationalities on campus = **15%** OF THE STUDENT BODY

Ranked Category 1
by the Higher Education Authority
for Performance funding in 2015 & 2016

Top Employers of the Institute's graduates

IT
Intel | IBM
UNUM | SAP
LotusWorks

PHARMA
Pfizer | MSD
Boston Scientific
Abbott | Stryker

FINANCE
AIB | State Street
BNY Mellon
Bank of Ireland
Citibank

QUICK REFERENCE GUIDE

KEY DATES

Carlow Campus Open Day
16 November 2017

Wexford Campus Open Day
17 November 2017

KEY CONTACTS

General Queries
Admissions
T: (059) 9175174
E: admissions@itcarlow.ie

Schools Liaison Information
Mary Bates
T: (059) 9175092
E: mary.bates@itcarlow.ie

The following information is useful for students, guidance counsellors and parents alike. This summary of practical information will assist you in using the Institute of Technology Carlow 2018-2019 prospectus.

UNDERGRADUATES

New Common Points Scale

The Department of Education and Skills introduced a new Leaving Certificate grading scale in 2017. The new scale has 8 grades at higher (H) level and 8 grades at ordinary (O) level. The highest grade is H1 and the lowest Grade is O8. The highest seven grades at higher level (H1-H7) divide the marks range from 100% to 30% into seven bands of 10%, with a H8 grade being awarded for marks less than 30%. The highest seven grades at ordinary level (O1-O7) also divide the marks range from 100% to 30% into seven bands of 10%, with a O8 grade being awarded for marks less than 30%. The points given for all higher and ordinary grades are summarised in the table.

New Common Points Scale for Leaving Certificate from 2017

HIGHER		ORDINARY	
Grade (%)	Points	Grade (%)	Points
H1 (90-100)	100		
H2 (80<90)	88		
H3 (70<80)	77		
H4 (60<70)	66		
H5 (50<60)	56	O1 (90-100)	56
H6 (40<50)	46	O2 (80<90)	46
H7 (30<40)	37	O3 (70<80)	37
H8 (0<30)	0	O4 (60<70)	28
		O5 (50<60)	20
		O6 (40<50)	12
		O7 (30<40)	0
		O8 (0<30)	0

Recent CAO Course Additions

Students who have completed a full QQI-FET award at Level 5 and achieved at least three distinctions are eligible to apply through CAO for entry to Year 1 - on to Level 8 courses. Students who have completed a full QQI-FET award at Level 5 are eligible to apply through CAO for entry to Year 1 on Level 6/Level 7 courses. Students who have completed a full QQI-FET award at Level 6 may be eligible to enter Year 2. Applications for this are direct to the Institute Admissions Department.

GRADUATES

Honours Degrees/Ordinary Degrees – Exit Awards

Students may choose to exit after two years and graduate with a Higher Certificate Award or after three years and graduate with an Ordinary Bachelor Degree Award – refer to the course detail pages for specific information.

Graduates of our courses progress to taught and research postgraduate courses at Institute of Technology Carlow. See what you can do in our new Postgraduate Opportunities section.

CARLOW TOWN

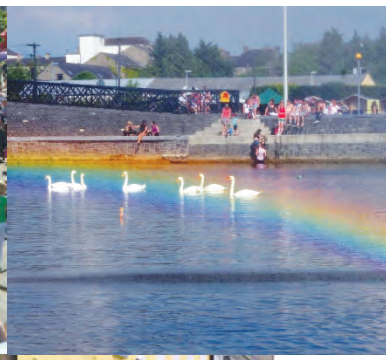
Carlow is a vibrant, bustling town with a population of over 20,000.

The town enjoys a thriving arts and crafts community, an exciting nightlife, a strong tradition of Irish language, culture and festivals as well as a superb range of shops and restaurants. Carlow is a student-centric town and is within easy walking distance of the Institute campus. Student accommodation is plentiful and the transport network is excellent.

The modern name Carlow is derived from the old Irish place name *Ceatharloch*, meaning 'four lakes'. Visitors to the area can enjoy its many pre-historic sites, castles, churches and monastic buildings and routes. The much-loved town park and town heritage trail provide good starting points for those new to the town. The ample waterways and mountains surrounding Carlow provide every opportunity for outdoor activities and adventures. Carlow is just 80km from Dublin city and 40km from Kilkenny city.

For thousands of students, Institute of Technology Carlow is where the journey begins. Whether it is designing a new product concept, analysing DNA, producing a TV or radio show, being at the forefront of college sporting events, presenting a PR or marketing plan or constructing model buildings, Institute of Technology Carlow is the place to be and in September 2018, your journey can begin.

You'll find all the support and encouragement you need to achieve your goals at Institute of Technology Carlow.



INTERNATIONAL DIMENSIONS

International Students

Institute of Technology Carlow has over 70 exchange partnerships with countries across the globe including: Germany, Finland, Estonia, Denmark, China, Korea, Malaysia, Oman, Saudi Arabia, India and Nigeria. Some 15% of the Institute's students were born outside Ireland. Such diversity amongst the student population undoubtedly adds to the quality of the undergraduate experience. International students are drawn to the Institute's internationally-recognised courses, its first-class facilities and welcoming, friendly campus.

For more information visit:
www.itcarlow.ie/international

Cultural Shake Up

Institute of Technology Carlow boasts many student clubs and societies, some of which include skydiving, drama, soccer, dance, hillwalking and martial arts. Many overseas students choose to join the international society – Cultural Shake Up – where Irish and international students meet, socialise and plan events and outings.

International Office

The Institute's dedicated International Office is a huge support to students from abroad. It provides a welcoming service to help new students settle in when they arrive. The dedicated international team offer, amongst other things: pre-arrival information, free airport pick-up, induction and registration support, accommodation advice, free English language classes and career advice.

For information about international applications, contact the International team via: **internationaladmin@itcarlow.ie**

Erasmus

Institute of Technology Carlow is an enthusiastic participant in the Erasmus Programme, which enables students to study and work abroad. Students find the opportunity of living and studying abroad and experiencing first-hand different cultures, a hugely memorable and rewarding experience.

For information about our Erasmus programme, contact the International team via: **erasmus@itcarlow.ie**






STUDENT SERVICES

The Student Services team provide a range of high-quality activities and support services for students at Institute of Technology Carlow. Their aim is to provide a comprehensive and caring service to help our students achieve their full academic and personal potential.

You can access more information about our services on our website at: **www.itcarlow.ie/studentservices**

Accommodation and Transport

Student Services provide general advice regarding accommodation and transport. It is important that students view their accommodation before paying a deposit and make sure to receive a contract and rent book from the landlord. Information on how to find accommodation and local transport services can be found on the website: **www.itcarlow.ie/accommodation**

Health Centre

The campus Health Centre provides a full comprehensive medical service for all students including full-time nursing services and surgeries from visiting doctors.

Careers Service

The Careers Service assists students by providing information, support and advice on employment and further study.

Chaplaincy

The Chaplaincy offers spiritual guidance and support to all students and staff. The Institute has a multi-faith room where students can retreat from the hustle and bustle of daily student life and enjoy the calm and tranquility this space provides.

Access and Financial Supports

The Access Office provides supports for students with disabilities, mature students and students with financial difficulties. Refer to page 175 for full details on the Institute of Technology Carlow Access Programmes.

Counselling

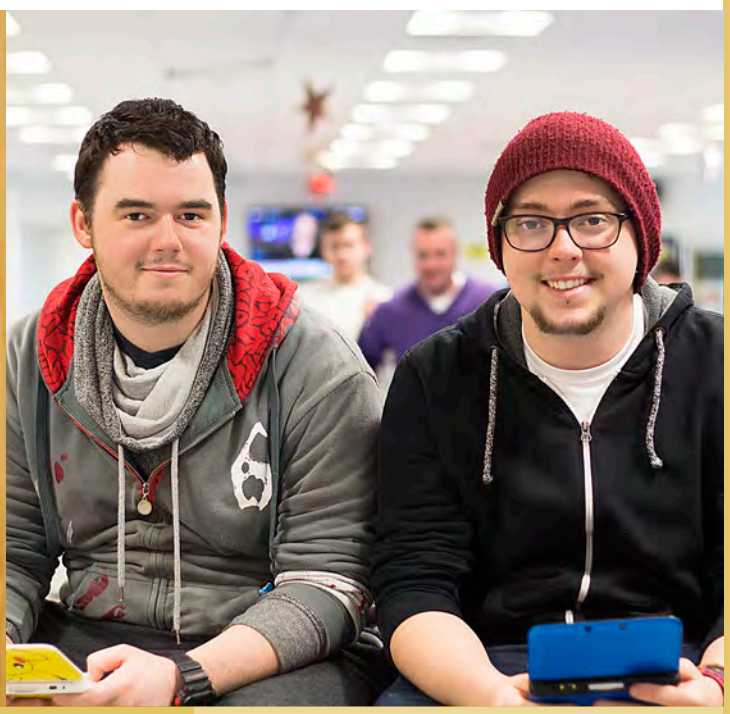
The student counselling service is there to help students with any personal problems affecting their work or well-being. The service is professional, confidential and free to full-time registered students of Institute of Technology Carlow.

Clubs and Societies

There is an extensive range of Clubs and Societies in Institute of Technology Carlow. They include drama, music and astronomy as well as course based societies covering areas such as Computing, Design and Early Years. Institute of Technology Carlow's many Sports Clubs include Archery, Fencing, Volleyball, GAA, Rugby and Soccer.

Students' Union

The Students' Union ensures that students get the most out of college life. It represents students at various levels of the Institute, nationally and internationally. The Students' Union area provides a very lively atmosphere, perfect for students seeking relaxation or fun during the breaks between classes.



SPORT

Sport at Institute of Technology Carlow

Over the last number of years Institute of Technology Carlow has established itself as a centre of sporting excellence within the south east region. This is a result of heavy investment by the institute in the development of state-of-the-art sports facilities, pioneering new undergraduate and postgraduate courses and a sports scholarship programme which affords talented sports men and women the opportunity to compete at the highest level while pursuing their academic course at the Institute. Clubs at Institute of Technology Carlow provide a huge range of opportunities to train, play and compete in sport, no matter what your passion, ability or level. We cater for performance sports athletes, competitive sports, physical activity, health and well-being.

Institute of Technology Carlow Sporting Success 2016/2017

Institute of Technology Carlow is the college of choice for many talented sports stars. It is therefore no coincidence that the 2016/2017 academic year was a very successful one for the Institute's sports teams and athletes. This success is not just attributed to one club or athlete, but was achieved across a wide and varied range of competitions and events.

2016/2017 Sports Achievements

Airsoft
Irish Colleges Airsoft Intervarsity's Winners 2017
Athletics *(IUAA Outdoor Intervarsity Championships 2017)*
Gold in Men's 4 x 100m in a time of 41.62secs setting a new 4 x 100m college's record.
Gold in Men's 200m
Silver in Men's 100m
Bronze in Men's 10,000m
Bronze in Men's Pole Vault
Badminton
Student Sport Ireland (SSI) Badminton League Semi Finalist 2017
Basketball
Women's National League Division 1 Regular Season Champions 2016/2017
Promoted to Women's Super League for 2017/2018 Season
Women's NBCC Division 1 Intervarsity Finalists 2017
Men's NBCC Division 1 League Semi Finalists 2016/2017
Boxing *(IATBA – Irish Amateur Third Level Boxing Association Intervarsity's)*
5 All Ireland Colleges Titles 2017
Camogie
CCAO Purcell Cup Semi Finalists 2017
Men's Gaelic Football
Sigerson Cup Quarter Finalists 2017
Hurling
Fitzgibbon Cup Finalists 2017
Division 1 All-Ireland Higher Education Hurling League Title (3 in a row)
Karting
Overall 6th Place team finish at the Student Sport Ireland (SSI) Karting League 2017
Overall 7th Place Individual finish at the Student Sport Ireland (SSI) Karting League
Pool
Student Sport Ireland (SSI) Pool League Division 1 Winners 2017
Power Lifting
2 x All Ireland Colleges Titles 2017
Overall 3rd Place Team finish
Men's Rugby
Student Sport Ireland (SSI) Fresher U20 O'Boyle Cup Winners 2016/2017
IRFU Student Sport Ireland (SSI) Brendan Johnston Cup Winners 2017
Soccer
Men's CFAI Umbro Cup Winners 2017 (6 in a row)
Women's WSCAI Futsal Cup Winners 2017 (2 in a row)

Other sports at the fore for Institute of Technology Carlow include: Women's Rugby, Golf, Cricket, Volleyball, Ladies Gaelic Football, Airsoft and Archery, with all clubs competing at a high level within third-level elite and competitive sports. The Institute also caters for a number of other clubs at recreational level including: Equestrian, Dance, Pilates, Yoga, Olympic Handball, Circuits, Bootcamps and many more.

Institute Sporting Facilities

The Barrow Centre opened in January 2012 and the sports facilities are part of an overall expansion of the student services area. These new enhanced facilities are some of the best equipped centres for strength, conditioning, fitness and sport and provide the ideal training ground for the elite athlete, college teams and the recreational user to enjoy and develop their sport.

The facilities include:

- Multi-purpose sports hall
- Health and fitness suite with sauna and steam rooms
- High Performance Strength and Conditioning gym
- Sports Performance Analysis Lab
- Exercise studio
- Activity rooms
- Spinning room
- Rehabilitation therapy clinic
- Sports Science laboratories.

In addition, the grounds have been developed to include two full-size sand-based flood lit Gaelic Football and Rugby pitches, a full-size flood lit 4G Soccer Pitch, all weather 5-a-side/7-a-side pitches and a 150 metre tartan sprint track. The grounds also include a 660 seat viewing stadium located adjacent to the main college pitch and a 250 seat viewing stand to showcase the weekly inter-colleges and Leinster League rugby matches. These facilities incorporate top-class team changing rooms, showers, sauna, steam rooms, physiotherapy areas and a series of inter-connecting seminar/hospitality rooms which afford panoramic views of all the pitch action. Work is also underway in the development of our new South Sports Campus which includes 6 additional sports pitches as well as a state-of-the-art 400m all weather athletics track.

As well as our on-site facilities, student rates have also been negotiated with the following local clubs to provide a range of additional sporting facilities:

- Talbot Hotel Swimming Pool
- Carlow Golf Club
- Carlow Driving Range
- St Laurence O'Tooles Athletics Club
- Carlow Squash Club
- Carlow Tennis Club
- Doyle's Equestrian Centre.

Institute of Technology Carlow Health and Fitness Suite

The Institute's Health and Fitness Suite provides an ultra modern facility for all aspects of fitness training and is equipped with a range of dual access equipment for cardiovascular, strength and flexibility training. It comprises a fitness gym, sports analysis laboratory, spinning room, activity rooms, changing facilities, showers, sauna, steam rooms and an elite performance training centre. This high performance facility provides the ideal platform for strength gains for the elite sports person and for college teams.

The fitness gyms are equipped with a full range of cardiovascular, strength training and free weights equipment, including squat racks, cages, platforms, suspension trainers, etc. The gym is operated by qualified fitness instructors who can design individual fitness programmes for students.

Sports Scholarships

Awarded for Excellence in Sport

Now in its 19th year, the sports scholarship scheme at Institute of Technology Carlow offers support packages and/or bursaries to students of exceptional sporting ability. The Institute of Technology Carlow Sports Scholarship programme recognises Gold and Elite standard athletes.

Gold Sports Scholarships

Institute of Technology Carlow provides a number of Gold Sports Scholarships to students who have shown exceptional sporting ability each academic year. The scholarships afford our sports people the opportunity to compete at the top level while pursuing a course of academic study. The scheme is designed to nurture and develop individual talent and maintain the Institute's sporting tradition. The programme attracts highly talented athletes from all over the world who serve as student ambassadors, enhance the Institute of Technology Carlow sports programme and contribute to inter-collegiate success. In 2016/17 over 80 such scholarships were made across a wide range of sports disciplines.

SPORT AT INSTITUTE OF TECHNOLOGY CARLOW

Elite Sports Scholarship

Institute of Technology Carlow has established itself as one of the leading third level sporting institutions in Ireland and is quickly evolving into a modern hub for sporting excellence. Our state-of-the-art sporting facilities and growing academic portfolio of sports related courses means we now attract the very best athletes who are competing both nationally and internationally across a wide range of disciplines. After the introduction of our new elite scholarship strand in 2014, we began to recognise our very best athletes competing at the highest level in their chosen sport. In 2016/17, eight students were recognised as elite scholars for their huge contribution to sport in GAA, rugby, soccer, basketball and athletics. For more information visit: **www.itcarlow.ie/sportsscholarships**

Who Should Apply

- Elite athletes, those participating at International, National, Inter-Provincial, Inter-County, Senior Club level and who have applied for their chosen course at Institute of Technology Carlow
- Those accepting a course place at Institute of Technology Carlow for the current academic year and
- Those currently studying at Institute of Technology Carlow.

Closing Date for incoming first year students: 31st August.

Scholarships are awarded in a range of sports. The Institute supports sports scholarship holders both academically and in their sporting career throughout the duration of their course.

The Sports Scholarship package may include:

- Athlete Profiling and Mentoring
- Gym Membership
- Personal Strength and Conditioning Programmes
- Physiological Testing
- Diet/Nutrition and Injury Prevention Advice
- Injury Rehabilitation
- Sports Scholarship Branded Sportswear
- Academic Support
- Sports Training Bursary and/or Academic Fees.

Further information:
Donal McNally, Director of Sport
Phone: 059 9175607
Email: donal.mcnally@itcarlow.ie
#sportitcarlow

CLUBS AND SOCIETIES

At Institute of Technology Carlow, students will find a vast array of exciting student friendly clubs and societies which cater for a broad range of student interests. With over 65 Clubs and Societies to choose from, you are sure to find the one for you. Clubs and Societies play an important role in the social and cultural development of students. Joining an Institute of Technology Carlow club or society provides students with the opportunity to meet friends with similar interests while taking a relaxing break from study.

Clubs

The sports clubs at the Institute provide a wide range of activities catering for all levels of participation. Both recreational and competitive aspects of sport are emphasised in each club. Club teams and individuals train at least once per week and instruction is provided by experienced, qualified coaches who can cater for all standards: beginners, improvers and advanced players. Institute teams are represented annually in competitions organised by Student Sport Ireland and other national governing bodies of sport at third level. The Institute's many sports clubs include: Gaelic Football, Hurling, Soccer, Rugby, Basketball, Athletics, Boxing, Badminton, Fencing, Archery, Hockey, Volleyball, Lacrosse, Futsal, Cricket, MMA, Airsoft and many others.

If you prefer more relaxing pursuits such as Hillwalking, Yoga, Pilates, Zumba, Salsa, Street Self Defense, Swimming, Golf, Tennis or Equestrian, you can also sample these and many others at Institute of Technology Carlow.

Societies

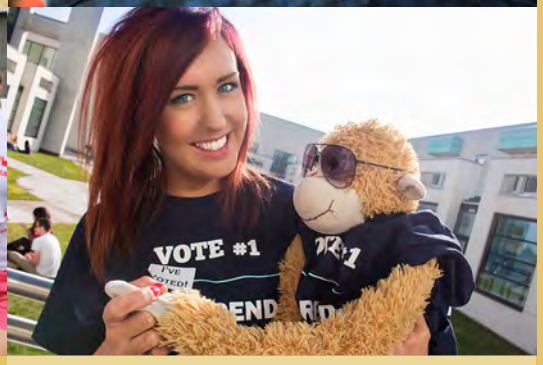
Societies give students an opportunity to experience many different things and meet new people. It is very easy to get involved. All you have to do is sign up during clubs and societies day or contact the Students Union. With over 25 societies on offer, you can choose from a vast array of activities including: Alpha, Anime Manga, Board Gaming, Chess, Computers, Cultural Shake up, Debating, DJ Society, Drama, Early Years, Karting, Law Society, Music, SHOUT–LGBT, Sign Language and more. Also, if you have an interest in an area not catered for currently, we will work with you to help you start up a new society.

Information on Clubs and Societies Contact:

Sports Clubs and Activities
Sports Office
Tel: 059 9175608
Email: paula.hickey@itcarlow.ie

Societies
Chaplain Fr. Martin Smith
Tel: 059 9175612
Email: martin.smith@itcarlow.ie



INFORMATION AND LIBRARY SERVICES

The Library is an integral part of the Learning Resource Centre and is a central space on campus. Library staff partner closely with academic colleagues to ensure that the Library provides the most appropriate and relevant material to support and enhance the teaching, learning and research activities of the Institute.

The Library holds in excess of 55,000 print items comprising books, reports, official publications, working papers, theses, standards and newspapers. It also has an extensive DVD and audio-visual collection. In addition, there are approximately 200 journals and newspapers available in print format and a further 60,000+ journals and newspapers available via online subscriptions.

Over 150,000 e-books are accessible both on and off campus. Users may borrow texts or consult a range of reference material covering all subject areas taught at the Institute. A Short Loan Collection allows 2-day lending of texts which are in heavy demand.

There are 723 study desks in the Library, many of which provide a computer. WiFi is readily available throughout the building. Photocopying and printing is available on every floor.

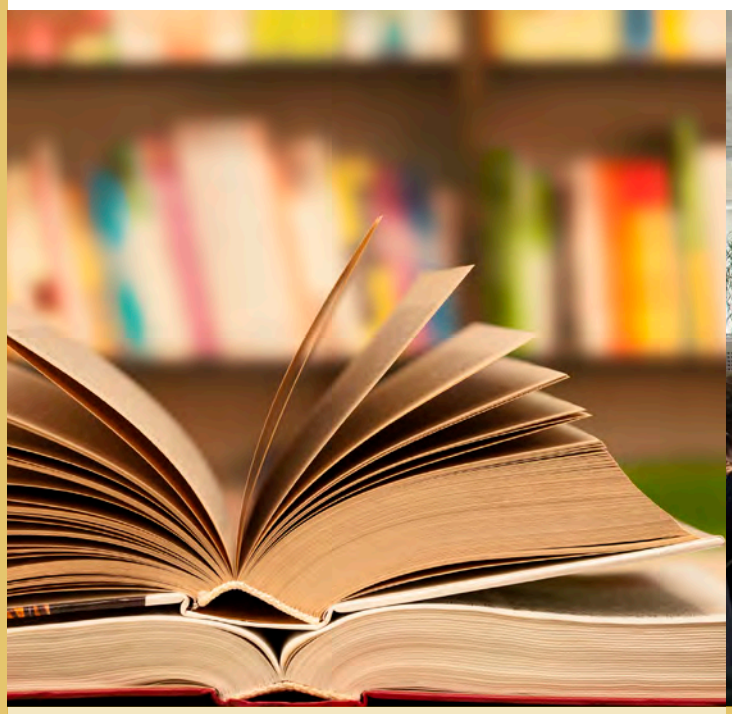
The Library subscribes to the Trinity College Information Service and the British Library Document Supply Centre. This enables the Library to make available to eligible users almost any text published in Ireland or the UK. The MILLENNIUM library system is the gateway that allows access to library collections and to subscribed scholarly resources on the Internet. The holdings of the Library can be searched worldwide on the web by using our library catalogue or our Single Search Discovery tool SUMMON.

The Library is committed to training users in finding, using and managing information. Training on all aspects of the Library is provided during the initial weeks of the first semester at Orientation programmes and on a scheduled basis throughout the academic year.

For more information about the Library including opening hours and borrowing rights, visit our website:
www.itcarlow.ie/library

Facebook: **IT Carlow library** and

Twitter: **@itcarlowlibrary**



COMPUTING SERVICES

The Computing Services Department provides ICT services for staff and students of the Institute. Students have access to:

- more than 1500 PCs distributed in laboratories and open access areas around the campus. All PCs have full broadband connectivity.
- specialist Apple Mac labs for high performance media processing
- dedicated laboratories and equipment for: architectural graphics, 3-D modelling and design, languages, computing and networking project work, IC fabrication and design, AutoCAD, sports science, pharmacy, games development, avionics and multimedia development
- a wide range of application software ranging from industry standard to more specialised development packages
- a managed print and photocopying service with access to A3/A4 colour print, photocopying and scanning facilities located throughout the Learning Resource Centre
- wide format and poster quality plotting facilities
- WiFi access for users of mobile devices including: iPhones, iPads, smartphones and laptops
- free Institute of Technology Carlow e-mail account on the Microsoft Office 365 Professional Suite
- a walk-in help desk facility to help students with any technical issues relating to the above services.

The Institute has adopted the "Blackboard" virtual learning environment enabling students to access course material, take assessments, view class announcements, participate in online discussions or tutorial sessions, remotely or on campus. Blackboard is also available as an app to students on Apple or Android mobile devices.

Wexford Campus

Students in the Wexford Campus have access to state-of-the-art computing facilities and full broadband connectivity. All PCs are linked to the computing facilities at the Carlow Campus. Full WiFi is also available throughout the campus. In addition, students have access to high specification iMac computers for high performance media processing. There is campus-wide access to managed print/photocopying facilities with access to A3/A4 colour print, photocopying and scanning facilities. There are also wide format and poster quality plotting facilities available to students in the Wexford campus.

SCHOOLS LIAISON

Guidance Counsellors

Guidance Counsellors meet with both Institute staff and the President during the year in order to keep up-to-date with course developments and Institute activities which may be of interest to their students.

School Visits

Institute of Technology Carlow is happy to visit your school and present details about the Institute, its courses and facilities. To book, please see contact details below.

Careers Exhibitions

Institute of Technology Carlow participates in many careers exhibitions within the region and nationally throughout the academic year.

Open Day

Institute of Technology Carlow hosts an Open Day every academic year, providing students the opportunity to explore the Institute's campus and facilities and to meet with lecturers and current students to discuss courses and career opportunities.

Carlow Campus Open Day:
Thursday, 16th November 2017

Wexford Campus Open Day:
Friday, 17th November 2017

Campus Visits

Campus visits may be requested throughout the year to enable students to explore career options and experience college life.

For further information on any aspect of Schools Liaison contact:
Mary Bates
Phone: 059 9175092
Email: mary.bates@itcarlow.ie

ENGINEERING SCHOOL INITIATIVES

Engineering Your Future Programme

This is a 4-day immersion in the world of engineering for local Transition Year students. The programme runs in May and is coordinated by Engineers Ireland.

School Construction Curriculum Supplement Programme

This is a 1/2 day practical programme for 5th Year school students enrolled in Construction Studies. The programme is run annually and is designed to use our facilities to supplement the school curriculum.

Debating Competition

This is open to all secondary schools and is designed to stimulate objective debate about topics related to the Building Industry in Ireland. The final is hosted during Open Day in November.

Bridge Design Competition

This is a national bridge-design competition aimed at transition year students that uses freely available and easy to use 'Westpoint Bridge Competition' software. Information is sent to schools in the first term in relation to this competition. Visit www.itcarlow.ie for further details.

PRESIDENT'S VOLUNTEER AWARD

The Institute of Technology Carlow President's Volunteer Award has been established in association with UNUM Ireland and Carlow Volunteer Centre to harness, acknowledge and support the contribution that students at the Institute make to their communities, whether on campus and its environs, within their own local community or overseas.

The main aims of the awards are:

- To develop active citizenship and civic engagement amongst the student population
- To create joint projects with our volunteer communities
- To support the contribution that our student volunteers make to our communities
- To create civic and leadership skills amongst students.

The most important requirement for the award is a commitment to volunteering work. Carlow Volunteer Centre can help you to find a volunteering role that will suit your talents interests and availability. See **www.volunteercarlow.ie** for information on over 200 voluntary organisations and the voluntary roles you may be able to take up. Students in Wexford can find information about local volunteering opportunities at **www.wexfordvolunteer.ie**. However, you are not limited to these opportunities.

Each academic year you have the opportunity to earn a bronze, silver or gold award. You do not have to acquire a bronze or silver award before applying for a gold.

BRONZE	20 hours of volunteering
SILVER	40 hours of volunteering
GOLD	60 hours of volunteering

Outstanding Achievement Award

Institute of Technology Carlow will recognise and honour students exhibiting an overall exceptional commitment to volunteering during the academic year.

For further information, please contact our Student Services Department.

SCHOLARSHIPS

High Performance Entry Scheme

Institute of Technology Carlow introduced the High Performance Entry Scheme in 2015. This scheme awards up to 50 extra CAO points for students who excel outside the classroom in three key areas: Innovation/Entrepreneurship, Active Citizenship or Sport. Twelve places - four in each of the three categories - are offered for the academic year.

This is the only initiative of its kind in the country that specifically rewards aspiring third-level students for achievements in these three areas and Institute of Technology Carlow is the only Institute to offer performance points for excellence in sport. Find out more on our website: **www.itcarlow.ie/study**

Academic Scholarships

Institute of Technology Carlow rewards high achieving students by offering academic scholarships for students entering their first year of college. This programme provides one scholarship per course to the student who achieves the highest points in the Leaving Certificate above a defined minimum points level, and is one of the most generous in the country. Find out more on our website: **www.itcarlow.ie/academicscholarships**

Sports Scholarships

The Sports Scholarship Programme at the Institute of Technology Carlow offers generous support packages and/or bursaries to students of exceptional sporting ability.

Find out more about Sports Scholarships on pages 17 and 18 or on our website: **www.itcarlow.ie/sportsscholarships**

FACULTY OF **ENGINEERING**

Department of Aerospace, Mechanical and Electronic Engineering
Department of Built Environment and Extended Campus

HEAD OF FACULTY: **Brian McQuaid**, BSc (Hons), MSc, MAI

HEAD OF DEPARTMENT OF AEROSPACE, MECHANICAL AND ELECTRONIC ENGINEERING

Dr Cathal Nolan

BEng(Hons), PG Dip, MEng, PhD

E: cathal.nolan@itcarlow.ie

HEAD OF DEPARTMENT OF BUILT ENVIRONMENT AND EXTENDED CAMPUS

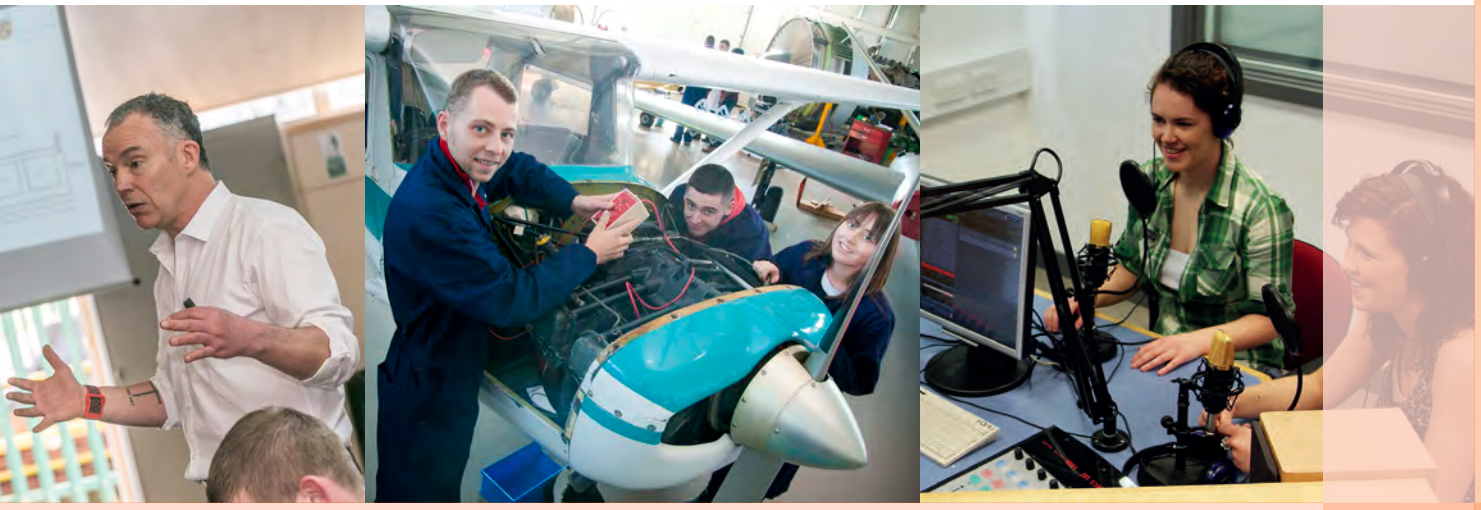
Eoin Homan

BScEng (Hons), MSc, CEng, MIEI

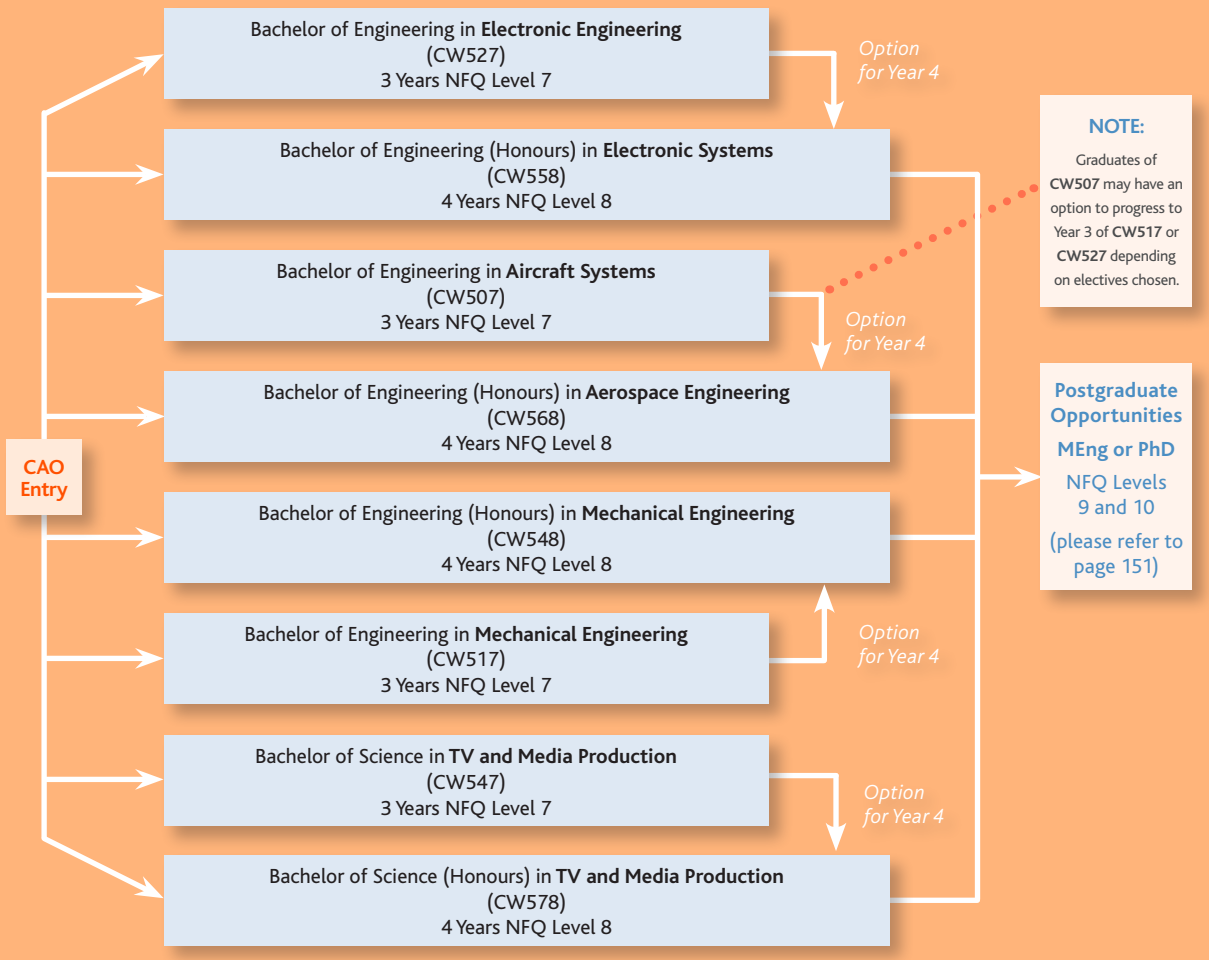
E: eoin.homan@itcarlow.ie

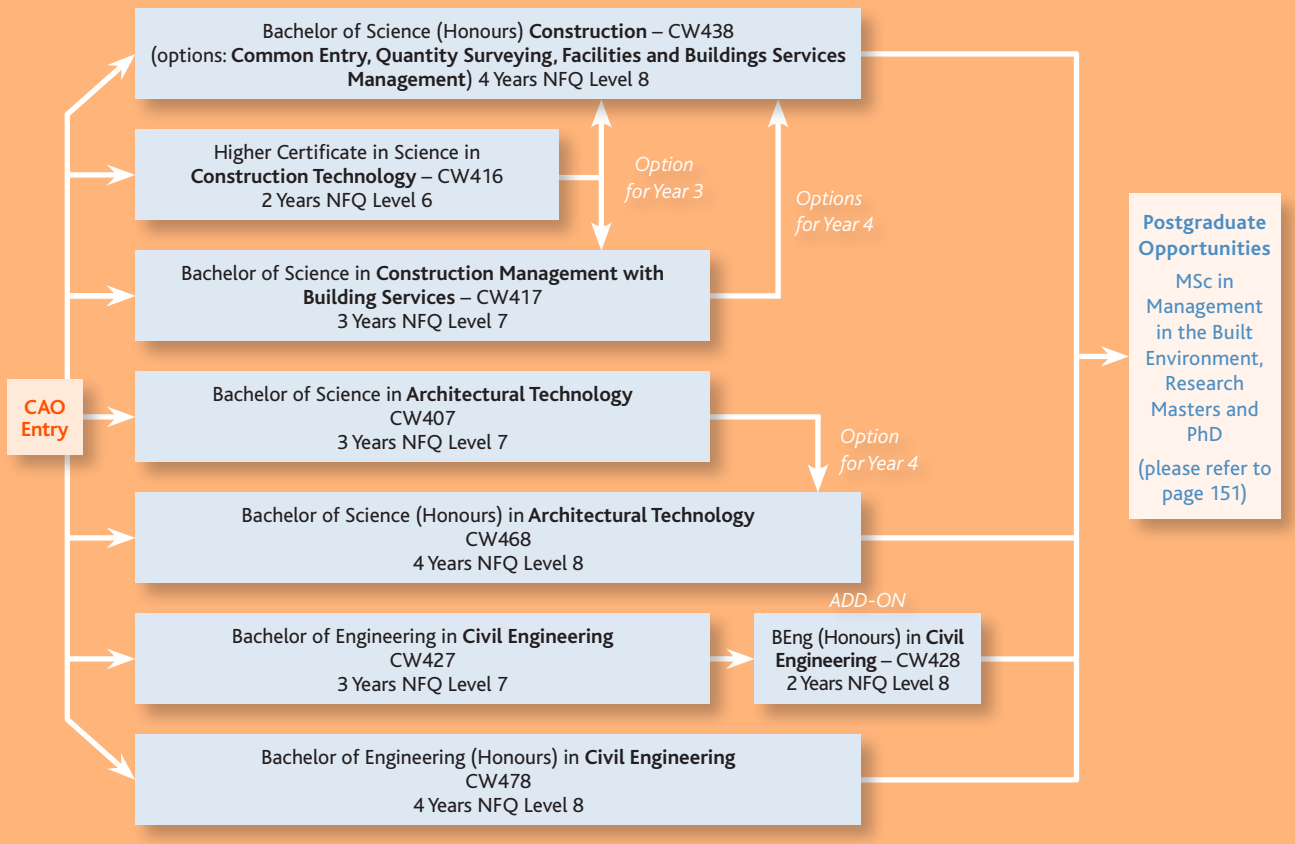
Faculty of Engineering

T: 059 9175403



Course Progression Chart




Bachelor of Science (Honours) **Construction** – CW438
(options: **Common Entry, Quantity Surveying, Facilities and Buildings Services Management**) 4 Years NFQ Level 8
Higher Certificate in Science in **Construction Technology** – CW416
2 Years NFQ Level 6
Option for Year 3
Options for Year 4
Bachelor of Science in **Construction Management with Building Services** – CW417
3 Years NFQ Level 7
CAO Entry
Bachelor of Science in **Architectural Technology**
CW407
3 Years NFQ Level 7
Option for Year 4
Bachelor of Science (Honours) in **Architectural Technology**
CW468
4 Years NFQ Level 8
ADD-ON
Bachelor of Engineering in **Civil Engineering**
CW427
3 Years NFQ Level 7
BEng (Honours) in **Civil Engineering** – CW428
2 Years NFQ Level 8
Bachelor of Engineering (Honours) in **Civil Engineering**
CW478
4 Years NFQ Level 8
Postgraduate Opportunities
MSc in Management in the Built Environment, Research Masters and PhD
(please refer to page 151)

CW568

NFQ LEVEL 8

Bachelor of Engineering (Honours)

Aerospace Engineering

PLACES	POINTS	DURATION	EXIT AWARD
15	395	4 YEARS	YES

PROGRAMME DIRECTOR

Gerard Gibbs
CEI, MEng
E: gerard.gibbs@itcarlow.ie

What is Aerospace Engineering?

Aerospace Engineering is an exciting discipline covering the design and development of all types of aircraft including: airplanes, helicopters, satellites and spacecraft. Aerospace engineers bring concepts to reality by applying the principles of engineering to the design, manufacture and operation of highly sophisticated technologies for use in aviation and space exploration. They ensure that aircraft and spacecraft meet safety requirements by creating new and more environmentally-friendly designs and manufacturing methods.

This course provides graduates with real-life problem solving skills. Institute of Technology Carlow is the only third-level institute in Ireland to have its own on-campus aerospace centre, comprising a range of aircraft, a wind tunnel and an avionics/UAV laboratory. These unique facilities ensure students have the very best learning environment, combining theory with practical hands-on experience. Students will use industry standard design tools such as CATIA, ANSYS and MATLAB to design, analyse and simulate flight of aerial vehicles (AVs). The course provides students with the skill sets in the areas of aerodynamics, propulsion, aircraft networks, flight dynamics, control systems, aircraft leasing, embedded systems and project design.

What will I be able to do when I finish the course?

Many aerospace engineers work directly within the aerospace industry in roles with leading aircraft manufacturers and airline companies as well as Government Agencies. The role of an aerospace engineer can vary hugely from aircraft design to research, design and development, field service, marketing and software development.

Graduates may apply to undertake either a taught or research Masters at Institute of Technology Carlow or other universities.

Aerospace Engineering Graduate Stephen Reid is now Project Engineer with Ryanair.

Special features of this course

- Access to the Institute's Centre for Aerospace Engineering on campus grounds with facilities including a fleet of aircraft and an avionics workshop.
- Institute of Technology Carlow has been recognised as a leading aerospace education facility in the country by an independent panel and won the Aviation Education Industry Award in 2015.
- Two Exit Awards – Higher Certificate in Aircraft Systems after Year 2 or a Bachelor of Engineering in Aircraft Systems after Year 3.

What subjects will I study?

YEAR 1

Mandatory Subjects

Mathematics 1
Physics
Electrical Fundamentals
Technical Communications
Electronic Fundamentals
Basic Aerodynamics
Introduction to Aircraft Design
Workshop Practice

YEAR 2

Mandatory Subjects

Digital Techniques
Instrument Systems
Mathematics 2
Project 2 (Digital)
Computer Applications
Human Factors
Materials and Hardware
Maintenances Practices
Project 2 (Mechanical)
Aircraft Structures Fundamentals

YEAR 3

Mandatory Subjects

Aviation Legislation
Propellers
Mathematics 3
Industrial Studies
Electrical Power Systems
Aerodynamics and Flight Control Systems

Elective Group: ***Mechanical***

Project 3 (Mechanical)
Aircraft Structures
Aircraft Systems
Gas Turbine Engine
Piston Engine

Elective Group: ***Avionic***

Project 3 (Avionic)
Aircraft Structures and Systems
Instrument and Autopilot Systems
Radio Communication and Navigation Systems
Power Plant

Elective Group: ***Rotary***

Project 3 (Mechanical)
Instrument and Autopilot Systems
Gas Turbine Engine
Piston Engine
Helicopter Aerodynamics, Structures and Systems

YEAR 4

Mandatory Subjects

Aerodynamics and CAD
Structures
Flight Dynamics and Control
Embedded Systems
Computer Networks for Aircraft
Individual Research Project
Development Project
Technical Aircraft Leasing

Elective

Industrial Placement
Professional Studies

Bachelor of Engineering

Aircraft Systems

CW507

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Gerard Gibbs CEI, MEng **E**: gerard.gibbs@itcarlow.ie	**28**	**340**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1

Mandatory Subjects

Mathematics 1
Physics
Electrical Fundamentals
Technical Communications
Electronic Fundamentals
Basic Aerodynamics
Introduction to Aircraft Design
Workshop Practice

YEAR 2

Mandatory Subjects

Instrument Systems
Digital Techniques
Computer Applications
Human Factors
Maintenance Practice
Materials and Hardware
Mathematics 2
Project 2 (Mechanical)
Project 2 (Digital)
Aircraft Structures Fundamentals

YEAR 3

Mandatory Subjects

Aviation Legislation
Propellers
Mathematics 3
Industrial Studies
Electrical Power Systems
Aerodynamics and Flight Control Systems

Elective Group: ***Mechanical***

Project 3 (Mechanical)
Aircraft Structures
Aircraft Systems
Gas Turbine Engine
Piston Engine

Elective Group: ***Avionic***

Project 3 (Avionic)
Aircraft Structures and Systems
Instrument and Autopilot Systems
Radio Communication and Navigation Systems
Power Plant

Elective Group: ***Rotary***

Project 3 (Mechanical)
Instrument and Autopilot Systems
Gas Turbine Engine
Piston Engine
Helicopter Aerodynamics, Structures and Systems

What is an Aircraft System?

Aircraft Systems refers to all the 'subsystems' required to maintain the airworthiness of an aircraft. These systems include flight controls, landing gear, electrical systems, hydraulics, avionics, navigation, communications and instrumentation, amongst others. An aircraft systems engineer can work as a development engineer, developing and testing aircraft systems or components, or can work as a maintenance engineer, testing, calibrating, maintaining and upgrading aircraft systems. Students have access to a multi-million euro on-campus aerospace centre with its own fleet of aircraft, a wind tunnel and an avionics/UAV laboratory.

This course provides an overview of all aspects of aircraft systems. In Year 3, students have a choice of specialising in Mechanical Systems (aircraft structure and engines) or Avionics Systems (autopilot, communications, navigation and radar systems).

What will I be able to do when I finish the course?

As aviation is one of the largest industries in the world, Aircraft Systems Engineers have excellent employment opportunities at home and abroad. Graduates may find employment in a variety of roles including management, maintenance, design, flight crew, air traffic control, crash investigation, flight dispatching and ground crew staff. Graduates have secured positions with companies such as Aer Lingus, Ryanair, The European Space Agency, CityJet, Aerospace Inspection International, Spirit AeroSystems, and Eirtech Aviation.

Graduates can progress to Year 4 of the Bachelor of Engineering (Honours) in Aerospace Engineering (CW568), Year 3 of the BEng (Honours) in Electronic Systems or Year 3 of the BEng (Honours) in Mechanical Engineering course at Institute of Technology Carlow, subject to availability of places and specialism chosen in Year 3 of the BEng in Aircraft Systems.

Institute of Technology Carlow has a Memorandum of Understanding with Cranfield University UK which enables graduates to enter the pre-masters in Engineering at Cranfield University. On completion of this nine month course, graduates can progress to their one-year MSc course.

Special features of this course

- Course accredited by Engineers Ireland (EI) and the Royal Aeronautical Society (RAeS) and graduates are eligible for membership of both organisations.
- Institute of Technology Carlow has very strong relationships with the organisations in the aviation industry.
- Exit Award – Higher Certificate in Aircraft Systems after 2 Years.

CW558

NFQ LEVEL 8

Bachelor of Engineering (Honours)

Electronic Systems

PLACES	POINTS	DURATION	EXIT AWARD
15	290	4 YEARS	YES

PROGRAMME DIRECTOR

Dr Darren Kavanagh
BEng (Hons), PhD
E: darren.kavanagh@itcarlow.ie

What is Electronic Systems?

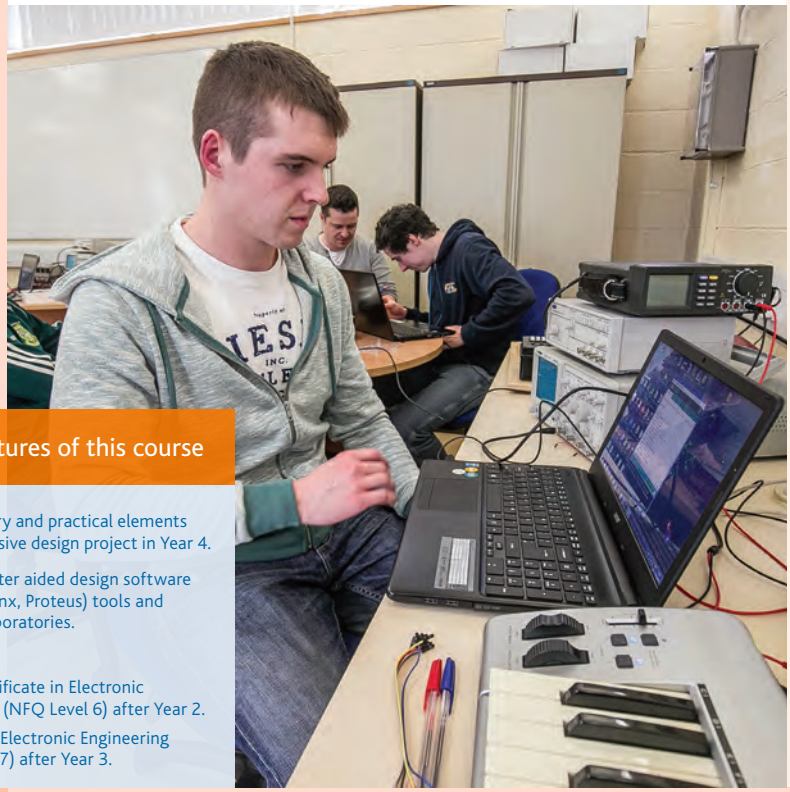
Electronic systems are at the heart of everyday life at home, at work, in our cars and in our mobile devices and entertainment systems. As smart electronics continue to evolve, electronic engineers will increasingly play a vital role in all our lives designing, testing, installing and maintaining electronic systems in business, entertainment, health, security, computing, communications and many other areas.

This course combines theory with practical projects and assignments. Modules include: Electronics, Electricity, Engineering Science, Electronic Craft, Mathematics, Technical Communications, System Design, Fabrication and many more. Students are required to complete a design project in Year 4 using their problem-solving abilities, knowledge and acquired skills to work both individually and as part of a team. The course makes extensive use of computer-aided design software tools in simulation laboratories.

What will I be able to do when I finish the course?

The electronics sector will continue to grow in size and complexity, requiring an ongoing supply of talented graduates. A wide range of opportunities and a diverse range of careers exist for electronic systems engineers including electronic system designers, development engineers, communications engineers and technical sales and marketing support roles. These roles are required across the industry spectrum from specialist engineering firms to computer network and control industries.

Graduates can progress to postgraduate study at either Masters or Doctoral level.



What subjects will I study?

YEAR 1

Mandatory Subjects

Introduction to Electronics
Principles of Electricity
Engineering Science
Mathematics 1
Technical Communications
Electronic Engineering Practice
Introduction to Computer Programming

YEAR 2

Mandatory Subjects

Analogue Electronic Systems
Digital Electronic Systems
Electronic Communications
System Design and Test
Mathematics 2
Industrial Studies
Computer Programming for Engineers

YEAR 3

Mandatory Subjects

Analysis of Analogue Circuits
Programmable Electronics
Signal Processing
Management Studies
Mathematics 3
Development Project
Digital Communications
Computer Networks I

YEAR 4

Mandatory Subjects

System Analysis
Microelectronic Design
Digital Systems Design
Design Project

Electives

Professional Studies
Industrial Placement
Computer Networks I
Computer Networks II
Embedded Linux Development

Special features of this course

- Blend of theory and practical elements with an extensive design project in Year 4.
- Latest computer aided design software (Cadence, Xilinx, Proteus) tools and simulation laboratories.
- Exit Awards:
  - Higher Certificate in Electronic Engineering (NFQ Level 6) after Year 2.
  - Bachelor of Electronic Engineering (NFQ Level 7) after Year 3.

Accredited

Bachelor of Engineering

Electronic Engineering

CW527

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Dr David Allen BEng (Hons), PhD **E**: david.allen@itcarlow.ie	**18**	**220**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1

Mandatory Subjects

Introduction to Electronics
Principles of Electricity
Engineering Science
Mathematics 1
Technical Communications
Electronic Engineering Practice
Introduction to Computer Programming

YEAR 2

Mandatory Subjects

Analogue Electronic Systems
Digital Electronic Systems
Electronic Communications
System Design and Test
Mathematics 2
Industrial Studies
Computer Programming for Engineers

YEAR 3

Mandatory Subjects

Analysis of Analogue Circuits
Programmable Electronics
Signal Processing
Management Studies
Mathematics 3
Development Project
Digital Communications
Computer Networks I

What is Electronic Engineering?

Electronic Engineering is the field of study which deals with the systems that underlie our modern world through the development of new equipment in the fields of medicine, communications, computing, security, business and entertainment. It is a challenging and creative profession and one which has facilitated a wide range of technological advances such as smartphones, medical diagnostic equipment, satellite communications, security systems and so many other things we now take for granted.

What will I be able to do when I finish the course?

Electronic Engineering offers a broad range of exciting career challenges including the creation of new innovations and developments in telecommunications, robotics, computing hardware and power electronics equipment. Graduates can expect to find careers as:

- Development engineers– the design and development of new electronic engineering products
- Technical support managers – installing, commissioning and servicing electronic products
- Communications engineers – operating, upgrading and optimising communication networks.

Graduates of this course will also be eligible to progress to Year 4 of the Bachelor of Engineering (Honours) in Electronic Systems (CW558) at Institute of Technology Carlow.

Special features of this course

- Accredited by Engineers Ireland (EI) and graduates are eligible for EI membership.
- 50% of class time dedicated to practical exercises in laboratories, workshops and computing centre.
- Well balanced mixture of theory and practical elements with an extensive design project in Year 3.
- Latest computer aided design software tools and simulation laboratories.
- Exit Award: Higher Certificate in Engineering - Electronic Engineering (NFQ Level 6) after Year 2.

CW548

NFQ LEVEL 8

Bachelor of Engineering (Honours)

Mechanical Engineering

PLACES	POINTS	DURATION	EXIT AWARD
22	335	4 YEARS	YES

PROGRAMME DIRECTOR

Joe Dillane
BEng (Hons), MBS
E: joe.dillane@itcarlow.ie

What is Mechanical Engineering?

Mechanical Engineering is one of the most diverse of the engineering disciplines. It deals with the design and manufacture of everything from small individual parts and devices like the inkjet nozzle to large systems such as spacecraft tools. The role of a mechanical engineer is to take a product from idea to marketplace. It requires specialist engineering knowledge combined with creative thinking, problem solving, team working and analytical skills.

This course equips graduates with the specialist knowledge and practical experience required to manage the complete mechanical engineering process from product design to manufacturing output. The course features extensive practical workshops and includes a challenging project in Year 4. On completion of this course students will have a detailed understanding of:

- mechanical, energy, manufacturing and electromechanical engineering
- the design and development process to bring new products to manufacturing stage
- management and control of a manufacturing operation
- effective communications
- pre-production and maintenance planning
- production processes and storage of materials.

What will I be able to do when I finish the course?

Mechanical engineers work in a diverse range of industries including: automotive, aerospace, biotechnology, computers and electronics, microelectromechanical systems, energy conversion, environmental control, automation and manufacturing. Graduates will have a variety of career options open to them such as working in industry, government, consultancy or research centres.

Graduates will be eligible to progress to postgraduate study at either Masters or Doctoral level.

What subjects will I study?

YEAR 1

Mandatory Subjects

Mechanics of Machines 1
Technical Graphics 1
Electrical Science
Mechanical Workshop
Plant Engineering
Mathematics 1
Technical Communications
Energy Technology
Material Science

YEAR 2

Mandatory Subjects

Mechanics of Machines 2
Energy Systems 2
Design and Manufacture
Technical Graphics 2
Mechatronics 2
Mathematics 2
Industrial Studies
Material Science

YEAR 3

Mandatory Subjects

Dynamics 3
Mechanics of Materials 3
Energy Systems 3
Computer Integrated Engineering 3
Mechatronics 3
Mathematics 3
Management Studies
Development Project

YEAR 4

Mandatory Subjects

Sustainable Energy
Computer Integrated Engineering 4
Dynamics and Control
Process Engineering
Quality
Mechanics of Materials 4
Project

Electives

Professional Studies
Industrial Placement

Special features of this course

- 50% class time on practical exercises in laboratories and workshops.
- Students of this course have been very successful in the Engineers Ireland Innovative Student of the Year Award, winning three times and runner up once in the past 6 years.
- Well balanced mixture of theory and practical elements with an extensive design project in Year 4.
- Course incorporates strong emphasis on the vital area of sustainable energy.
- Use of industry standard design tools ANSYS and SOLIDWORKS.
- Exit Awards:
  - Higher Certificate in Engineering - Mechanical Engineering (NFQ Level 6) after Year 2.
  - Bachelor of Engineering - Mechanical Engineering - (NFQ Level 7) after Year 3.

Accredited

Bachelor of Engineering

Mechanical Engineering

CW517

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Justin Townsend BSc Eng (Hons), MSc **E**: justin.townsend@itcarlow.ie	**14**	**270**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1

Mandatory Subjects

Mechanics of Machines 1
Technical Graphics 1
Electrical Science
Mechanical Workshop
Plant Engineering
Mathematics 1
Technical Communications
Energy Technology

YEAR 2

Mandatory Subjects

Mechanics of Machines 2
Design and Manufacture
Energy Systems 2
Technical Graphics 2
Mechatronics 2
Mathematics 2
Industrial Studies
Materials Science

YEAR 3

Mandatory Subjects

Energy Systems 3
Computer Integrated Engineering 3
Mechatronics 3
Mathematics 3
Management Studies
Development Project
Dynamics 3
Mechanics of Materials 3

What is Mechanical Engineering?

Mechanical Engineering is one of the broadest of all engineering disciplines focusing on the design, construction, control and maintenance of mechanical systems. The role of a mechanical engineer is to take a product from idea to marketplace, requiring specialist engineering knowledge combined with creative thinking, problem solving, team working and analytical skills.

Graduates of this course will have specialist knowledge and practical experience required to assist in the management of the manufacturing process from product design to output. The course features extensive practical workshops and practicals.

What will I be able to do when I finish the course?

Graduates will have a variety of career options working in industry, government, consultancy or research centres. Graduates of this course work in the evaluation and resolution of mechanical problems, they work in manufacturing facilities and as team members on new design work.

Graduates are eligible to progress to Year 4 of the Bachelor of Engineering (Honours) – Mechanical Engineering (CW548) at Institute of Technology Carlow.

Professional Bodies Accreditation

This course is accredited by Engineers Ireland (EI) as meeting the educational requirements of Associate Engineer membership.

Special features of this course

- Accredited by Engineers Ireland (EI) for Associate Engineer and graduates are eligible for EI membership.
- 50% class time on practical exercises in laboratories and workshops.
- Course incorporates strong emphasis on the vital area of sustainable energy.
- Exit Award: Higher Certificate in Engineering - Mechanical Engineering (NFQ Level 6) after Year 2.

CW578

NFQ LEVEL 8

Bachelor of Science (Honours)

TV and Media Production

PLACES	POINTS	DURATION	EXIT AWARD
15	365	4 YEARS	YES

PROGRAMME DIRECTOR

Paula Mulroe
BA (Hons), MA
E: paula.mulroe@itcarlow.ie

What is TV and Media Production?

The Bachelor of Science Honours degree in TV and Media Production is a hands-on course where students find themselves completely immersed in the practical world of media production. This course allows students the chance to practically apply skills in writing, editing, camera, sound and graphics that they will acquire over the four years, but also offers students the theoretical and legal backdrop for their work.

Lecturers on the course have significant industry experience with national and international media outlets including CNN, Channel 4, Sky 1, RTE, TV3, CBeebies, BBC, ITV, RTE radio and Newstalk, as well as the independent sector.

These lecturers include scriptwriters, TV and radio producers, directors, animators, editors and camera operators.

What will I be able to do when I finish the course?

Graduates of this course will be equipped to:

- Design content for interactive websites
- Research, plan and manage TV and film productions
- Create motion graphics and visual effects to professional broadcast standard
- Understand the legal requirements associated with commission/ broadcast programmes.

The range of career options open to graduates of this course is extensive and includes roles such as Production Manager, Media Content Researcher, Director/Producer for TV, Web Developer or Media Entrepreneur.

Graduates of this course will be eligible to progress to postgraduate study at either Masters or Doctoral level.

What subjects will I study?

YEAR 1

Mandatory Subjects

Introduction to Video Production
Media Technology
Introduction to Media Production
Principles of Light and Sound
Scriptwriting
Introduction to Audio for Visual Media
Visual Culture

YEAR 2

Mandatory Subjects

Single Camera Video Production
TV Studio Production 1
Graphics and Animation 1
Web Technology
Radio and Audio Post Production
Producing and Writing for Factual TV

YEAR 3

Mandatory Subjects

Location Video Production
Documentary Making
TV Studio Production 2
Production Management
Graphics and Animation 2

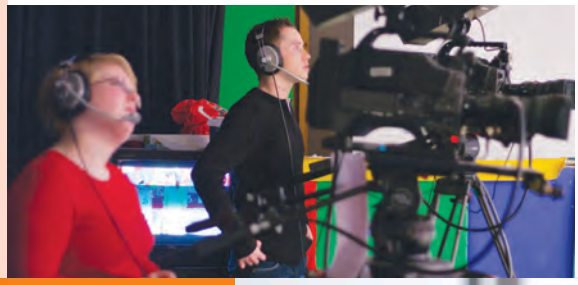
YEAR 4

Mandatory Subjects

Media Culture
Media Law
Project
Advanced Research, Writing and Communication

Electives

Enterprise
Industrial Placement
Advanced Graphics and Editing
Radio Production



Special features of this course

- 60% of student contact time is practical.
- 70% of the course is assessed through continuous assessment rather than exams.
- Dedicated TV and audio studio and editing facilities.
- Editing suite with all of the latest editing and animation software (AVID, Adobe, ProTools).
- Location filming on and off campus.
- Exit Award: Bachelor of Science in TV and Media Production (NFQ Level 7) after Year 3.

Bachelor of Science

TV and Media Production

CW547

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Trina Rea BA (Hons), MA **E:** trina.rea@itcarlow.ie	**15**	**350**	**3 YEARS**	**N/A**

What subjects will I study?

YEAR 1

Mandatory Subjects

Introduction to Video Production
Media Technology
Introduction to Media Production
Principles of Light and Sound
Scriptwriting
Introduction to Audio for Visual Media
Visual Culture

YEAR 2

Mandatory Subjects

Single Camera Video Production
TV Studio Production 1
Graphics and Animation 1
Web Technology
Radio and Audio Post-Production
Producing and Writing for Factual TV

YEAR 3

Mandatory Subjects

Location Video Production
Documentary Making
TV Studio Production 2
Production Management
Graphics and Animation 2

What is TV and Media Production?

The course is run by lecturers who have significant experience with outlets including CNN, Channel 4, Sky 1, RTE, TV3, CBeebies, BBC, ITV, RTE radio and Newstalk, as well as the independent and private sector. These lecturers include Scriptwriters, TV and Radio Producers, Directors, Animators, Editors and Camera Operators.

It's against this background that a hands-on degree course was developed in which students find themselves completely immersed in practical based modules designed to reflect a real-world working environment.

What will I be able to do when I finish the course?

Graduates will have the opportunity to progress onto the BSc in TV and Media (Level 8/Honours). Past graduates of this degree course have gone on to become camera-operators and editors with national and international TV stations; others have become independent producers and directors in both TV, radio and digital media.

Special features of this course

- 60% of student contact time is practical.
- 70% of the course is via continuous assessment rather than exams.
- Dedicated TV and Radio studios
- Editing facilities with all of the latest editing and animation software.
- Our lecturers are award winning, including a BAFTA nomination, an IFTN winner and a BBC Radio Academy Award.

CW478

NFQ LEVEL 8

Bachelor of Engineering (Honours)

Civil Engineering

Engineers Ireland Accredited

PLACES	POINTS	DURATION	EXIT AWARD
32	395	4 YEARS	NO

PROGRAMME DIRECTOR

Shane Murray
BA (Hons), BAI, MSc, HCert, CEng, MIEI
E: shane.murray@itcarlow.ie

What is Civil Engineering?

Civil engineering deals with the built environment and encompasses much of what defines modern civilization. Thus civil engineering is responsible for the development of buildings, transport networks, water provision, i.e. all the essentials we depend on. Increasingly the role of the civil engineer in developing sustainable solutions to challenges presented by climate change is becoming more important.

This course provides a blend of academic and practical training across all key civil engineering areas. The course features a strong practical element with students frequently working in our specialised materials, hydraulic and environmental laboratories and workshops.

A work placement module between Years 3 and 4 provides students with the opportunity to enhance their learning in working on real-life design or construction projects as part of a professional engineering team.

What will I be able to do when I finish the course?

Civil engineers can be found working in industries as varied as aerospace, ship building, energy, environment and many more where constructed facilities are involved. Graduates of this course will be qualified to:

- Work independently with contractors, consultants and local authorities in the areas of design and construction
- Identify problems in the field of civil engineering and provide viable solutions to those problems
- Collect, analyse and interpret relevant data
- Work in multi-disciplinary team situations
- Understand the need for the highest ethical standards in the practice of engineering profession.

Graduates may progress to an MSc in Management in the Built Environment or to a Research Masters or Doctoral studies at Institute of Technology Carlow.

What subjects will I study?

YEAR 1

Mandatory Subjects

Civil Engineering Technology
Surveying and Setting Out I
Physics and Chemistry
Engineering Drawing
Material Science
Soils Mechanics
Quantity Surveying and Estimating
Advanced Mathematics I

YEAR 2

Mandatory Subjects

Surveying and Setting Out II
Structures I
Civil Engineering Drawing I and BIM
Geotechnical Engineering I
Civil Engineering Economics and Management
Advanced Mathematics II
Earthworks Analysis

YEAR 3

Mandatory Subjects

Engineering Geology
Highway and Traffic Engineering I
Advanced Mathematics III
Structural Analysis I
Structural Design I
Environmental Engineering I
Hydraulics I

YEAR 4

Mandatory Subjects

Geotechnical Engineering II
Highway and Traffic Engineering II
Engineer in Society
Structural Analysis II
Structural Design II
Environmental Engineering II
Hydraulics II
Work Placement
Dissertation
Advanced Mathematics IV

Special features of this course

- Accredited by Engineers Ireland (EI) and graduates are eligible for membership of EI.
- The course emphasis is on geo-environmental specialities where civil engineering skills save money, resources and lives.
- Strong emphasis on 'hands-on' learning in our specialized civil engineering laboratories and workshops.
- Our lecturers are all Chartered Civil Engineers with many years of national or international experience.
- Our graduates are successful both in Ireland and around the world working in organisations such as ESB, Carlow Precast, WBHO Civil (Perth), PJ Hegarty & Sons, BAM Contractors, SISK Group.

Accredited

Bachelor of Engineering

Civil Engineering

CW427

NFQ LEVEL 7

PROGRAMME DIRECTOR

Gerry Gallagher, BSc (Hons), CEng, MEng Sc, MIEI, MIStructE
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PLACES	POINTS	DURATION	EXIT AWARD
15	210	3 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Civil Engineering Technology
Surveying and Setting Out I
Applied Civil Engineering
Engineering Science
Material Science
Mathematics
Engineering Drawing
Information Technology

YEAR 2

Mandatory Subjects

Soils Mechanics
Concrete Technology
Water Engineering
Surveying and Setting Out II
Civil Engineering Drawing I and BIM
Quantity Surveying and Estimating
Advanced Mathematics I
Structures I

YEAR 3

Mandatory Subjects

Geotechnical Engineering I
Highway Engineering and Surveying
Structures II
Civil Engineering Economics and Management
Advanced Mathematics II
Civil Engineering Drawing II
Civil Engineering Project
Earthworks Analysis

What is Civil Engineering?

Civil engineering deals with the built environment, often referred to as the structures that have been built as separate from the natural environment. Buildings and bridges are often the most conspicuous creations but this discipline is also responsible for roads, railroads, subway systems, airports, water supply systems and waste disposal. In fact civil engineering as a profession provides much of the infrastructure and essential services on which we depend for survival (further information is available on www.steps.ie).

This course provides specialised training in infrastructure design and construction. The course features a strong practical element with a combination of lectures and practical work in our specialised materials, hydraulic and environmental laboratories and workshops.

What will I be able to do when I finish the course?

A civil engineering qualification travels well – i.e. work anywhere in the world and across almost any industry sector. Graduates are qualified to:

- Work with contractors, consultants or local authorities on civil engineering design, construction and maintenance works
- Survey and set out road works using the latest surveying and GPS systems
- Participate in site investigations
- Supervise and carry out quality control on construction materials
- Draw and detail civil and structural works using CAD and/or BIM software
- Quantify and estimate costs for civil engineering works.

Graduates may progress to the Bachelor of Engineering (Honours) in Civil Engineering (CW428 – Add on) at Institute of Technology Carlow. Progression offers are subject to academic prerequisites.

Special features of this course

- This course is accredited by Engineers Ireland (EI) and graduates of the course are eligible for Associate Engineer membership of EI.
- The emphasis of the course is on geoenvironmental specialities where civil engineering skills save money, resources and lives.
- Significant class time dedicated to practical exercises in our specialised laboratories and workshops.
- Our lecturers are all Chartered Civil Engineers with many years of national or international experience.
- Graduates of this course will have a variety of career options within the built environment.
- Exit Award: Higher Certificate in Engineering in Civil Engineering (NFQ Level 6) after Year 2.

CW428

NFQ LEVEL 8

Bachelor of Engineering (Honours) – Add on

Civil Engineering

Engineers Ireland Accredited

PLACES	POINTS	DURATION	EXIT AWARD
30	N/A	2 YEARS	N/A

PROGRAMME DIRECTOR

Brian Byrne, BSc Eng (Hons), MSc Eng, Ch Eng, FIEI, CMIOSH
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What is Civil Engineering?

Civil engineering deals with the built environment and encompasses much of what defines modern civilization. Buildings and bridges are often the most conspicuous of its creations but this discipline is also responsible for roads, railroads, subway systems, airports, water supply systems and waste disposal. In fact, civil engineering as a profession provides much of the infrastructure and essential services on which we depend for survival (further information is available on www.steps.ie).

This course is designed for graduates of the Bachelor of Engineering in Civil Engineering (NFQ Level 7) from Institute of Technology Carlow or equivalent qualifications. The course provides specialised training in infrastructure design and construction.

The course features a strong practical element with a combination of lectures and practical work in our specialised materials, hydraulic and environmental laboratories and workshops.

A work placement module between Years 4 and 5 will provide students with the opportunity to enhance their learning in working on real-life design or construction projects as part of a professional engineering team.

What will I be able to do when I finish the course?

A civil engineering qualification travels well – you can work anywhere in the world and across almost any industry sector. Graduates are qualified to:

- Work independently with contractors, consultants or local authorities in the areas of design and construction
- Identify problems in the field of civil engineering and provide viable solutions to those problems
- Collect, analyse and interpret relevant data
- Work in multi-disciplinary teams
- Understand the need for the highest ethical standards in the practice of the engineering profession.

Civil engineers can be found working in industries as varied as aerospace, ship building, energy, environment and many more, wherever constructed facilities are involved.

Graduates may progress to the MSc in Management in the Built Environment. Graduates can also progress to a Research Masters or Doctoral studies at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 4

Mandatory Subjects

Structural Analysis I
Structural Design I
Engineering Geology
Highway and Traffic Engineering I
Environmental Engineering I
Hydraulics I
Advanced Mathematics III

YEAR 5

Mandatory Subjects

Geotechnical Engineering II
Highway and Traffic Engineering II
Engineer in Society
Structural Analysis II
Structural Design II
Environmental Engineering II
Hydraulics II
Advanced Mathematics IV
Work Placement
Dissertation

Special features of this course

- Accredited by Engineers Ireland (EI) and graduates are eligible for membership of EI.
- The emphasis of the course is on geo-environmental specialities where civil engineering skills save money, resources and lives.
- Strong emphasis on 'hands-on' learning in our specialized civil engineering laboratories and workshops.
- Our lecturers are all Chartered Civil Engineers with many years of national and/or international experience.
- Students participate in national competitions. For example, in 2015 Institute of Technology Carlow students won the Health and Safety Authority's Safety in Construction competition with a further two teams reaching the final.
- Our graduates are successful both in Ireland and around the world working in organisations such as ESB, Carlow Precast, WBHO Civil (Perth), PJ Hegarty & Sons, BAM Contractors, SISK Group.

Bachelor of Science (Honours)

Architectural Technology

CW468

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dan O'Sullivan
DipArch, RIAI, RIBA, PG Cert
E: dan.osullivan@itcarlow.ie

PLACES	POINTS	DURATION	EXIT AWARD
15	270	4 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Technical Design and Detailing I
Information Technology and Computer Aided Design
Building Technology, Materials and Structures I
Building Services I
Applied Mathematics
Surveying
Evolution of Buildings and Technologies I

YEAR 2

Mandatory Subjects

Technical Design and Detailing II
Graphics, CAD and Building Information Modelling (BIM) I
Building Technology, Materials and Structures II
Building Services II
Architectural Practice and Legislation I
Evolution of Buildings and Technologies II

YEAR 3

Mandatory Subjects

Technical Design and Detailing III
Graphics, CAD and Building Information Modelling (BIM) II
Building Technology, Materials and Structures III
Building Services III
Architectural Practice and Current Legislation II
Evolution of Buildings and Technologies III

YEAR 4

Mandatory Subjects

Technical Design and Detailing IV
Design Dissertation
Environmental Building Design
Conservation and Refurbishment
Project Management and Practice
Advanced Graphics, CAD and BIM

What is Architectural Technology?

Architectural Technology refers to the technical design and expertise used in the increasingly complex design process required for contemporary architecture. While architects are responsible for creating initial concepts and designs, architectural technologists are more concerned with the technical side of construction. Architectural technologists work closely with architects and other building professionals to resolve any potential design problems before construction starts.

This is a studio-based technical design course that integrates theory with practical application. The course equips students with real-life problem solving and communication skills. The course incorporates an integrated research and design project based on a field study with previous trips to Bilbao, Barcelona and Milan.

What will I be able to do when I finish the course?

Graduates of the Architectural Technology course will have the skills to:

- Research and propose detailed constructional and technological solutions for new builds, extensions and refurbishment of existing and historic buildings
- Work within a contemporary technical environment using BIM technologies such as energy analysis and building services integration using software such as Revit Building Design Suite
- Develop technical solutions from sketch design stage through to working drawings and prepare and coordinate tender documents.

The Architectural Technologist is a key member of the design team and collaborates closely with the architect. Typical employers include: private construction firms and contractors, property developers, planning departments and local authorities.

Graduates may progress to an MSc in Management in the Built Environment or to a Research Masters or Doctoral studies at Institute of Technology Carlow.

Special features of this course

- Accredited by The Chartered Institute of Architectural Technologists (CIAT) and The Royal Institute of the Architects of Ireland (RIAI).
- A studio-based technical design course with dedicated studio space for students of each year.
- Students will acquire proficiency in Graphics, Computer Aided Design (CAD), Revit and Building Information Modelling (BIM).
- Students complete an integrated research and design project based on a field study. Previous international field trips included visits to Bilbao, Barcelona and Milan.
- Annual end-of-year industry showcase event for Final Year students.
- Exit Awards: Higher Certificate in Science in Architectural Technology (NFQ Level 6) after Year 2 and Bachelor of Science in Architectural Technology (NFQ Level 7) after Year 3.

CW407

NFQ LEVEL 7

Bachelor of Science

Architectural Technology

PLACES	POINTS	DURATION	EXIT AWARD
15	170	3 YEARS	YES

PROGRAMME DIRECTOR

Mark Duffy, RIAI, MSc Arch, PG Dip Arch, PG Cert Prof Arch, PG Dip Arch, BA Arch (Hons), NC
E: mark.duffy@itcarlow.ie

What is Architectural Technology?

While architects are responsible for creating initial concepts and designs, architectural technologists are more concerned with the technical side of construction. Architectural technologists work closely with architects as part of the architect's team, preparing working drawings, schedules and specifications. They also work with other building professionals on site surveys, building regulations, fire safety certificates and planning applications.

The course equips students with real-life problem solving and communication skills and a broad understanding of relevant building regulations, Health and Safety Welfare legislation and the theory and practice of environmental design.

What will I be able to do when I finish the course?

Graduates of Architectural Technology will have the skills to:

- Select the right materials and processes for a project
- Use BIM technology
- Support the architect in the preparation of plans and drawings
- Liaise with other construction professionals.

Typical employers include: private construction firms and contractors; property developers; planning departments and local authorities.

Graduates may progress to Year 4 of the Bachelor of Science (Honours) in Architectural Technology (CW468) in Institute of Technology Carlow.

What subjects will I study?

YEAR 1

Mandatory Subjects

Technical Design and Detailing I
Information Technology and Computer Aided Design
Building Technology, Materials and Structures I
Building Services I
Applied Mathematics
Surveying
Evolution of Buildings and Technologies I

YEAR 2

Mandatory Subjects

Technical Design and Detailing II
Graphics, CAD and Building Information Modelling (BIM) I
Building Technology, Materials and Structures III
Building Services II
Architectural Practice and Legislation I
Procedure II
Evolution of Buildings and Technologies II

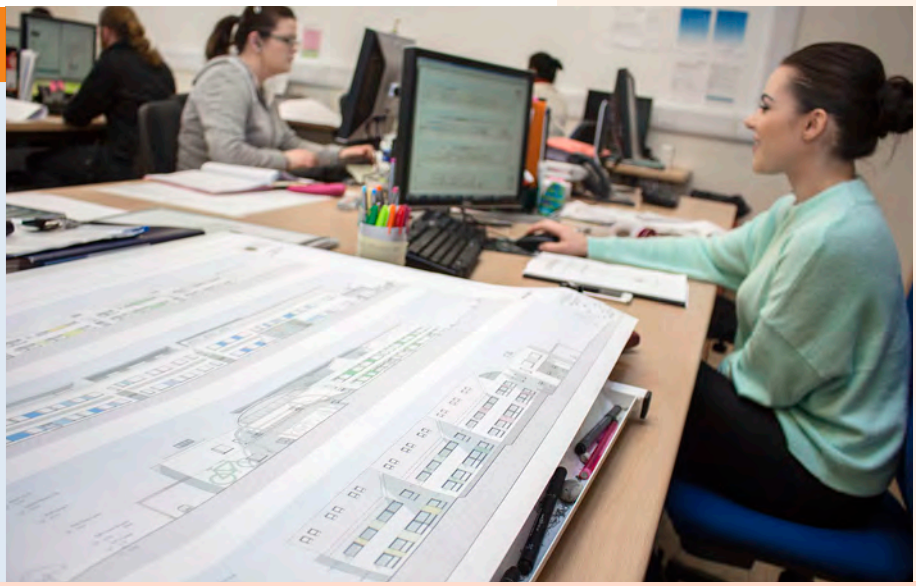
YEAR 3

Mandatory Subjects

Technical Design and Detailing III
Graphics, CAD and Building Information Modelling (BIM) II
Building Technology, Materials and Structures III
Building Services III
Architectural Practice and Current Legislation II
Evolution of Buildings and Technologies III

Special features of this course

- Accredited by Royal Institute of the Architects of Ireland (RIAI) and The Chartered Institute of Architectural Technologists (CIAT).
- A studio-based technical design course with dedicated studio space for students of each year.
- Students will acquire proficiency in Graphics, Computer Aided Design (CAD), Revit and Building Information Modelling (BIM).
- Institute of Technology Carlow has well established international industry links providing students with the opportunity to study abroad through Erasmus and summer work placements (Year 3) programmes.
- Exit Award: Higher Certificate in Science in Architectural Technology (NFQ Level 6) after Year 2.



Bachelor of Science (Honours)

Common Entry (CEY), Quantity Surveying (QSY) or Facilities and Building Services Management (FBS)

CW438

NFQ LEVEL 8

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Fiona Dawson BSc (Hons), ASCSI, MRICS **E:** fiona.dawson@itcarlow.ie	**10**	**260**	**4 YEARS**	**YES**

	Construction - When you apply for Construction you must select ONE of the following options: CEY; QSY or FBS		
CW438	**CEY** Common Entry	**QSY** Quantity Surveying	**FBS** Facilities and Building Services Management
	Applicants should choose CEY (Common Entry) if they are undecided on their speciality and can decide on their degree option at the end of Year 3. Applicants that select a specific degree option at CAO stage are guaranteed a place on that course, subject to meeting the entry requirements and points. All applicants may change their selection up to the end of Year 3 and must confirm their specialism at that point.		

What subjects will I study?

YEAR 1

Mandatory Subjects

Construction Technology I
Building Services I
Materials
Structural Appreciation
Surveying
Management and Measurement
Applied Mathematics
CAD and IT

YEAR 2

Mandatory Subjects

Construction Technology II
Building Services II
Building Information Modelling
Earthworks Measurement and Surveying
Measurement and Estimating
Management and Law
Mathematics with IT

YEAR 3

Mandatory Subjects

Environmental Management
Sustainability and Energy Technology
Measurement and Management
Accounting, Financial Planning and Control
Services Technology
Capstone Project

Application procedure

Applicants now have the option to choose either a common entry option at CAO stage and choose a specialist area by the end of Year 3 or he/she can choose a specialist area at CAO stage.

What is this course about?

This course provides students with an overall understanding of construction and building management.

Students will take part in visits to commercial and industrial facility sites during the term of the course. After three years, students separate into their chosen specialist area from a choice of two areas:

- Quantity Surveying
- Facilities and Building Services Management.

An industrial work placement module between Years 3 and 4 will provide students with an opportunity to enhance their learning in a Quantity Surveying Practice, Facilities Management role or a Construction Company.

Course options

Common Entry (CEY)

By choosing 'CEY' Common Entry course option, applicants are applying for a place on the course but postponing the decision as to which construction speciality to opt for until the end of Year 3. This allows students time to explore the future career choices open to graduates in the different specialism streams. Expert guidance will be available from lecturing staff members in the Institute and ultimate choices can then be considered in light of academic performance across a range of subject areas.

Quantity Surveying (QSY)

This course equips students with an understanding of construction and building management, specialising in management of costs and contracts for construction and refurbishment projects. Graduates can find employment in Ireland or abroad in a wide range of construction sector areas.

Facilities and Building Services Management (FBS)

Facilities and Building Service managers are responsible for the provision, maintenance, operation and renewal of buildings and infrastructure. Specific technical and leadership skills are required to manage complex buildings and infrastructure in the most cost effective and sustainable manner. Graduates of this course are employed across a broad range of sectors including industrial, commercial and public sector.

CW438

NFQ LEVEL 7

Bachelor of Science (Honours)

Common Entry (CEY), **Quantity Surveying** (QSY) or **Facilities and Building Services Management** (FBS)

Bachelor of Science (Honours)

Quantity Surveying (QSY)

What is Quantity Surveying?

Quantity Surveying is the profession responsible for the management and control of all aspects of construction projects. Often also called Construction Economics, the modern quantity surveyor not only evaluates and manages the build costs but also assesses the running costs and whole life costs of a project.

In the Quantity Surveying (QSY) option at Year 4 students will study the modules outlined in the table on this page.

Students will take part in visits to commercial and industrial facility sites during the term of the course.

What will I be able to do when I finish the course?

Quantity Surveying

Graduates will be qualified to:

- Manage building design costs
- Manage contract and procurement procedures
- Administer financial construction contracts and budgets
- Manage projects.

Quantity Surveyors are increasingly in demand as the economy improves and graduates can find employment in Ireland or internationally with consultancy firms, general and specialist contractors, local authorities and government departments.

Mechanical and electrical services are becoming an increasingly important function within buildings and this course is unique in providing specialist training in this area at undergraduate level.

Graduates may progress to an MSc in Management in the Built Environment or to a Research Masters or Doctoral studies at Institute of Technology Carlow.

PROGRAMME DIRECTOR

Fiona Dawson
BSc (Hons), ASCSI, MRICS
E: fiona.dawson@itcarlow.ie

What subjects will I study?

YEAR 4

Mandatory Subjects

Measurement, Tendering and Valuation
Building Economics
Law, Procurement and Contract Practice
Professional Practice
Management
Work Placement
Dissertation

Special features of this course

- Accredited by Chartered Institute of Building (CIOB).
- Students visit commercial and industrial facility sites during the course.
- Highly practical course with 'learn by doing' approach.
- Training in leading edge technology and software.
- Exit Awards: Higher Certificate in Science in Construction Technology (NFQ Level 6) after Year 2 and BSc in Construction Management with Building Services (NFQ Level 7) after Year 3.

CW438

NFQ LEVEL 8

Bachelor of Science (Honours)

Facilities and Building Services Management (FBS)

PROGRAMME DIRECTOR

Yvonne Finn
BSc (Hons), PG Dip
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What subjects will I study?

YEAR 4

Mandatory Subjects

Facilities and Buildings Services Management
Building Economics
Law, Procurement and Contract Practice
Professional Practice
Management
Work Placement
Dissertation

What is Facilities and Building Services Management?

This profession is responsible for the provision, maintenance, operation and renewal of buildings and infrastructure within the commercial, industrial and public sectors. Specific technical and leadership skills are required to manage complex buildings and infrastructure in the most cost effective and sustainable manner.

In the Facilities and Buildings Services Management (FBS) option at Year 4, students will study the modules outlined in the table on this page. The course features a strong practical element with a combination of lectures and practical work in our specialized materials, hydraulic and environmental laboratories and workshops. Students visit commercial and industrial facility sites during the course.

What will I be able to do when I finish the course?

Facilities and Buildings Services Managers have responsibilities for providing and maintaining a range of services such as: property strategy, space management, communications infrastructure, building maintenance and administration. These roles are required across a broad range of sectors including: industrial, commercial, public sector and government, working with direct clients or as contractors.

Graduates may progress to an MSc in Management in the Built Environment or to a Research Masters or Doctoral studies at Institute of Technology Carlow.

Special features of this course

- Accredited by Chartered Institute of Building (CIOB).
- Students visit commercial and industrial facility sites during the course.
- Highly practical course with 'learn by doing' approach.
- Training in leading edge technology and software.
- Exit Awards: Higher Certificate in Science in Construction Technology (NFQ Level 6) after Year 2 and BSc in Construction Management with Building Services (NFQ Level 7) after Year 3.

CW417

NFQ LEVEL 7

Bachelor of Science

Construction Management with Building Services

PLACES	POINTS	DURATION	EXIT AWARD
15	210	3 YEARS	YES

PROGRAMME DIRECTOR

Martin O'Neill
FSCSI, FRICS, MASI, MCIOB
E: martin.oneill@itcarlow.ie

What is Construction Management?

With the growing complexity of modern buildings and the regulation of the built environment, there is an increasing need for people with the training and skills to manage the design, construction, operation and maintenance of these buildings. The design and maintenance of sustainable energy efficient buildings is becoming an important priority and this is an important part of construction technology.

This course equips graduates with the knowledge and understanding of building construction, building services, building maintenance and construction economics along with the development of management skills. Students will study building performance, energy technology and other technologies used to provide and maintain a suitable environment for the building users. Students will also learn about the strategies for management of these buildings from construction stage, through their full lifecycle of operation to the renewal or decommissioning stages.

What will I be able to do when I finish the course?

This course enables graduates to work in a managerial or technical leadership role with building contractors, specialist sub-contractors, suppliers and manufacturers of building materials as well as building owners and public bodies in the construction, refurbishment and/or maintenance of buildings.

Graduates may progress to Year 4 of the Bachelor of Science (Honours) (CW438), specialising in either Quantity Surveying (QSY) or Facilities and Buildings Services Management (FBS).

What subjects will I study?

YEAR 1

Mandatory Subjects

Construction Technology I
CAD and IT
Applied Mathematics
Management and Measurement
Buildings Services I
Materials
Structural Appreciation
Surveying

YEAR 2

Mandatory Subjects

Construction Technology II
Building Information Modelling
Management and Law
Mathematics with IT
Buildings Services II
Earthworks Measurement and Surveying
Measurement and Estimating

YEAR 3

Mandatory Subjects

Environmental Management
Capstone Project
Services Technology
Accounting, Financial Planning and Control
Measurement and Management
Sustainability and Energy Technology

Special features of this course

- Accredited by the Chartered Institute of Building (CIOB).
- Team-based practical project based on a different building each year requiring interaction with existing building owner/operator.
- Students participate in national competitions. For example in 2015 Institute of Technology Carlow students won the Health and Safety Authority's Safety in Construction competition with a further two teams reaching the final.
- Strong practical and project emphasis through the course.
- Exit award: Higher Certificate in Science in Construction Technology (NFQ Level 6) after Year 2.

Higher Certificate in Science

Construction Technology

CW416

NFQ LEVEL 6

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Martin O'Neill FSCSI, FRICS, MASI, MCIOB **E:** martin.oneill@itcarlow.ie	**15**	**175**	**2 YEARS**	**N/A**

What subjects will I study?

YEAR 1

Mandatory Subjects

Applied Mathematics
Materials
Structural Appreciation
Construction Technology I
Building Services I
CAD and IT
Management and Measurement
Surveying

YEAR 2

Mandatory Subjects

Building Information Modelling
Management and Law
Mathematics with IT
Building Services II
Earthworks Measurement and Surveying
Measurement and Estimating
Construction Technology II

What is Construction Technology?

With the growing complexity of modern buildings and the regulation of the built environment, there is an increasing need for people with the training and skills to manage the design, construction, operation and maintenance of these buildings. The design and maintenance of sustainable energy efficient buildings is becoming an important priority and this is an important part of construction technology.

This course equips graduates with the knowledge and understanding of buildings, their construction, services maintenance and economics. Students will acquire skills in: surveying and setting out; interpretation and preparation of drawings; Building Information Modelling (BIM) and financial management for construction estimates.

What will I be able to do when I finish the course?

Graduates can expect employment at a technician/supervisory and managerial level within contracting, manufacturing, consulting, commercial and public sector organisations both in Ireland and internationally.

Graduates may progress to Year 3 of the Bachelor of Science in Construction Management with Building Services (CW417).

Special features of this course

- Project work is a significant part of the course providing students with real-world, practical problem solving skills.
- Site visits to buildings under construction and manufacturing plants.

FACULTY OF **ENGINEERING**

Apprenticeship Courses

HEAD OF FACULTY: **Brian McQuaid**, BSc (Hons), MSc, MAI

HEAD OF DEPARTMENT OF AEROSPACE, MECHANICAL AND ELECTRONIC ENGINEERING

Dr Cathal Nolan

BEng (Hons), PG Dip, MEng, PhD

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HEAD OF DEPARTMENT OF BUILT ENVIRONMENT AND EXTENDED CAMPUS

Eoin Homan

BScEng (Hons), MSc, CEng, MIEI

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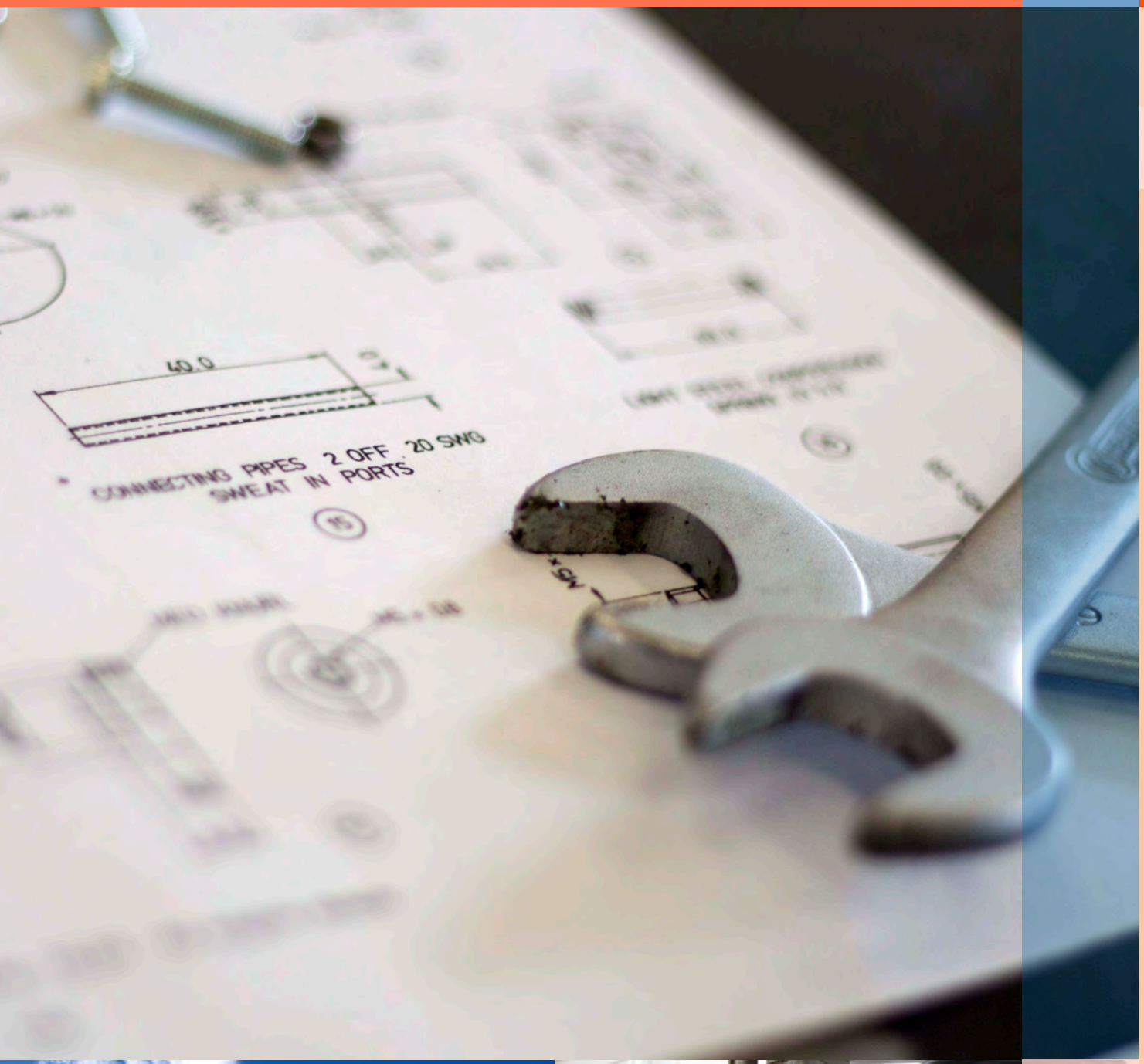
Faculty of Engineering

T: 059 9175403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CONNECTING PIPES 2 OFF 20 SWG
SWEAT IN PORTS


STITUTE of
CHNOLOGY
RLOW

Apprenticeship Courses

Institute of Technology Carlow delivers apprenticeship training in four trades:

- Electrician
- Instrumentation
- Electrical Instrumentation
- Carpentry and Joinery

In what way do the apprenticeships progress?

The present standards-based apprenticeship scheme is run by SOLAS.

Advanced Certificate - Craft

Apprentices who successfully complete all 7 phases are conferred with an Advanced Certificate - Craft by QQI. Only holders of an Advanced Certificate can be registered as qualified craftspersons.

Progression Opportunities

Holders of a National Craft Certificate may be eligible for advanced entry to some of the Department of the Built Environment and Extended Campus courses.

Under the present scheme an apprenticeship lasts 4 years and is divided into 7 distinct phases

PHASE 1
On-the-Job training while working with your employer
PHASE 2
Off-the-Job training in a SOLAS Training Centre
PHASE 3
On-the-Job training while working with your employer
PHASE 4
Off-the-Job training in an Institute of Technology
PHASE 5
On-the-Job training while working with your employer
PHASE 6
Off-the-Job training in an Institute of Technology
PHASE 7
On-the-Job training while working with your employer

The duration of each phase varies from trade to trade. However, in almost all trades apprentices attend an Institute of Technology for Phases 4 and 6.

INSTITUTE OF TECHNOLOGY CARLOW DELIVERS PHASES 4 AND 6 MODULES IN THE FOLLOWING TRADES:

ELECTRICIAN

The aim of this trade is to produce qualified Electricians.

Electricians are typically employed in three main areas:

Electrical generation and distribution
Responsible for the operation and management of national power stations and power distribution networks.

Contracting
Responsible for the installation of power, computer and security cabling systems in homes and businesses.

Electrical maintenance
Responsible for the maintenance of electrical services, motors and automation equipment within a company.

ELECTRICAL INSTRUMENTATION

The aim of this trade is to produce qualified Electrical Instrumentation Technicians who are typically employed in the following areas:

Electrical service maintenance
Responsible for the maintenance of manufacturing plant electrical services, primarily in pharmaceutical and food processing industries.

Calibration and maintenance
Responsible for the calibration and maintenance of process instrumentation equipment.

INSTRUMENTATION

The aim of this trade is to produce Instrument Mechanics. These tradespeople are responsible for the installation and maintenance of process instrument equipment. Typically Instrument Mechanics are employed in the following areas:

Measurement and control
Responsible for measurement and control of temperature, pressure, level and flow, gas analysis in manufacturing industries, primarily pharmaceutical or food processing.

Environmental monitoring and control
Process instrumentation used to measure, monitor and control water and air quality, through environmental protection agencies.

Sales and installation
Responsible for technical sales and installation as sales representatives or technical support engineers.

CARPENTER AND JOINER

The aim of this trade is to produce qualified carpenters and joiners who typically work in the following areas:

Civil engineering
Assist in provision of road structures, shopping centres, offices and other buildings.

Construction engineering
Assist in building domestic and commercial structures including houses, offices, extensions and refurbishments.

FOR FURTHER INFORMATION CONTACT

SOLAS or
Head of Department
Eoin Homan
BScEng, MSc, CEng, MIEI
E: eoin.homan@itcarlow.ie

Faculty of Engineering
Department of Built Environment and Extended Campus
T: 059 9175403
E: engineering@itcarlow.ie

HOW TO BECOME AN APPRENTICE

- To become an apprentice and participate in the Apprenticeship Training Scheme, apprentices must be registered with SOLAS.
- To become a registered apprentice individuals must first find employment with a company. The company then registers the individual with SOLAS.
- As a registered apprentice, SOLAS allocate the individual to a Training Centre and also to an Institute of Technology to complete Phases 2, 4 and 6 of the training. Phases 1, 3, 5 and 7 are completed with the employer.

Faculty of Engineering

Professional Bodies

Royal Aeronautical Society

Royal Aeronautical Society is the world's only professional body dedicated to the entire aerospace community. Established in 1866 to further the art, science and engineering of aeronautics, the Society has been at the forefront of aerospace ever since. The BEng in Aircraft Systems is accredited by RAeS as meeting the academic requirements for Incorporated Engineer.

Royal Institute of the Architects Ireland

The BSc (Honours) in Architectural Technology and the BSc in Architectural Technology meet the requirements of the Royal Institute of the Architects Ireland and the courses are approved by them. The RIAI matrix of competencies forms the backbone of the courses and are key to the learning outcomes.

Engineers Ireland

All Institute of Technology Carlow Civil Engineering courses are accredited by Engineers Ireland as are the BEng in Mechanical Engineering, BEng in Electronic Engineering, BEng in Electronic Engineering and BEng in Aircraft Systems. The Faculty of Engineering also partners with Engineers Ireland to develop Engineering focused courses for second level students to inform them about the opportunities presented in the wide field of Engineering.

Chartered Institute of Architectural Technologists

The Chartered Institute of Architectural Technologists is a UK based qualifying body that represents professionals working and studying in the field of Architectural Technology. It is internationally recognised and both the BSc (Honours) in Architectural Technology and the BSc in Architectural Technology meet CIAT's stringent international standards.

Chartered Institute of Building

The Chartered Institute of Building is an international organisation with over 47,000 members worldwide. Institute of Technology Carlow Honours courses in Architectural Technology, Quantity Surveying, Civil Engineering and Facility Energy Management are all recognised by CIOB.

Graduate Profiles

Tony Brophy

Aircraft Systems

What did you like about the course?
The Aircraft Systems course covers a wide base of subjects in aviation. The industry is so broad ranging it requires a course which can touch all bases of the aviation industry. The course was informative, practical and above all else identified the skills required to work in the aviation sector.

What are you doing now?
I currently work for Aircontractors Ireland which is a part of the ASL Aviation Group. My responsibility as an Aircraft Line Engineer is to carry out maintenance on large passenger carriers as well as small and medium cargo aircraft. I work as part of a team carrying A-checks, line checks and routine maintenance tasks.

How did the course prepare you for the job you are doing now?
The course prepared me for my current job by providing me with the academic and practical skills needed to be able to work in aircraft line maintenance. I have a good mix of knowledge gathered from both the classroom and workshops which helps me in my everyday duties as an aircraft engineer.

Clare Dowling

Civil Engineering

What did you like about the course?
The course has a broad range of subjects with a practical approach including lectures on engineering principles, laboratory classes, fieldwork and design. The lecturers are very encouraging and easy to approach.

What are you doing now?
I am employed as a Structural Engineer (a sub-discipline of civil engineering) with Carlow Precast, a large concrete manufacturer. I'm responsible for the design of large precast concrete elements for structures and large infrastructure projects. This is a highly competitive market and by optimising design techniques, Carlow Precast have developed a large and growing client list in Ireland and beyond.

How did the course prepare you for the job you are doing now?
I developed communications, teamwork and management skills in this course which are transferable to the workplace. The flexibility of the Civil Engineering degree at Institute of Technology Carlow has allowed me to work in a variety of roles including as an Infrastructure Engineer and a Geotechnical Engineer before taking up my current role.

Faculty of Engineering

Graduate Profiles

Keith Greville

Civil Engineering

What did you like about the course?

The Civil Engineering course I studied at Institute of Technology Carlow helped me greatly with my career. The amount of practical knowledge taught was hugely beneficial and our final year project really allowed us to spread our wings and delve into engineering. My group chose to design a bridge over the local river and we covered every aspect of the project from site visits to meetings with local engineers, working out construction means and methods and detailed bridge design calculations. It allowed us to both understand and enjoy what we were studying.

What are you doing now?

I am an Associate Principal with Arup Los Angeles and part of the Executive Leadership of the Infrastructure Practice. I am currently leading our multi-disciplinary team In the $1.3Bn Crenshaw LAX Light Rail Transit Project. The project will connect two original LRT lines in LA, covering 8.5 miles of grade, aerial and underground track via cut and cover sections and tunnelling. It is due to open to the public in late 2018.

How did the course prepare you for the job you are doing now?

A lot of what we learned over the first two years, I still apply to my work today and indeed, our final year project was also a significant stepping stone from college to career.

Brian Kenny

Facilities Management

What did you like about the course?

The course is designed to give students many options and ample time to decide on the career path they want to take. For me the law, accounting and AutoCAD subjects are a great help in my present job.

What are you doing now?

I am currently doing a 4 year graduate placement (Excelerate) with John Sisk & Son, which at the moment has me working in the UK. The course is set out so I can receive my chartership after 3/4 years with CIBSE. It incorporates monthly workshops which deal with all aspects of construction, design and management. The course is designed to give me the foothold I need to be senior management in a short space of time. In September I started working in North Wales on a billion pound project. My role was the management, coordination and design of the mechanical and electrical installations. In March 2015 I was moved to London. I will be doing placements with Sisk sub-contractors and working on Sisk sites.

How did the course prepare you for the job you are doing now?

It gave me great insight into the types of M & E technologies, the law and contractual side of construction, report writing (professional formatting), excel training, AutoCAD and research. These are all tools I use on a day-to-day basis and have given me a distinct advantage in the working world.

Paul Lennon

Electronic Engineering

What did you like about the course?
For me, the course was the perfect balance between theoretical and hands-on experience that provided me with the skills required to excel in the Electronic Systems sector. The course allows students to gain the experience of working as part of a team on projects, which builds their communication skills and introduces them to project management.

The course provides students with the capability to gain employment and perform in any one of these areas, with particular emphasis on digital systems and analogue design.

What are you doing now?
I currently work as an IP Development Engineer for Microsemi Semiconductors Ltd. Microsemi is a leading multi-national semiconductor company which provides a range of high-reliability devices and components to the Communications, Aerospace and Automotive sectors. The IP solutions team in Dublin which I'm part of, deals with the design of secure, low-power System-on-Chip (Soc) FPGA solutions, which contain a hard ARM Cortex-M3 microprocessor, various AMBA peripherals and FPGA fabric utilised to implement custom hardware designs.

My role involves developing IP solutions to run on FPGA's using RTL design techniques (VHDL & Verilog). Typically, these solutions involve creating design blocks to implement serial protocols which are ultra-configurable with the aim to cover all major customer use cases. Projects extend for 3-6 months in duration and require rigorous documentation and planning throughout. These are skills which are constantly developed and enhanced during the undergraduate course at Institute of Technology Carlow.

How did the course prepare you for the job you are doing now?
My role presents a new challenge to overcome every day, making good use of the problem solving techniques taught at Institute of Technology Carlow.

Lisa Sills

TV and Media Production

What did you like about the course?
I liked how hands-on and practical the course was. It's very much geared towards group work. The level of creativity in the course is definitely a big plus too. I really miss working in the studio in particular as that was a highlight. Taking an idea from its base and making it into an actual tangible thing was always really cool.

What are you doing now?

I'm currently working as a Content Marketer with digital marketing agency, Brave Media, in Dublin. We deal with a variety of clients, from SMEs to big companies like Renault. We're a full-service digital marketing agency so we do everything from content creation to paid advertising and building websites.

How did the course prepare you for the job you are doing now?
The TVM course definitely teaches you how to work as part of a team. Creativity and an understanding of digital media are very important to my job too, as are the skills I learned HTML, Photoshop, and video editing. The course really gives you a launching point to be able to work within a team and dive straight into any project.

FACULTY OF **SCIENCE**

Department of Computing and Networking

HEAD OF FACULTY: **Dr David Dowling**, BA Mod (Natural Sciences), PhD

HEAD OF DEPARTMENT OF COMPUTING

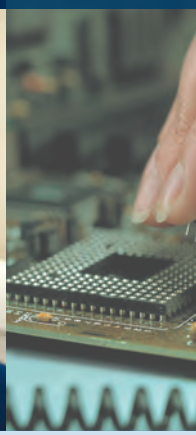
Nigel Whyte

BSc (Hons), MSc

E: nigel.whyte@itcarlow.ie

Faculty of Science

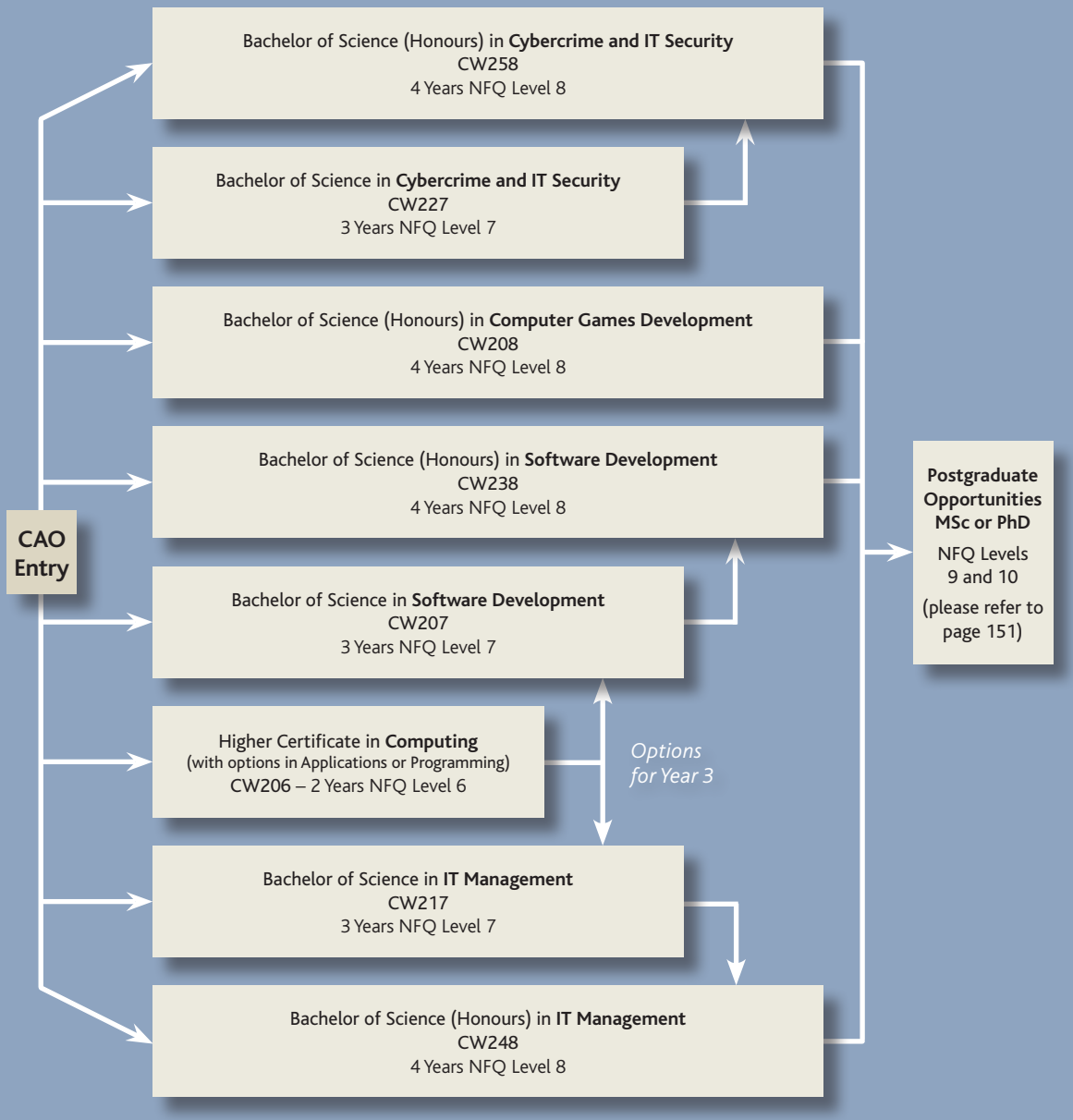
T: 059 9175500






Department of Computing and Networking

Course Progression Chart



CW258

NFQ LEVEL 8

Bachelor of Science (Honours)

Cybercrime and IT Security

PLACES	POINTS	DURATION	EXIT AWARD
25	315	4 YEARS	YES

PROGRAMME DIRECTOR

Richard Butler
BSc (Hons), MSc, CISSP
E: richard.butler@itcarlow.ie

What is Cybercrime and IT Security?

IT security is the practice of safeguarding information from unauthorised access and modification. While cybercrime is illegal activity carried out with technology. This course aims to equip graduates with the knowledge and skills required to prevent, detect and recover from cybercrime. Graduates should be capable of identifying IT system vulnerabilities and have the ability to formulate strategies to enhance the security posture of organisations to reduce overall exposure to cybercrime.

Learners undertaking the BSc (Honours) in Cybercrime and IT Security will study the topics of both software development and network engineering. Learners will be taught to forensically investigate IT security incidents and to critically analyse and reverse engineer malware implementations.

What will I be able to do when I finish the course?

With ever-growing concern over the privacy and security of digital information, cyber security has become one of the fastest growing sectors in the technology industry.

The World Economic Forum identified cyber-related threats as one of the highest of all global risks from the perspective of both impact and likelihood. Professionals with Cybercrime and IT Security qualifications and experience are highly sought after.

Career options include roles in ethical hacking, secure application development, secure network management and digital forensics.

Graduates who obtain an Honours Degree are eligible to proceed to suitable MSc or PhD postgraduate courses of study at Institute of Technology Carlow.

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

Mathematics
Programming
Computer Hardware
Operating Systems
Networking I
Applications and Interpersonal Communications

YEAR 2

Mandatory Subjects

Discrete Structures and Algorithms I
Web Programming and Databases
Incident Handling and Risk Analysis
Object Oriented Software Development
Secure Systems Administration
Networking II

YEAR 3

Mandatory Subjects

Advanced Programming
Software Engineering
Networking III
Cybercrime Legislation
Discrete Structures and Algorithms II
Penetration Testing (Ethical Hacking)
Project/Work Placement

YEAR 4

Mandatory Subjects

Secure Application Development
Secure Networks and Testing
Computer Forensics
Entrepreneurship
Reverse Engineering and Malware Analysis
Project

Pictured at the launch of the Cybercrime and IT Security Degree courses: Dr Patricia Mulcahy, President of Institute of Technology Carlow with International experts Niccolo Alicandri, Co-Founder and Chief Business Officer of global security monitoring specialists CipherTechs Inc. and CipherTechs EMEA Ltd. general manager Laurence Conroy.

Special features of this course

- Students will be following our "learning by doing" model in first year with continuous assessment replacing final exams.
- Work placement is incorporated into Year 3 of the course.
- Final Year students will have the opportunity to display their skills and project work at the Institute of Technology Carlow industry showcase which is attended by leading IT employers.

Bachelor of Science

Cybercrime and IT Security

CW227

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Richard Butler BSc (Hons), MSc, CISSP **E**: richard.butler@itcarlow.ie	**25**	**280**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

Mathematics
Programming
Computer Hardware
Operating Systems
Networking I
Applications and Interpersonal Communications

YEAR 2

Mandatory Subjects

Discrete Structures and Algorithms I
Web Programming and Databases
Incident Handling and Risk Analysis
Object Oriented Software Development
Secure Systems Administration
Networking II

YEAR 3

Mandatory Subjects

Advanced Programming
Software Engineering
Networking III
Cybercrime Legislation
Discrete Structures and Algorithms II
Penetration Testing (Ethical Hacking)
Work Placement/Project

What is Cybercrime and IT Security?

Cybercrime is illegal activity carried out with technology. Information Technology security is the practice of safeguarding information from cybercrime and other unauthorised access or modification. This course aims to equip graduates with the knowledge and skills required to prevent, detect and recover from cybercrime. Graduates should be capable of identifying and resolving IT system vulnerabilities.

Learners undertaking this course will study the fundamental topics of both networking and software development. The course will develop cybercrime and IT security graduates capable of identifying and securing IT system vulnerabilities.

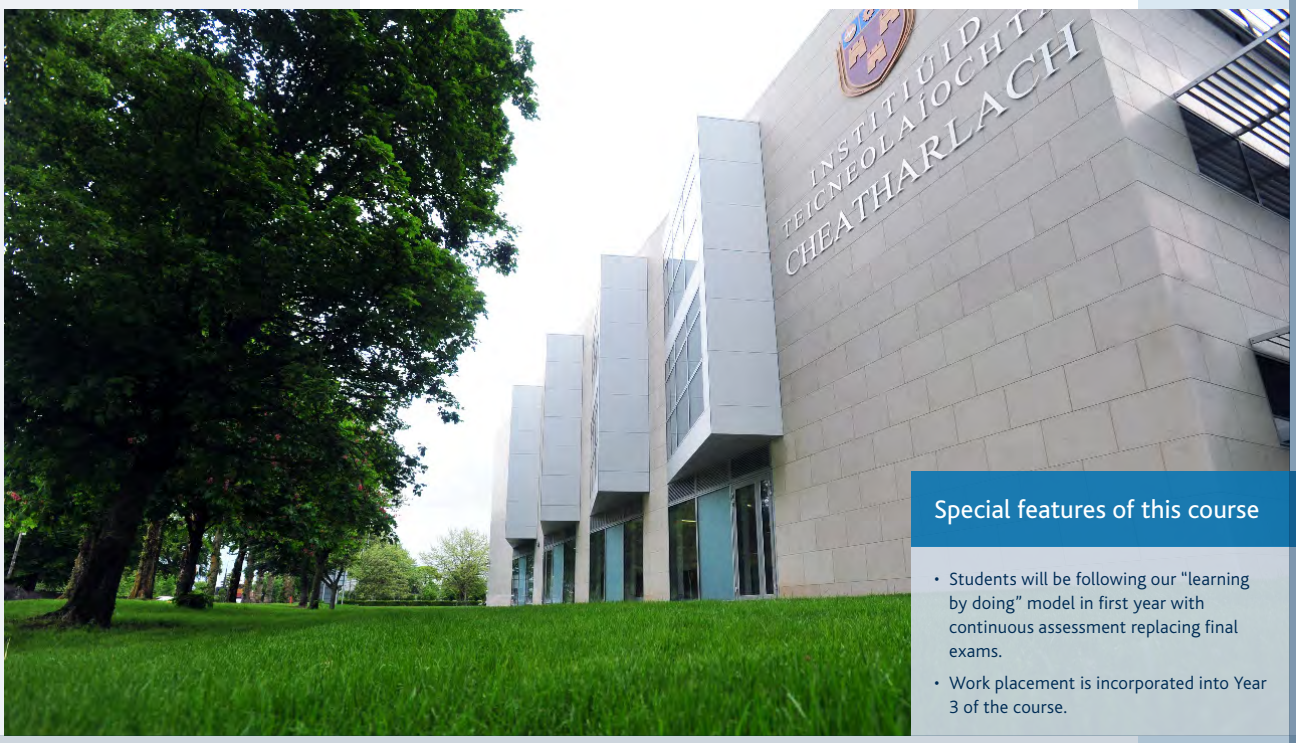
What will I be able to do when I finish the course?

The World Economic Forum identified cyber-related threats as one of the highest of all global risks from the perspective of both impact and likelihood. Professionals with cybercrime and IT security qualifications and experience are highly sought after.

With ever-growing concern over the privacy and security of digital information, cyber security has become one of the fastest-growing sectors in the technology industry.

Career options include roles in ethical hacking, secure application development, secure network management and digital forensics.

Graduates of the course may apply to proceed to Year 4 of the BSc (Honours) in Cybercrime and IT Security course CW258.



Special features of this course

- Students will be following our "learning by doing" model in first year with continuous assessment replacing final exams.
- Work placement is incorporated into Year 3 of the course.

CW208

NFQ LEVEL 8

Bachelor of Science (Honours)

Computer Games Development

PLACES	POINTS	DURATION	EXIT AWARD
48	290	4 YEARS	YES

PROGRAMME DIRECTOR
Ross Palmer
BSc (Hons), MSc
E: ross.palmer@itcarlow.ie

What is Computer Games Development?

Games Development is one of the most exciting and dynamic areas of software development that one can work in. Graduates of this course are sought after by both multinational and indigenous industry leaders such as Microsoft, Demonware, Aeria Games and Swrve.

The games industry continues to grow rapidly and Ireland is gaining international recognition as a centre of excellence due to the calibre of graduates in this field.

This course provides students with the skills they need to become professional games developers. Students will acquire skills in software design and programming, game design, graphics programming, and artificial intelligence. On completion, students will have produced several complete game concepts in a playable form.

Lectures and course practicals cover game industry development technologies including programming languages: C++, Javascript,Python and HTML5; game engine frameworks such as: Unity 3D, Unreal Engine, SFML, OpenGL and DirectX; peripheral technology such as: Kinect and Oculus Rift.

What will I be able to do when I finish the course?

The games industry is vibrant and rapidly expanding with excellent employment opportunities with game publishers and games development studios both at home and abroad.

Graduates have the option to progress to postgraduate studies at either Masters or Doctoral level within the GameCORE Research Centre at Institute of Technology Carlow or elsewhere. Graduates will also be eligible to undertake the MSc in IT Management or the MA in Interaction Design at Institute of Technology Carlow.

What subjects will I study?

YEAR 1

Mandatory Subjects

Games Studies
Computer Graphics
Applied Mathematics
Programming
Computer Architecture for Games Devices

YEAR 2

Mandatory Subjects

Programming
Gameplay Programming I
Software Engineering for Games
Applied Physics
Human Computer Interaction
Animation

YEAR 3

Mandatory Subjects

3D Graphics II
Gameplay Programming II
Project I
Programming for Game Devices
Web Development and Databases
Data Structures and Algorithms
Work Placement

YEAR 4

Mandatory Subjects

Games Engineering I
On-line Gaming Technologies
Real World Modelling and Simulation
Artificial Intelligence for Games
Project II

Special features of this course

- An active learning environment that includes dedicated game development studios.
- Games Development students have competed successfully in national and international digital game events including:
  - 2017 Games Fleadh: Winners of seven awards and runners up in Games Studio Ireland Challenge.
  - 2016 Games Fleadh: Outright winners of best game award.
- Institute of Technology Carlow's final year project showcase is attended by leading employers in the games and IT industries.
- Work placements are offered as part of all undergraduate courses with leading national and international companies.
- The department maintains an international perspective through widespread collaboration with other computing departments and higher education providers with active research links with Netherlands, France, China, Finland, Norway, Hungary and UK.
- Graduates of this course are sought after by employers and Institute of Technology Carlow alumni are working for prominent companies such as Aeria Games, Glu Mobile, Havok, Swrve, Demonware and Microsoft.

Staff and participating students of Games Fleadh 2017 who collected a total of seven awards including Best in Artificial Intelligence.

Bachelor of Science (Honours)

Software Development

CW238

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dr Joesph Kehoe
BSc (Hons), MSc, PhD
E: joseph.kehoe@itcarlow.ie

PLACES	POINTS	DURATION	EXIT AWARD
30	290	4 YEARS	YES

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

- Mathematics
- Programming
- Computer Hardware
- Operating Systems
- Networking
- Applications and Interpersonal Communications I

YEAR 2

Mandatory Subjects

- Discrete Structures and Algorithms I
- Web Programming and Databases
- Systems Analysis, Design and Testing
- Object Oriented Software Development
- Computer Architecture
- Project

YEAR 3

Mandatory Subjects

- Advanced Programming
- Operating Systems
- Software Engineering for Web, Cloud and Mobile Apps
- Discrete Structures and Algorithms II
- Web and Cloud Development
- Work Placement /Project

YEAR 3

Mandatory Subjects

- Secure Application Development
- Data Science
- Software Engineering
- Entrepreneurship
- Distributed and Concurrent Device Development
- Project

What is Software Development?

Software development is the computer programming, documenting, testing, and bug fixing involved in creating and maintaining applications and frameworks during a software release life cycle and resulting in a software product. In the broad sense, it includes everything from concept through to the final production of software. It can include identification of required software, analysis of software requirements, software design, programming, testing and maintenance.

This course equips students with the range of skills required to become competent software developers. Students follow our new 'learning by doing' model in first year with continuous assessment replacing final exams. Modules for the first three years include a broad range of subjects such as: Programming, Networking, Computer Hardware, Web Programming, Systems Analysis, Computer Architecture, Software Engineering and an industry work placement. Year 4 concentrates on high-level software development topics such as: Secure App Development, Data Science, Distributed Systems and an extensive project.

What will I be able to do when I finish the course?

Ireland is a large global player in the software development and software engineering industry with significant employment opportunities for graduates at home and abroad. Graduates of this course are working with companies such as UNUM, IBM, Microsoft, HP, AOL, DoneDeal, Symantec and Intel.

Graduates have the option to progress to postgraduate studies at either Masters or Doctoral level within the GameCORE Research Centre at Institute of Technology Carlow or elsewhere. Graduates will also be eligible to undertake the MSc in IT Management or the MA in Interaction Design at Institute of Technology Carlow.

Special features of this course

- Dedicated software development laboratory for 3rd and 4th year students sponsored by UNUM, providing a real-world working environment.
- Work placements are offered as part of all undergraduate courses with leading national and international companies.
- Institute of Technology Carlow's final year industry showcase is attended by leading IT employers.
- Active participation by students in national and international competitions. Institute of Technology Carlow Software Development students were recently awarded 2nd place in FIWARE 'Smart Society' competition in Seville, winning €40,000 in prize money for their 'My people Care' project.
- Institute of Technology Carlow maintains an international perspective through widespread collaborations with international third level institution computing departments and has active research links with the Netherlands, France, China, Norway, Hungary and the UK.
- Institute of Technology Carlow maintains close relations with leading industry players such as Intel and UNUM. The collaboration with Intel has resulted in its sponsorship of the Galileo development board and Quark chip at the institute and this leading edge technology is now central to several undergraduate and graduate research projects at Institute of Technology Carlow.
- Exit Awards: Higher Certificate in Computing (NFQ 6) after Year 2 and a BSc in Software Development (NFQ Level 7) after Year 3.

CW207

NFQ LEVEL 7

Bachelor of Science

Software Development

PLACES	POINTS	DURATION	EXIT AWARD
25	260	3 YEARS	YES

PROGRAMME DIRECTOR
Dr Chris Meudec
BSc (Hons), MA (TL), PhD
E: chris.meudec@itcarlow.ie

What is Software Development?

Software development is the set of activities that results in software products. Software is everywhere in our lives: from mobile phones to business systems and cloud based services. Software developers work in collaborative teams to solve real problems.

The course equips students with the skills required to work in a diverse range of areas within software development and support. Students follow our 'learning by doing' model in first year with continuous assessment replacing final exams. Modules include a broad range of subjects including: Programming, Operating Systems, Networking, Computer Hardware, Web, Mobile and Cloud Programming, Computer Architecture, Software Engineering and an industry work placement. The course offers flexibility for students with an early exit after Year 2 with a Higher Certificate in Computing award (NFQ 6).

What will I be able to do when I finish the course?

This course can lead to a range of IT careers including systems programmers, IT service managers, network programmers, software designers and installation engineers. Graduates have found employment with leading organisations including UNUM, Intel, IBM, Microsoft, HP, DoneDeal and AOL.

Graduates will be eligible to proceed to the BSc (Honours) in Software Development at Institute of Technology Carlow.

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

Mathematics
Programming
Computer Hardware
Operating Systems
Networking I
Applications and Interpersonal Communications

YEAR 2

Mandatory Subjects

Discrete Structures and Algorithms I
Web Programming and Databases
Systems Analysis, Design and Testing
Object Oriented Software Development
Computer Architecture
Project

YEAR 3

Mandatory Subjects

Advanced Programming
Operating Systems
Software Engineering for Web, Cloud and Mobile Apps
Discrete Structures and Algorithms II
Web and Cloud Development
Work Placement/Project

Special features of this course

- Dedicated software development laboratory for 3rd Year students sponsored by UNUM, providing a real-world working environment.
- Work placements are offered as part of all undergraduate courses with leading national and international companies.
- Institute of Technology Carlow's final year industry showcase is attended by leading IT employers.
- Active participation by students in national and international competitions. Institute of Technology Carlow students were recently awarded 2nd place in FIWARE 'Smart Society' competition in Seville, winning €40,000 in prize money for their 'My People Care' project.
- Institute of Technology Carlow maintains an international perspective through widespread collaborations with international third level institution computing departments and has active research links with the Netherlands, France, China, Norway, Hungary and the UK.
- Institute of Technology Carlow maintain close relations with leading industry players such as Intel and UNUM. The collaboration with Intel has resulted in its sponsorship of the Galileo development board and Quark chip at the institute and this leading edge technology is now central to several undergraduate and graduate research projects at Institute of Technology Carlow.
- Exit Award: Higher Certificate in Computing (NFQ Level 6) after Year 2.

Higher Certificate in Science

Computing (with Options in Applications or Programming)

CW206

NFQ LEVEL 6

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Catherine Moloney BSc (Hons) **E**: catherine.moloney@itcarlow.ie	**20**	**230**	**2 YEARS**	**N/A**

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

Mathematics
Programming
Computer Hardware
Operating Systems
Networking I
Applications and Interpersonal Communications

YEAR 2

Mandatory Subjects

Applications Option

Mathematics
Web Programming and Databases
Networking II
Secure Systems Administration
Business Management
Project

Programming Option

Discrete Structures and Algorithms I
Web Programming and Databases
Systems Analysis, Design and Testing
Object Orientated Software Development
Computer Architecture
Project

What is Computing?

Computing is the study of how computers and computer systems work and how they are constructed and programmed. As computing increasingly impacts on every aspect of our lives, it is also becoming a more evolved and complex area. While computing may be of general interest to students, it's often difficult to know which area of specialisation will be of most interest. This course has been designed to give students the broadest possible choice before choosing a specialisation.

This course provides a general overview of computing in Year 1 and includes modules in Mathematics, Programming, Hardware, Operating Systems, Networking and Applications. In Year 2, students may choose to specialise in Computer Applications or Programming.

Applications option: This option examines the assembly and secure administration of computer systems and networks and web development. Graduates of this option often go on to work in systems administration, IT support and networking.

Programming option: This involves the detailed analysis, design and programming of computer software. Graduates from this area go on to work as programmers in the world of business or as software support and sales representatives.

What follow-on study opportunities are available?

Graduates of the Applications option may apply to proceed to Year 3 of the BSc in IT Management (CW217). Graduates of the Programming option may apply to proceed to Year 3 of the BSc in Software Development (CW207) at Institute of Technology Carlow. Once graduates have completed their degree, they can also apply for an Honours degree course in the area of their specialisation.

Special features of this course

- Year 1 of the course is examined on a continuous assessment basis with no end-of-year exams.
- This course has been designed to give students the broadest possible choice before a specialised area is chosen.
- Students taking the Applications and Programming options gain valuable experience working as part of a team developing web-based business applications.

CW248

NFQ LEVEL 8

Bachelor of Science (Honours)

Information Technology Management

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
15	300	4 YEARS	YES	**Dr Enda Dunican** BSc (Hons), MSc, EdD **E**: enda.dunican@itcarlow.ie

What is IT Management?

IT (Information Technology) Management involves the coordination of complex computer systems in organisations including the selection, installation and maintenance of all computing technologies.

This is a critical role in any organisation as the efficient management of IT is vitally important for all aspects of a business.

This course provides a unique blend of business and IT subjects which is viewed by industry as an essential element in the role of a modern IT manager. The course comprises a significant amount of practical work. In particular, Year 1 features continuous assessments with no final year exam, enabling students to monitor progress throughout the year.

On completion of the course, students will have a detailed understanding of:

- Network systems management, advanced database management
- Strategic management
- HR technologies
- Financial information management
- Day-to-day IT department management.

What will I be able to do when I finish the course?

Graduates are qualified to work across the IT spectrum in any industry sector. Positions open to them include: Business Analyst, Systems Administrator, IT Consultant, IT Manager, Network Administrator and Web Developer. Graduates have taken up roles such as IT Analyst at HP, Graduate SAP Developer at Glanbia, Deployment Engineer at ICT Services and IT Support Engineer at Infinity IT.

To see the range of technologies used by students in final year computing projects visit: http://tinyurl.com/iby3aze.

Graduates also have the option to progress to postgraduate studies at either Masters or Doctoral level within the GameCORE Research Centre at Institute of Technology Carlow or elsewhere. Graduates are also eligible to undertake the MSc in IT Management and the MSc in Data Science.

TCS IT Futures Competition Winners
L-R: Christine Carty, HR Business Partner TCS Ireland; Brian Breslin, IT Management Student and competition winner; Paul Byrne, IT Management Student and competition winner, Venkatesh Priyadarshi, Regional Manager TCS Ireland; Ciara McMahon, IT Management Student and competition winner.

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

Mathematics
Programming
Computer Hardware
Operating Systems
Networking I
Applications and Interpersonal Communications

YEAR 2

Mandatory Subjects

Mathematics
Web Programming and Databases
Networking II
Secure Systems Administration
Business Management
Project

YEAR 3

Mandatory Subjects

Web Applications
System Administration
Information Systems
Project Management
Networking III
Work Placement/ Project

YEAR 4

Mandatory Subjects

Network Systems Management
Strategic Management and Information Systems
Advance Database Systems
Recent and Emerging IT Technologies
Management Accounting
People Management Skills for IT Managers
Project

Special features of this course

- Work placements are offered as part of all undergraduate courses with leading national and international companies. Previous placements have been made with Adidas (Germany), Ericsson, Kerry Food, MSD, Intel, Glanbia and Abbott Ireland.
- Institute of Technology Carlow's final year industry showcase is attended by leading IT employers.
- Institute of Technology Carlow maintains close relations nationally and internationally with leading industry players. For example, TATA Consultancy Services, a leading global Information Technology consultancy, holds a 'Dragon's Den' style competition with Institute of Technology Carlow where students' final year research-based projects which entail a proof-of-concept prototype compete for a €1,500 cash prize (funded by TCS).
- Exit awards: Higher Certificate in Computing (NFQ 6) after Year 2 and a BSc in Information Technology Management after Year 3 (NFQ Level 7).

Bachelor of Science

Information Technology Management

CW217

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Aidan McManus BSc (Hons) **E**: aidan.mcmanus@itcarlow.ie	**20**	**240**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1 (Common 1st Year)

Mandatory Subjects

Mathematics
Programming
Computer Hardware
Operating Systems
Networking I
Applications and Interpersonal Communications

YEAR 2

Mandatory Subjects

Mathematics
Web Programming and Databases
Networking II
Secure Systems Administration
Business Management
Project

YEAR 3

Mandatory Subjects

Web Applications
System Administration
Information Systems
Project Management
Networking III
Work Placement/Project

What is IT Management?

The efficient management of Information Technology is central to all aspects of any organisation. It involves the coordination of complex computer systems in organisations, including the selection, installation and maintenance of all computing technologies.

This course provides a unique blend of IT and business subjects that are an essential element in the role of a modern IT manager. It follows a 'learning by doing' model where students learn through active participation and hands-on practical activity. Year 1 also features continuous assessments, with no final year exam, enabling students to monitor progress throughout the year.

On completion of the course, students will have a detailed understanding of:

- Database management
- Business management
- Web application development
- Networking
- Information systems
- Network systems administration
- Operating system shells and shell scripts.

What will I be able to do when I finish the course?

Roles available to graduates include systems administrator for Windows and Linux operating systems, database design and management, website design and development, design and administration of networked systems including design and configuration of services for LANs (Local Area Networks) and WANs (Wide Area Networks). Graduates are qualified to work across the IT spectrum in any industry sector.

Graduates are eligible to proceed to the BSc (Honours) in IT Management (CW248) at Institute of Technology Carlow.

Institute of Technology Carlow team 'My People Care' Cloud Service Wins €40,000 in Seville. L-R Carlos Ralli, Telefonica Research & Development and President of the Jury; Dr Chris Meudec, Robbie Lynch, Dominik Chomic.

Special features of this course

- Work placements are offered as part of all undergraduate courses with leading national and international companies. Previous placements have been made with Adidas (Germany), Ericsson, Kerry Food, MSD, Intel, Glanbia and Abbott Ireland.
- Institute of Technology Carlow's final year industry showcase is attended by leading IT employers.
- Active participation by students in national and international competitions.
- Institute of Technology Carlow maintains close relations nationally and internationally with leading industry players. For example, TATA Consultancy Services, a leading global Information Technology consultancy, holds a 'Dragon's Den' style competition with Institute of Technology Carlow where students' final year projects compete for a €1,500 cash prize (funded by TCS).
- Exit award: Higher Certificate in Science in Computing (with options in Computer Applications and Programming)(NFQ Level 6) after Year 2.

Faculty of Science

Graduate Profiles

Ray Shannon

Software Development

What did you like about the course?

The course provided me with a wide and varied curriculum at a high standard and I was able to determine my preferred area of IT. With a high concentration of practical labs and projects, I obtained great confidence in development and have a positive approach to any challenge that faces me today.

What are you doing now?

As a graduate of Institute of Technology Carlow, I was able to gain employment at UNUM Ireland as a Software Engineer. My current role exposes me to the latest technologies and design principles in software development. I am currently working on data intake applications which enable customers to enrol for their annual premium subscriptions, a multi-billion dollar sector of our business. I am also part of a team that creates and suggest new support tools and application improvements to ensure we are keeping up with and taking the lead in the insurance premium industry.

How did the course prepare you for the job you are doing now?

Having completed my Honours Degree in Software Development, I am confident I have the knowledge and skills required to be successful in my career. I found that Institute of Technology Carlow's reputation within the IT industry offered lots of opportunities, with many large multi-national companies and created a solid stepping stone into an ever increasing and exciting industry.

I am now undertaking a Masters by Research - Computing and Networking at Institute of Technology Carlow, while continuing to work at UNUM.

Tracey Cassells

Computer Games Development

What did you like about the course?

The four years I spent as a Games Development student have been the most interesting, rewarding, challenging and fun years of my life. This course introduced me to so many new ideas and technologies and gave me a fantastic network of people with a similar love of computer games. The lecturers are incredibly supportive and are always willing to discuss new ideas. From the very start of the course, I felt I had made the right choice and I loved my time at Institute of Technology Carlow.

What are you doing now?

After receiving the President's Fellowship Scholarship from Institute of Technology Carlow, I am continuing my studies in Games Development with postgraduate research in Gamification. As a research student in GameCORE, I have had the responsibility of working on a large-scale project, while gaining new knowledge and skills. As a graduate, I have had the opportunity to teach and assist students, which has been an invaluable experience that I have enjoyed immensely. Part of my research involves traveling to conferences, in both Ireland and abroad to talk to like-minded peers and present my research.

How did the course prepare you for the job you are doing now?

During my time as a computer games development student, I learned all the necessary skills in software design, coding and testing to be a developer and I gained an important insight into how games are created and how the different game mechanics work and affect players. My undergraduate years gave me core skills to build upon, and the passion for computer games I felt during this course has given me a lifelong love of software development.

Dominik Chomic

Software Development

What did you like about the course?

I think that the course was really great as I learned a lot about computers in general. I really liked the structure of the course which helped me to study and work on projects throughout the year as well as prepare for the final exams.

What are you doing now?

I am working as a Mobile Developer at WorldNet TPS. We are a payment company. We provide transaction processing systems to payment providers. Our systems help clients to accelerate their payment innovation by improving their payment products.

I am working on a chip and pin enabled mobile payment application which can take card payments anytime and anywhere using your smartphone. My responsibilities are making sure that the application is working as expected, adding new features to the app, integrating new devices and obviously testing of the app.

How did the course prepare you for the job you are doing now?

The course gave me a lot of skills and knowledge to understand how to develop a software for mobile devices. I also learned android in my free time which is also my hobby.

I enjoyed my time in Institute of Technology Carlow as a student. It was a great experience for me.

FACULTY OF **SCIENCE**

Department of Science and Health

HEAD OF FACULTY: **Dr David Dowling**, BA Mod (Natural Sciences), PhD

HEAD OF DEPARTMENT OF SCIENCE AND HEALTH

Paula Rankin
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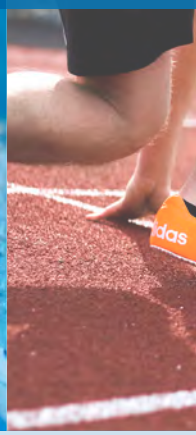
E: paula.rankin@itcarlow.ie



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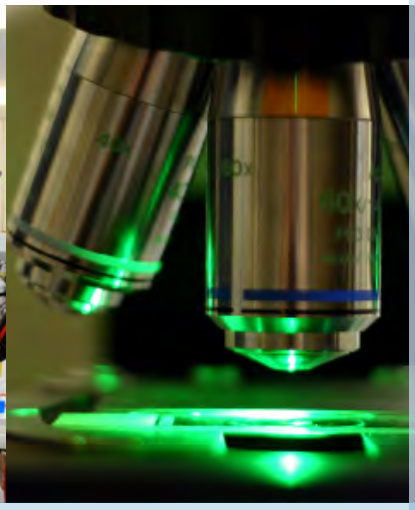
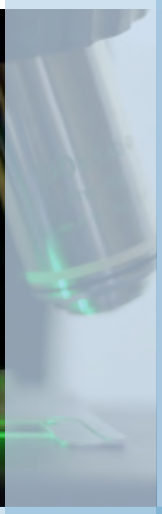
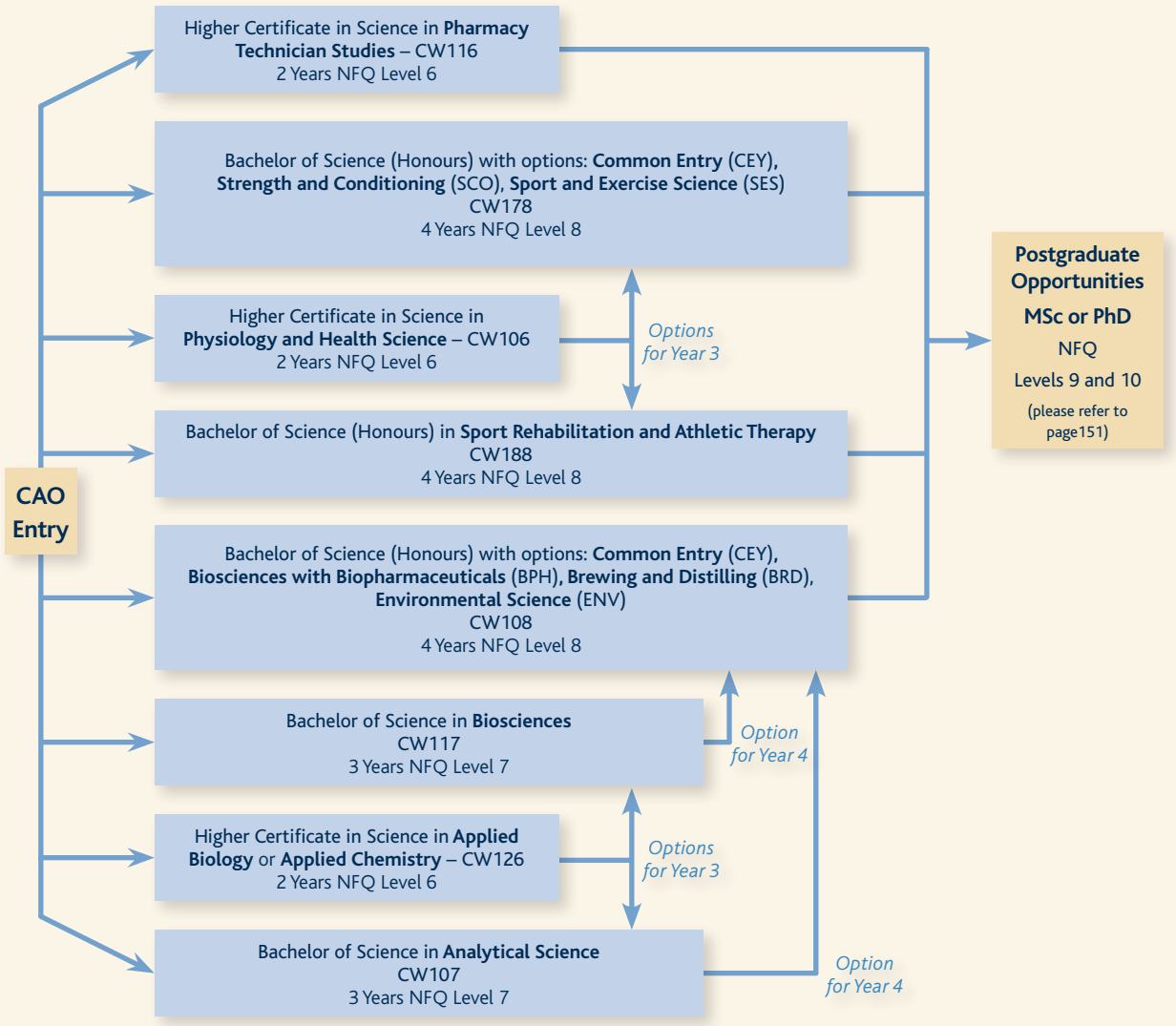



Department of Science and Health

Course Progression Chart



CW178

NFQ LEVEL 8

Bachelor of Science (Honours)

Common Entry (CEY), **Strength and Conditioning** (SCO) or **Sport and Exercise Science** (SES)

NEW COURSE

PLACES	POINTS	DURATION	EXIT AWARD
18	NEW COURSE	4 YEARS	YES

CW178	**Sport Science** – When you apply for Sport Science you must select ONE of the following options: **CEY**, **SES** or **SCO**		
	CEY Common Entry	**SES** Sport and Exercise Science	**SCO** Strength and Conditioning
	Applicants who select a specific degree option (i.e. CW178 SES or SCO) are guaranteed a place on that course subject to meeting the entry requirements and points. Applicants who are undecided on choices should choose CW178 CEY (Common Entry). All applicants may change their selection up to the end of Year 2 and must confirm their specialism at that point.		

Application procedure

There is a new entry procedure for the Bachelor of Science (Honours) Sport Science degree. Students now have the option to choose either a common entry option at CAO stage and choose a specialist area after Year 2 or can choose a specialist area at CAO stage.

What is this course about?

This course equips students with a broad skill-base ensuring graduates will have a wide range of career options. The first year of this course provides students with a foundation in sport science and subjects are common for all students. After Year 2, students separate in to their chosen specialist area:

- Sport and Exercise Science
- Strength and Conditioning.

The course offers a blend of academic and practical skill development.

Course options

Common Entry (CEY)

By choosing 'CEY' Common Entry applicants are applying for a place on the course but postponing the decision as to which science speciality to opt for until the end of Year 2. This allows students time to explore the future career choices open to graduates in the different specialism streams.

Expert guidance will be available from lecturing staff members in the Institute and ultimate choices can then be considered in light of academic performance across a range of science subject areas.

Sport and Exercise Science(SES)

This option equips graduates with a theoretical knowledge and practical skills and competencies demanded by the rapidly growing Sport Science Industry.

Strength and Conditioning (SCO)

This option equips graduates with the necessary knowledge, skills and competencies Strength and Conditioning to enable them to make a contribution to this recognised growth industry.

What subjects will I study?

YEAR 1

Mandatory Subjects

Anatomy 1
Physiology
Physical Sciences
Exercise and Fitness Instruction 1
Cell Biology
Exercise Physiology
Introduction to Sport and Exercise Psychology
Research Methods 1

YEAR 2

Mandatory Subjects

Nutrition, Biochemistry, Pharmacology and Dietetics
Health and Exercise Psychology
Strength and Conditioning (Resistance Training and Olympics Lifts)
Motor Control/Biomechanics
Anatomy 2
Exercise Physiology
Research Methods 2
Exercise and Fitness Instruction 2
Pathophysiology

Special features of this course

- Students gain hands-on practical experience working with Institute of Technology Carlow's elite athletes and sports teams.
- 14-week national or international work placement with sports organisations.
- Premium facilities including a dedicated elite athlete performance gym, large general gym, fitness assessment suite and performance analysis laboratories.
- Exit award: Higher Certificate in Sport Science or Physiology and Health Science (NFQ Level 6).
- Engagement with community groups, local schools and institute events.

CW178

NFQ LEVEL 8

PROGRAMME DIRECTOR

Paul Byrne
BA (Hons), MSc
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Bachelor of Science (Honours) **Strength and Conditioning** (SCO)

What subjects will I study?

YEAR 3

Mandatory Subjects

Sport and Exercise Biomechanics
Strength and Conditioning for Older Adults
Applied Strength and Reconditioning
Paediatric Strength and Conditioning
Sports Nutrition
Work Placement

YEAR 4

Mandatory Subjects

Exercise Physiology
Periodisation
Research Project and Dissertation
Sports Management
Sport Psychology
Research Methods 3

What is Strength and Conditioning?

Strength and conditioning is an applied science that focuses on ways to improve athletic performance including endurance, speed, strength and power.

This course is designed to help students develop the knowledge, skills and analytical techniques in the sub-disciplines of sport and exercise sciences. Students gain the knowledge and skill to help athletes and players achieve optimum sports performance. The course combines theoretical and practical elements and modules include: Anatomy and Physiology, Exercise and Fitness Instruction, Physical Sciences, Strength and Conditioning (power, speed, endurance,), Sports Nutrition, Biomechanics and Strength and Conditioning for Paediatrics and the older adult. Year 4 includes a 14-week work placement in a variety of national or international sites.

What will I be able to do when I finish the course?

Graduates of Strength and Conditioning will be able to use scientific knowledge and practical expertise to guide the design and implementation of training programmes and monitoring of athletes. Graduates will also have expert knowledge in the application of strength and conditioning for both children and older adults.

Graduates are eligible to apply for the MSc in Strength and Conditioning at Institute of Technology Carlow or a wide range of taught or research postgraduate courses at Institute of Technology Carlow or other third level institutions.

Successful graduates will be eligible to apply for membership of the United Kingdom Strength and Conditioning Association (UKSCA) and the National Strength and Conditioning Association (NSCA) based in the USA.

Special features of this course

- Students gain hands-on practical experience working with Institute of Technology Carlow's elite athletes and sports teams.
- 14-week national or international work placement with sports organisations.
- Premium facilities including a dedicated elite athlete performance gym, large general gym, fitness assessment suite and performance analysis laboratories.
- Exit award: Higher Certificate in Strength and Conditioning (NFQ Level 6).
- Engagement with community groups, local schools and institute events.

CW178

NFQ LEVEL 8

Bachelor of Science (Honours)
Common Entry (CEY), **Sport and Exercise Science** (SES) or
Strength and Conditioning (SCO)

Bachelor of Science (Honours)

Sport and Exercise Science (SES)

PROGRAMME DIRECTOR
Damien Sheehan
BSc (Hons),PG Dip
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What is Sport and Exercise Science?

Sport and Exercise Science is the application of scientific principles in order to understand and enhance sport performance and health and well-being.

This course incorporates the core areas of Physiology, Psychology and students undertake a 14-week placement in a variety of sport science areas nationally and internationally.

The work placement module is a great opportunity for students to experience a real hands-on working environment, where by they can employ and enhance their skill set.

What will I be able to do when I finish the course?

Graduates will be able to apply scientific and laboratory skills to assess fitness and health, design and implement training programme(s) and assess how training influences performance. Graduates will also be able to advise on strength and reconditioning training, nutrition for sport and pharmacological aspects of athletic performance.

This course is suitable for anyone who is passionate about sport and science. For many people it is the perfect way to combine their love for a particular sporting activity with an education and career in a related field.

Possible careers include:

- Sport and Exercise Physiologist
- Strength and Conditioning Coach
- Biomechanist
- Performance Analyst
- Sport and Exercise Psychologist
- Sport and Fitness Coach
- Sport Development Officer.

Postgraduate or research (MSc/PhD) opportunities are available at Institute of Technology Carlow, Universities in Ireland, UK or around the world in areas including: physiotherapy, radiography, strength and conditioning, sport psychology, men's health, nutrition, sport performance analysis, exercise and fitness in children.

What subjects will I study?

YEAR 3

Mandatory Subjects

Applied Strength and Reconditioning
Special Populations
Sport and Exercise Biomechanics
Sports Nutrition
Performance Analysis
Adapted Physical Activity
Work Placement

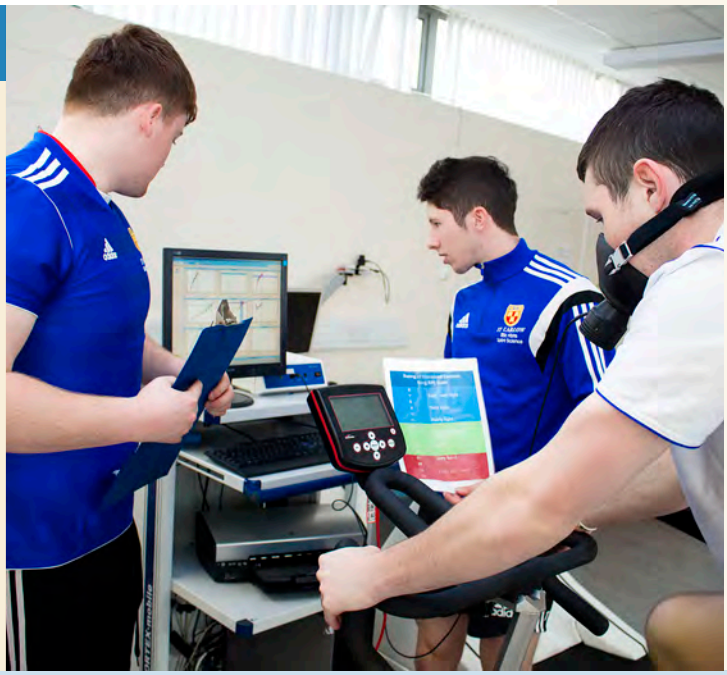
YEAR 4

Mandatory Subjects

Coaching
Exercise Physiology 3
Sports Management
Sport Psychology
Research Methods 3
Human Performance and Athletic Assessment
Current Concepts in Sport Science
Research Project and Dissertation

Special features of this course

- 14-week placement in a national or international organisation. Work placement sites have included the Leinster and Connacht rugby teams, Stanford University, Reading Football Club, Swedish Winter Sports Research Centre.
- Modern Physiology Laboratory and elite performance gym.
- Dedicated performance analysis laboratory with the latest technologies.
- Community engagement in activity programmes.
- Institute of Technology Carlow Health Week.
- On-going practical experience working with Institute of Technology Carlow sports teams.
- Exit award: Higher Certificate in Physiology and Health Science (NFQ Level 6).



Bachelor of Science (Honours)

Sport Rehabilitation and Athletic Therapy

CW188

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dr Sharon Kinsella
BSc (Hons), MSc, PhD
E: sharon.kinsella@itcarlow.ie

PLACES	POINTS	DURATION	EXIT AWARD
18	445	4 YEARS	YES

What subjects will I study?

YEAR 1 (Common 1st year)

Mandatory Subjects

Anatomy 1
Physiology
Exercise and Fitness Instruction 1
Physical Sciences
Cell Biology
Exercise Physiology 1
Research Methods 1
Introduction to Sport and Exercise Psychology

YEAR 2

Mandatory Subjects

NMSA
Exercise and Fitness Instruction 2
Pathology of Injury
Exercise Physiology 2
Research Methods 2
Soft Tissue Manual Therapy
Pathophysiology
Anatomy 2
Motor Control/Biomechanics

YEAR 3

Mandatory Subjects

Clinical Studies
Strength and Conditioning
Articular Manual Therapy
Strapping and Foot Postural Assessment
Pitchside Traumatology
Movement Dysfunction
Sports Nutrition
Advanced Rehabilitation
Research Methods 3
Electrotherapy

YEAR 4

Mandatory Subjects

Clinical Studies
Differential Diagnosis
Current Concepts in Sports Rehabilitation and Athletic Therapy
Professional and Ethical Studies
Research Project and Dissertation
Work Placement

What is Sport Rehabilitation and Athletic Therapy?

Participation in competitive and recreational sport has greatly increased over recent years with an inevitable increase in sports-related injuries. Sports rehabilitation focuses on both preventative assessment and curative aspects of injury.

This course equips students with the skills to manage the assessment, treatment and rehabilitation of injured individuals. The course offers a unique blend of academic theory, practical workshops and clinical placements in the final year, ensuring learners have real world experience. Students on this course enjoy state-of-the-art facilities with an elite gym and a fully equipped dedicated rehabilitation unit on campus.

What will I be able to do when I finish the course?

On completion of this course graduates will be competent and effective practitioners in sports injury and rehabilitation.

Graduates are qualified to be sports rehabilitators and/or athletic therapists and can secure employment with professionals, semi-professionals, amateur sports clubs and organisations in third level institutions, sports injury clinics or with amateur or professional sporting bodies.

Graduates are eligible to apply for the MSc in Strength and Conditioning at Institute of Technology Carlow or can transfer to a wide range of taught and research postgraduate courses at MSc and PhD Level nationally and internationally. A number of graduates have gone on to Pre-Registration Masters in Physiotherapy in Ireland and the UK.

Graduates may sit the ARTI examination on completion of the course. On passing this exam, graduates can use the title 'Certified Athletic Rehabilitation Therapist'. Further exams include the United States Board of Certification exam (BoC) and National Athletics Therapist Association (NATA) exam and/or the Canadian exam. Successful completion entitles the graduate to work in the USA or Canada as an Athletic Trainer (ATC).

Special features of this course

- Students gain hands-on clinical experience in our dedicated teaching clinic on campus.
- Practical experience working with Institute of Technology Carlow sports teams.
- All students have the opportunity to do a clinical work placement nationally or internationally in countries including USA, South Africa, Australia, Britain and Ireland.
- Graduates of this course are sought after by national sporting governing bodies and our alumni are working for national and international organisations.
- Graduates of Physiology and Health Science (CW106) may apply for entry to Year 3 CW188.
- Exit award: Higher Certificate in Physiology and Health Science (NFQ Level 6).

CW106

NFQ LEVEL 6

Higher Certificate in Science

Physiology and Health Science

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
36	440	2 YEARS	N/A	**Brian O'Rourke** BSc (Hons), MSc **E**: brian.orourke2@itcarlow.ie

What is Physiology and Health Science?

Physiology and Health Science is the study of the human body with specific focus on how the body functions in relation to health and exercise.

This course provides foundational level understanding of core physiology and health science areas including: Anatomy, Physiology, Exercise and Fitness, Cell Biology, Exercise Physiology, Neuromuscular Skeletal Assessment, Biomechanics, Pathology of Injury and many more. The course combines theory with 'hands-on' practical elements resulting in an interesting and rewarding course.

What will I be able to do when I finish the course?

Graduates may be employed as exercise and fitness instructors. The course provides graduates with an avenue to progress to degree level courses in the allied health professions. Most graduates progress to further study in physiotherapy, occupational therapy, sport rehabilitation, radiography, nutrition and dietetics, speech and language therapy, chiropractic medicine and osteopathic medicine. The course provides a direct entry point to Year 3 of the BSc (Honours) Sport Rehabilitation and Athletic Therapy and BSc (Honours) Sport Science (subject to module choice and available places).

What subjects will I study?

YEAR 1

Mandatory Subjects

- Anatomy 1
- Physiology
- Exercise and Fitness Instruction 1
- Cell Biology
- Physical Sciences
- Research Methods 1
- Exercise Physiology 1
- Introduction to Sport and Exercise Psychology

YEAR 2

Mandatory Subjects

- Anatomy 2
- Exercise and Fitness Instruction 2
- Pathology of Injury
- Exercise Physiology 2
- Research Methods 2
- Motor Control/Biomechanics
- Pathophysiology
- Soft Tissue Manual Therapy

Plus One Elective

- Neuromuscular Skeletal Assessment
- Nutrition, Biochemistry Pharmacology and Dietetics

Special features of this course

- This course provides an excellent foundation for many careers in the health profession sector and enables students to make informed decisions about specialist areas for further study.
- Premium facilities include a dedicated elite athlete performance gym, teaching gym, physiology laboratory and sports injury clinic.

Higher Certificate in Science

Pharmacy Technician Studies

CW116

NFQ LEVEL 6

PROGRAMME DIRECTOR

Dr Brian O'Rourke
BSc (Hons), MSc, PhD
E: brian.orourke@itcarlow.ie

PLACES	POINTS	DURATION	EXIT AWARD
36	325	2 YEARS	N/A

What subjects will I study?

YEAR 1

Mandatory Subjects

Pharmaceutical Chemistry, Formulation and Compounding
Human Physiology
Drug Actions and Uses 1
Regulations and Dispensing
Pharmaceutical Calculations and Computing
Pharmacy Administration and Work Placement
Over The Counter

YEAR 2

Mandatory Subjects

Work Placement
Formulation Compounding
Drug Actions and Uses 2
Pharmacy Practice
Aseptic Techniques

What is a Pharmacy Technician?

A pharmacy technician is a key member of the pharmacy staff, involved in assuring the smooth uninterrupted functioning of pharmacy services by assisting the pharmacist in the preparation, checking, storage and dispensing of drugs.

This course offers a blend of academic knowledge, hands-on experience and real-world training. The course addresses:

- Pharmaceutical chemistry and human physiology - the study of how the body functions
- Drug actions and uses – understanding human diseases and the drugs used to treat these diseases
- Formulation and compounding – understanding how drugs are made and the regulations surrounding safe dispensing.

Students attend lectures and also spend time on a weekly basis in a pharmacy on work experience.

Students benefit from a six-month full-time work placement in second year in either hospital or community pharmacy.

What will I be able to do when I finish the course?

Graduates of Pharmacy Technician Studies may go on to study a Level 7 in this area. Some graduates may go on to study pharmacy degrees in Ireland, Northern Ireland and the UK and can also progress onto a range of science courses at Institute of Technology Carlow.

Special features of this course

- Weekly work experience throughout the course.
- Six month full-time work placement in second year at either a retail or hospital pharmacy. As part of the work placement module students may work abroad for eight weeks under the supervision of registered pharmacists.
- Participation in conferences, poster competitions and lectures by guest speakers from the pharmacy industry will ensure that students are well grounded in all areas of work available to pharmacy technicians.
- Students are eligible for student membership of the National Association of Hospital Pharmacy Technicians (NAHPT) and the Irish Association of Community Pharmacy Technicians (IACPT). Graduates will be able to apply for registration as Pharmacy Technicians in the UK.

CW108

NFQ LEVEL 8

NEW COURSE

Bachelor of Science (Honours)

Common Entry (CEY), **Biosciences with Biopharmaceuticals** (BPH), **Brewing and Distilling** (BRD) or **Environmental Science** (ENV)

PLACES	POINTS	DURATION	EXIT AWARD
36	NEW COURSE	4 YEARS	YES

CW108	**Science** – When you apply for Science you must select ONE of the following options: **CEY**, **BPH**, **BRD** or **ENV**			
	CEY Common Entry	**BPH** Biosciences with Biopharmaceuticals	**BRD** Brewing and Distilling	**ENV** Environmental Science
	Applicants who select a specific degree option (i.e. CW108 BPH, BRD or ENV) are guaranteed a place on that course subject to meeting the entry requirements and points. Applicants who are undecided on choices should choose CW108 CEY (Common Entry). All applicants may change their selection up to the end of Year 1 and must confirm their specialism at that point.			

Application procedure

There is a new entry procedure for the Bachelor of Science (Honours) degree. Students now have the option to choose either a common entry option at CAO stage and choose a specialist area after Year 1 or can choose a specialist area at CAO stage.

What is this course about?

This course equips students with a broad skill-base ensuring graduates will have a wide range of career options. The first year of this course provides students with a foundation in science and subjects are common for all students. After Year 1 students separate in to their chosen specialist area from a choice of three areas:

- Biosciences with Biopharmaceuticals
- Brewing and Distilling
- Environmental Science.

The course offers a blend of academic and practical skill development and includes a six-week industrial work placement in Year 4.

Course options

Common Entry (CEY)

By choosing 'CEY' Common Entry applicants are applying for a place on the course but postponing the decision as to which science speciality to opt for until the end of Year 1. This allows students time to explore the future career choices open to graduates in the different specialism streams. Expert guidance will be available from lecturing staff members in the Institute and ultimate choices can then be considered in light of academic performance across a range of science subject areas.

Biosciences with Biopharmaceuticals (BPH)

This option equips students with a theoretical knowledge and practical laboratory skills and competencies demanded by the rapidly growing biopharmaceutical science and biotechnology industries.

Brewing and Distilling (BRD)

This option will equip graduates with the necessary knowledge, skills and competencies in brewing and distilling and enable them to make a contribution to this recognised growth industry.

Environmental Science (ENV)

The Environmental Science option provides the knowledge and skills to assess and manage environmental systems in a sustainable manner.

What subjects will I study?

YEAR 1

Mandatory Subjects

Fundamental Biology
Chemistry
Physics
Quantitative Methods
Laboratory Science
Current Concepts in Science

Special features of this course

All students, regardless of the original option chosen, will be permitted to change their selection at the end of Year 1 and confirm their specialism for Year 2.

- Exit Awards - Ordinary Bachelor Degree after Year 3 in Biopharmaceuticals (BPH) or Environmental Science (ENV).
- Exit award – Higher Certificate (NFQ Level 6) after Year 2.

CW108

NFQ LEVEL 8

Bachelor of Science (Honours)

Biosciences with Biopharmaceuticals (BPH)

PROGRAMME DIRECTOR

Dr Gerard Murphy
BSc (Hons), PhD
E: gerard.murphy@itcarlow.ie

What subjects will I study?

YEAR 2

Mandatory Subjects

Instrumentation
Quantitative Methods and Quality Control
Biochemistry
Microbiology
Molecular Biology
Analytical Techniques/Pharmaceutical Science

YEAR 3

Mandatory Subjects

Biochemistry
Manufacturing and Analytical Technologies
Quality Management, Experimental Design and Data Analysis
Fermentation and Food Microbiology
Molecular Biology and Immunology
Research Project and Work Planning

YEAR 4

Mandatory Subjects

Industrial Microbiology and Biopharmaceuticals
Molecular Genetics and Immunology
Environmental Management and Industrial Management Systems
Research Project
Industrial Work Placement
Pharmaceutical Science
Bioforensics

What is Bioscience?

Bioscience is the branch of science concerned with living organisms, from microorganisms to towering trees and gigantic whales. Bioscience is the foundation of many other schools of scientific inquiry, including biopharmaceuticals, which refers to medical drugs manufactured in living organisms such as bacteria, yeast and mammalian cells.

This course will advance students' skills in bioanalysis, biotechnology, genetics, immunology, diagnostics, bioforensics and biopharmaceutical science. Skills will also be developed in how to source and present scientific information in advance of the Year 4 research project.

What will I be able to do when I finish the course?

The Biosciences with Biopharmaceuticals course is designed to produce highly employable graduates for the bioscience, biotechnology, bioforensics and biopharmaceutical science industries. These sectors are rapidly evolving and offer excellent and varied employment options for graduates at home and abroad including careers with police forces, research institutions, medical bodies, environmental agencies, government agencies or pharmaceutical companies.

Many graduates take up postgraduate opportunities at Institute of Technology Carlow and other national and international institutions with Masters and Doctorate Research or Taught courses.

CW108

NFQ LEVEL 8

Bachelor of Science (Honours)

Biosciences with Biopharmaceuticals (BPH), **Brewing and Distilling** (BRD), **Environmental Science** (ENV) or **Common Entry** (CEY)

Bachelor of Science (Honours)

Brewing and Distilling (BRD)

PROGRAMME DIRECTOR

Dr David Ryan
BSc (Hons), PhD
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What is Brewing and Distilling?

Brewing is the process by which beer is produced. Distilling is the fermentation and purification process for the production of distilled spirits including whiskey and brandy. The brewing and distilling industry in Ireland is growing rapidly and includes:

- A growing Irish beer sector employing 2,000 people and supporting thousands of farming families
- Direct employment in distilling to grow by 30% by 2025
- Massive growth in microbreweries with 100 expected by 2025
- Plans to invest €1 billion in the Whiskey industry and to grow market share by 300%
- 28 distilleries now operating or being developed on the island of Ireland.

Successful brewing and distilling requires the application of both scientific and engineering principles. This four year course, the first undergraduate brewing and distilling degree in Ireland, equips students with the necessary scientific knowledge and instrumentation competencies to work in the brewing and distilling industry. Combined with modules in product development, marketing and regulatory affairs, graduates will be ideally qualified to work in these expanding industries. The course incorporates an industry work placement in Year 3 and a research project in Year 4.

What will I be able to do when I finish the course?

Graduates will be skilled brewing and distilling experts and will gain employment in a variety of roles in the brewing and distilling industries including production, laboratory and technical work, quality assurance or product development, in large or small scale breweries or distilleries. Graduates may even start their own company. Skills can be used globally so there are endless international opportunities.

Graduates can progress to MSc and PhD courses at Institute of Technology Carlow or other third level Institutes or research centres.

What subjects will I study?

YEAR 2

Mandatory Subjects

Biochemistry
Microbiology
Quantitative Methods and Quality Control
Brewery and Distillery Instrumentation and Control
The Brewing and Distilling Industry
Yeast Biology
Analytical Techniques for Brewing and Distilling

YEAR 3

Mandatory Subjects

Brewery and Distillery Engineering
New Product Development, Innovation and Entrepreneurship
The Brewing Process
Malting and Brewing Raw Materials
Environmental Management
Research Methods for Brewing and Distilling
Work Placement

YEAR 4

Mandatory Subjects

Distillation and Distilled Spirits Production
Post-distillation Downstream Processing
Quality Management for Brewing and Distilling
Management and Marketing
Food Fermentation
Regulatory Affairs and Legislation
Research Project

Special features of this course

This is the first course of its kind in Ireland designed specifically to meet the demands of a growing industry.

- Professional recognition – Successful completion of this course allows exemption from the Brewing and Distilling Diploma level examinations to sit the Master level professional qualifications of the Institute of Brewing and Distilling (IBD).
- Industry-based work placement
- Access to brewing and distilling facilities as part of the course.
- Collaboration with industry.

CW108

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dr Úna Ní Ghógáin
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Bachelor of Science (Honours)
Environmental Science (ENV)

What subjects will I study?

YEAR 2

Mandatory Subjects

Instrumentation
Quantitative Methods and Quality Control
Analytical/Inorganic Chemistry
Organic and Physical Chemistry
Pharmaceutical Science
Environmental Science

YEAR 3

Mandatory Subjects

Quality Management, Experimental Design and Data Analysis
Spectrochemical Methods
Sampling and Separation Science
Analytic Project and Workplace Planning
Environmental Monitoring
Physical Chemistry
Food Analysis

YEAR 4

Mandatory Subjects

Environment Management and Modelling
Waste Treatment and Sustainable Energy
Research Project in Environmental Science
Physico Chemical Science
Industrial Work Placement
Pharmaceutical Science
Freshwater Ecology

What is Environmental Science?

Environmental science is all around us. It covers the areas of chemistry, physics, biology and mathematical modelling to monitor the current state and changes in the system. Training in environmental science provides the knowledge and skills to interpret and manage environmental systems in a sustainable manner.

This course equips students with the knowledge and skills to understand the environmental systems required for a sustainable environment. Modules covered include: Cell Biology, Chemistry, Laboratory Science, Physical Science, Environmental and Forensic Science, Computing and Instrumentation, Sampling, Analytical Applications, Statistics and Experimental Design, Waste Management and Pharmaceutical Science, Freshwater Ecology and Bioremediation.

The Environmental Science course combines theoretical and practical elements and includes a major research project as part of Year 4. A period of work placement of not less than twelve weeks is an integral part of this course and must be completed before the end of September in Year 4.

What will I be able to do when I finish the course?

A diverse range of employment opportunities are available to graduates including: technical services and waste management for local authorities; analytical services for private industry and state bodies; pollution control licensing for pharmaceutical companies and environmental consultancy and management.

Graduates can progress to MSc and PhD courses at Institute of Technology Carlow or other third level Institutions or research centres.

CW117

NFQ LEVEL 7

Bachelor of Science

Biosciences

PLACES	POINTS	DURATION	EXIT AWARD
18	225	3 YEARS	YES

PROGRAMME DIRECTOR
James G. Nolan
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What is Bioscience?

Bioscience is the branch of science concerned with living organisms, from microorganisms to towering trees and gigantic whales. Bioscience is the foundation of many other schools of scientific inquiry, including: **Bioforensics** – the study of traces of biological agent and **Biopharmaceutical** – medical drugs manufactured in living organisms such as bacteria, yeast and mammalian cells.

Years 1 and 2 provide students with a strong foundation in the biology and chemistry of living organisms. Year 3 provides more detailed and practical study of the production, monitoring and quality control of biologically based industrial processes and includes a practical industrial project.

What will I be able to do when I finish the course?

The Bioscience course has been designed to produce highly employable graduates for the bioscience, biotechnology, food and biopharmaceutical science industries. These sectors offer excellent and varied employment options for graduates at home and abroad including careers with research institutions, medical bodies, environmental agencies or pharmaceutical companies.

Graduates with a BSc in Biosciences will be able to work in quality control, quality assurance, technical, supervisory or management areas of the food and beverage, pharmaceutical, environmental or biotechnological industries.

Graduates are eligible to progress to Year 4 of the Bachelor of Science (Honours) in Biosciences with Biopharmaceuticals, with many continuing to MSc or PhD level at Institute of Technology Carlow. There are also opportunities to progress to honours degree courses in other Irish or international higher education institutes.

What subjects will I study?

YEAR 1

Mandatory Subjects

Fundamental Biology
Chemistry
Physics
Quantitative Methods
Laboratory Science
Current Concepts in Science

YEAR 2

Mandatory Subjects

Biochemistry
Microbiology
Molecular Biology
Quantitative Methods and Quality Control
Instrumentation
Analytical Techniques/Pharmaceutical Science

YEAR 3

Mandatory Subjects

Biochemistry
Fermentation and Food Microbiology
Molecular Biology and Immunology
Manufacturing and Analytical Technologies
Quality Management, Experimental Design and Data Analysis
Research Project and Workplace Planning

Special features of this course

- High level of practical work in every module.
- Industry relevant course with graduates achieving high employment levels in the Biotechnology, Pharmaceutical, Environmental and Food and Beverage industries.
- Exit award: Higher Certificate in Science - Applied Biology (NFQ Level 6) after Year 2.
- Research project requiring students to develop methods and procedures relevant to the workplace.

Bachelor of Science

Analytical Science

CW107

NFQ LEVEL 7

PROGRAMME DIRECTOR

Dr Carmel Roche
BSc (Hons), MSc, PhD
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PLACES	POINTS	DURATION	EXIT AWARD
10	**205**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1

Mandatory Subjects

Fundamental Biology
Chemistry
Physics
Laboratory Science
Quantitative Methods
Current Concepts in Science

YEAR 2

Mandatory Subjects

Instrumentation
Quantitative Methods and Quality Control
Analytical/Inorganic Chemistry
Organic and Physical Chemistry
Pharmaceutical Science
Environmental Science

YEAR 3

Mandatory Subjects

Quality Management, Experimental Design and Statistics
Spectrochemical Methods
Sampling and Separation Science
Analytic Project and Workplace Planning
Analytical and Forensic Application
Chemometrics, Microbiology and Process

What is Analytical Science?

Analytical chemists investigate the chemical nature of substances to identify and understand how they behave in different conditions. In the pharmaceutical industry, for example, Analytical Chemists are involved throughout the drug development process to help determine the quality and stability of drug products.

This course is designed to produce graduates with expertise in modern analytical science and its applications in industry. Subjects focus on applications such as:

- Chemical analysis used to monitor air, soil and water for environmental pollutants
- Analysis of raw materials and finished products in the food, pharmaceutical and other industries which are subject to strict quality assurance and validation
- Analytical methods used in medical research to diagnose disease.

The course has a strong practical aspect and project work will enhance decision making and ensure that graduates adapt to a wide range of work situations.

What will I be able to do when I finish the course?

This degree course offers excellent career prospects in a range of industrial and public laboratories, particularly in the Pharmaceutical sector. Analytical scientists make essential contributions to fields as diverse as: drug formulation and development, chemical analysis, process development, product validation, quality control, toxicology, environmental analysis and food analysis. Since analytical science has a universal language, graduates have the opportunity to travel and work abroad.

Graduates are eligible to progress to Year 4 of the BSc (Honours) Environmental Science or the BSc (Honours) Biosciences with Biopharmaceuticals, with many graduates progressing to MSc or PhD level.

Special features of this course

- Second year students can enter the Intra University EuraChem Analytical Measurement competition.
- Strong practical modules throughout the three-year course and a major analytical project in Year 3. The best analytical project is awarded a prize sponsored by local company, Clogrennane Lime.
- Institute of Technology Carlow collaborates with many local organisations including MSD, EPA, Teagasc and Kerry Group.
- Graduates are eligible to progress to Year 4 of the Bachelor of Science (Honours) CW108.
- Exit award: Higher Certificate in Science - Applied Chemistry (NFQ Level 6) after Year 2.

CW126

NFQ LEVEL 6

Higher Certificate in Science

Applied Biology OR Applied Chemistry

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
18	215	2 YEARS	N/A	**Dr Dina Brazil** BA Mod, MA (TL), PhD **E**: dina.brazil@itcarlow.ie

What is this course about?

The Higher Certificate in Science provides students with a grounding in scientific knowledge and skills. There is an emphasis on practical skills with students getting hands-on experience and more than 50% of the time is spent developing essential laboratory skills.

The course is designed to provide graduates with theoretical knowledge and understanding, and the practical skills necessary to pursue technical careers in a modern scientific environment in the areas of industrial chemistry, pharmaceutical manufacture, scientific instrumentation, quality control, food science and technology.

This course has a shared first year and in Year 2, students can choose to specialise in either Applied Biology or Applied Chemistry.

Course options

Applied Biology

The course features specialist biology modules including: Biochemistry, Microbiology, Molecular Biology, Quantitative Methods and Quality Control, Instrumentation and Computing, and Analytical Techniques/ Pharmaceutical Science.

Applied Chemistry

The course features specialist chemistry modules including: Organic, Physical and Analytical Chemistry; Quantitative Methods and Quality Control; Instrumentation and Computing; Industrial Applications – Pharmaceutical Environment.

What will I be able to do when I finish the course?

Students who complete the Higher Certificate in either Applied Biology or Applied Chemistry may gain employment as laboratory technicians in the food, chemical, biotechnological, pharmaceutical, healthcare and environmental industries. However, many students choose to continue their studies at Institute of Technology Carlow to degree level studying Biosciences, Environmental or Analytical Science.

What subjects will I study?

YEAR 1

Mandatory Subjects

Fundamental Biology
Chemistry
Physics
Quantitative Methods
Laboratory Science
Current Concepts in Science

YEAR 2 – BIOLOGY STREAM

Mandatory Subjects

Biochemistry
Microbiology
Molecular Biology
Quantitative Methods and Quality Control
Instrumentation
Analytical Techniques/Pharmaceutical Science

YEAR 2 – CHEMISTRY STREAM

Mandatory Subjects

Quantitative Methods and Quality Control
Instrumentation
Analytical/Inorganic Chemistry
Organic and Physical Chemistry
Pharmaceutical Science
Environmental Science

Special features of this course

- More than 50% of the course is dedicated to practicals, enabling students to gain essential laboratory skills.
- A common first year with the option to specialise in Year 2 in either Biology or Chemistry.
- Graduates are eligible to progress to Year 3 of the Bachelor of Science in Analytical Science (CW107) (in the case of the Chemistry stream) and Year 3 of the Bachelor of Science in Biosciences (CW117) (in the case of the Biology Stream).

Michael Lawlor

Sport Science

What did you like about the course?

The best thing about studying at Institute of Technology Carlow is the standard of lecturing staff and how helpful and available they are. Their willingness to give their time to help students is exemplary. The broad range of subjects covered and the standard to which they are covered makes going into the working world much easier as you leave with a well-rounded skill set and the confidence to apply those skills. Furthermore, the facilities at Institute of Technology Carlow are exceptional, with a top of the range physiology lab and an excellent high performance gym which are used as teaching facilities.

What are you doing now?

I am currently working as a Strength and Conditioning Coach for Leinster Rugby's underage set up, a position which I got through my work placement module at Institute of Technology Carlow. My roles and responsibilities include on-going athletic assessment and monitoring of the players and implementation of strength and conditioning programmes and best practice. Working with Leinster Rugby's underage set up is challenging but as the club produces a wealth of home grown world class players, is very rewarding and enjoyable.

How did the course prepare you for the job you are doing now?

The broad range of subjects I covered in my time studying Sport Science at Institute of Technology Carlow prepared me well for the various challenges that come with a career in this field. The lecturers are all working in the field at the highest levels, so what you learn from them is all relevant to what actually happens, as opposed to just being theory based. There is a lot of importance placed on practical work and this makes applying what you learn out in the working world far easier. The work placement module in the final year was a great opportunity to build confidence in my abilities in the area of Sport Science and helped me forge contacts in the industry, which have been a massive help since graduation.

Further to the excellent academic standards, Institute of Technology Carlow has a lot to offer. From my time there I have made friends for life. There is a great atmosphere around the college, where everyone is quite friendly and helpful. There are societies and clubs for everyone, whether it's sports or music that you enjoy. The social scene in Carlow is amazing as well which is important with Carlow RAG week being legendary around the country for both its social and charitable activities. Nowhere in the country will you experience such a good mix of academia, sport and social.

Faculty of Science

Graduate Profiles

Stephen Smith

Sport Rehabilitation and Athletic Therapy

What did you like about the course?

The structure, content and focus of the course was very well balanced and gave me a strong foundation of knowledge to allow me to begin my career. The quality of lecturers and practitioners were of the highest calibre and ensured that as students, we not only had the educational underpinning but were able to translate that knowledge to practical application. Alongside this, the level of detail and high standards that were expected ensured that as a student, I gained maximum value and was ready for life as a professional.

What are you doing now?

Following Institute of Technology Carlow, I went on to work with Leinster Rugby for nearly eight years. Whilst working with Leinster I conducted my masters research, investigating combined risk factors as predictors of athletic injury and subsequently founded Kitman Labs. Kitman Labs is a sport science technology company helping elite sports teams use data and analytics to reduce injury risk and improve performance. We are currently working with some of the biggest brands in professional sport from across the globe including NFL, NBA, MLB teams as well as all of our own home grown Irish rugby teams. I am incredibly proud to be the founder and CEO of an Irish company changing the world of sport.

How did the course prepare you for the job you are doing now?

The course at Institute of Technology Carlow assembled the building blocks of my professional career. The course gave me a well rounded and holistic knowledge that allowed me to understand what aspect of sport science and medicine I had a true passion for. This allowed me to fine tune my skills to an area that excited me. The level of dedication and interaction with the lecturing team at Institute of Technology Carlow provided me with more than just an education, it provided me with an understanding and a skillset that has shaped my professional career. I will never forget the amazing time I spent at Institute of Technology Carlow.

Ian McCarthy

Sports Rehabilitation and Athletic Therapy

What did you like about the course?

Overall, I found the course to be a demanding mix of practical and theoretical components. It leaves students ably skilled to work in private practice, as part of a multidisciplinary team or in numerous sporting settings.

Gaining clinical experience in the on site 'Sports Rehabilitation Clinic' in the final 2 years is also a great feature of the course. This allows students to hone their newly learned skills under the guidance of clinical tutors. Overall, students leave with over 800 clinical hours upon graduation. In addition to this, a large proportion of practical classes in manual therapy, electrotherapy, musculoskeletal assessment and advanced rehabilitation leaves students with a standard of manual skills that surpasses many other health professionals.

I cannot put down on paper how much fun Carlow is as a student town. The strong clubs and societies culture in the college also provides students with many effortless opportunities to make friends and socialise with ease. I had the best 4 years of my life there and made many lifelong friends!

What are you doing now?

Since graduating, I have spent over 18-months working in the esteemed Stanford University Sports Medicine department, co-founded Stanford's "International Affiliate Clinical Training Program", been accepted to one of the world's most prestigious osteopathic schools and obtained employment in a successful sports injury clinic in London. I am currently enjoying my work as an Osteopathic Practitioner, Athletic Therapist and Certified Strength and Conditioning Specialist.

How did the course prepare you for the job you are doing now?

Before choosing this course, it is important to understand that there are many different areas and specialisations within a health professional's realm. This four year Degree focuses almost entirely on the neuromusculoskeletal area of practice (i.e. nerves, muscles and joints) by developing advanced assessment, diagnostic and treatment techniques for pathologies of this system.

One thing i know for certain is that none of the aforementioned "successes" would be possible without the knowledge, skills and contacts I made during my 4 years at Institute of Technology Carlow.

Richard Lally

Bioscience with Biopharmaceuticals

What did you like about the course?
I pursued a Higher Degree in Bioscience with Biopharmaceuticals as I found science in secondary school both exciting and promising. After reading about the course at Institute of Technology Carlow I realised it could offer me an education in an area I had a great interest in, the biological sciences.

After completing my undergraduate Level 8 Degree, I decided to further my education by pursuing a level 10 PhD through research at Institute of Technology Carlow.

I really enjoyed my time at Institute of Technology Carlow. Every year presented itself with a world of different opportunities to involve myself in: various clubs and societies, meeting new people and making lifelong friends. Institute of Technology Carlow Students' Union and each department work hard to ensure that not only a high level of education is provided for each student but also that the student has an exciting, memorable experience.

What are you doing now?
I graduated with a Ph.D. from Institute of Technology Carlow in November 2016 having successfully defended my thesis. I was recruited by Alltech having won the Global Alltech Young Scientist award in 2016. Currently, I'm a Post-doctoral research associate based in Nicholasville, Kentucky, USA where Alltech's global headquarters was founded by Irish entrepreneur Dr. Pearse Lyons. I work with the Alltech Crop Science division researching existing products but also in product development. Alltech aims to provide environmentally sustainable solutions for farmers and currently has a range of successful products used for various crop applications. Part of my research is based in central Florida so I'm lucky to have the opportunity to travel there every few months. My undergraduate and postgraduate experience has really stood to me in my new role. Important skills such as reporting, communicating research, presenting findings, networking and key molecular biology skills were all part of the learning experience at Institute of Technology Carlow.

How did the course prepare you for the job you are doing now?
I enjoyed the day-to-day structure of the lectures and laboratory practicals at the Institute. This is a very enjoyable way to learn as you get to practice what you have covered in the lecturing sessions. The opportunity to use state-of-the art high tech scientific instruments was also a favourable aspect to the course and a huge advantage in preparing me for the work I do now.

Fintan White

Sport Science

What did you like about the course?
I loved the wide variety of modules covered during the BSc Sport Science at Institute of Technology Carlow. The different disciplines covered such as strength and conditioning, performance analysis and exercise physiology gave me a great feel for what area of sport science I wanted to work in after my degree. There is a great mix of practical and theory throughout the degree which I think has really prepared me for the working world. The lecturers are excellent and come from diverse backgrounds which is great for exposure to different views and opinions. They are always on-hand to give advice and help you out which is one of the best things about the course. The facilities available for Sport Science students are top-class with an excellent physiology lab and high performance gym, which adds greatly to the learning experience.

What are you doing now?
I am currently employed as an Academy Sport Scientist for Reading Football Club whilst also studying an MSc part-time in Strength and Conditioning. Having completed my final year work placement at the club, I was given the opportunity to join the academy sport science team in September of 2015 full-time. Having also completed an internship with the FAI after my degree at Institute of Technology Carlow, working in football was always going to be the path I would pursue. In my current role, I predominately work with the U9-14 age groups of the academy which has recently regained its status as a Category 1 academy in the UK, meaning we are among the top academies in the country, competing each week against the likes of Man Utd, Man City, Chelsea and Arsenal.

How did the course prepare you for the job you are doing now?
The work placement module in my final year really prepared me for my current role as it gave me hands-on experience and insight on what it takes to work in academy football. This is one of the most important modules on the degree in my opinion and I found that it inevitably got my foot in the door to where I am today. The course also prepared me academically for further study to Masters level, learning how to write scientifically and critically has also stood me in good stead whilst completing my MSc. Overall the BSc in Sport Science has given me the necessary skills and knowledge to more than prepare me for employment in a very competitive field.

FACULTY OF **BUSINESS AND HUMANITIES**

Department of Business
Department of Humanities
Department of Sport, Media and Marketing

HEAD OF FACULTY: **Ms Maebh Maher**, BCL, Solr

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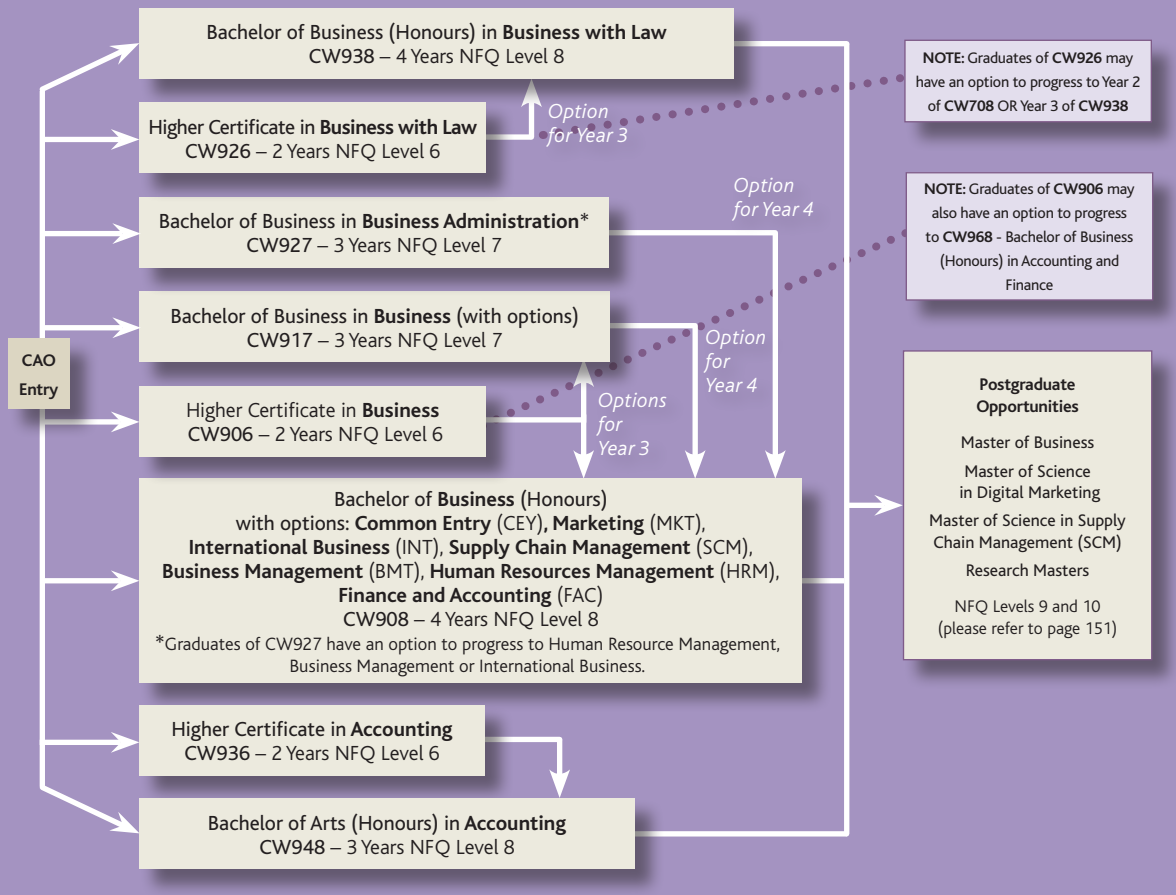
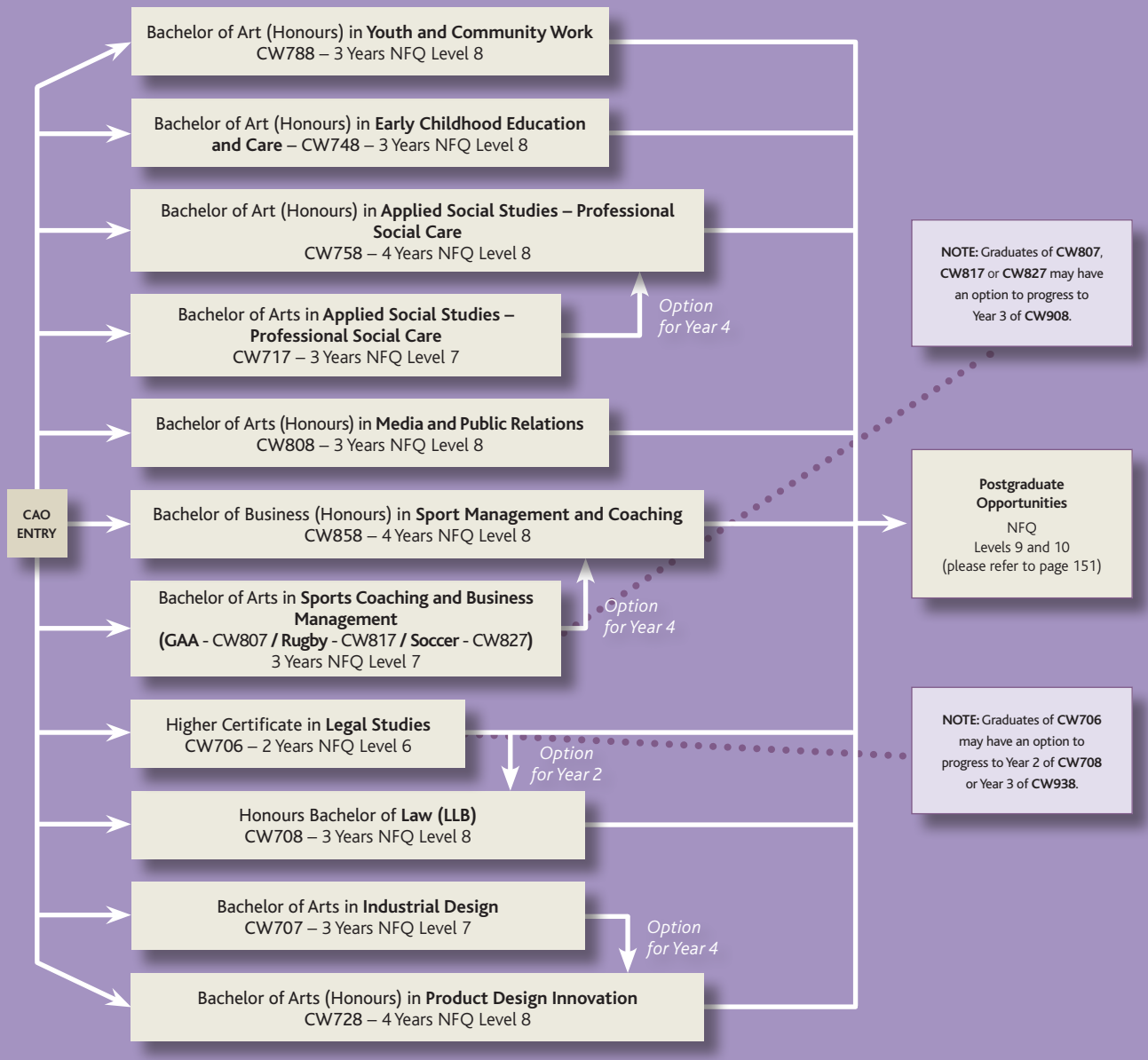
Course Progression Chart




CAO ENTRY
Bachelor of Art (Honours) in **Youth and Community Work** CW788 – 3 Years NFQ Level 8
Bachelor of Art (Honours) in **Early Childhood Education and Care** – CW748 – 3 Years NFQ Level 8
Bachelor of Art (Honours) in **Applied Social Studies – Professional Social Care** CW758 – 4 Years NFQ Level 8
Bachelor of Arts in **Applied Social Studies – Professional Social Care** CW717 – 3 Years NFQ Level 7
Option for Year 4
Bachelor of Arts (Honours) in **Media and Public Relations** CW808 – 3 Years NFQ Level 8
Bachelor of Business (Honours) in **Sport Management and Coaching** CW858 – 4 Years NFQ Level 8
Bachelor of Arts in **Sports Coaching and Business Management** **(GAA** - CW807 **/ Rugby** - CW817 **/ Soccer** - CW827**)** 3 Years NFQ Level 7
Option for Year 4
Higher Certificate in **Legal Studies** CW706 – 2 Years NFQ Level 6
Option for Year 2
Honours Bachelor of **Law (LLB)** CW708 – 3 Years NFQ Level 8
Bachelor of Arts in **Industrial Design** CW707 – 3 Years NFQ Level 7
Option for Year 4
Bachelor of Arts (Honours) in **Product Design Innovation** CW728 – 4 Years NFQ Level 8
NOTE: Graduates of **CW807**, **CW817** or **CW827** may have an option to progress to Year 3 of **CW908**.
Postgraduate Opportunities NFQ Levels 9 and 10 (please refer to page 151)
NOTE: Graduates of **CW706** may have an option to progress to Year 2 of **CW708** or Year 3 of **CW938**.

CW908

NFQ LEVEL 8

Bachelor of Business (Honours)

Common Entry (CEY), **Business Management** (BMT), **Human Resource Management** (HRM), **International Business** (INT), **Supply Chain Management** (SCM), **Marketing** (MKT) or **Finance and Accounting** (FAC)

PLACES	POINTS	DURATION	EXIT AWARD
70	270	4 YEARS	YES

	Business – When you apply for Business you must select ONE of the following options: CEY; BMT; HRM; INT; SCM; MKT or FAC						
CW908	**CEY** Common Entry	**BMT** Business Management	**HRM** Human Resource Management	**INT** International Business	**SCM** Supply Chain Management	**MKT** Marketing	**FAC** Finance and Accounting
	Applicants who select a specific degree option (i.e. CW908 BMT, HRM, INT, SCM, MKT or FAC) are guaranteed a place on that course subject to meeting the entry requirements and points. Applicants who are undecided on choices should choose CW908 CEY (Common Entry). All applicants may change their selection up to the end of year 2 and must confirm their specialism at that point.						

Application procedure

Students now have the option to choose either a common entry option at CAO stage and choose a specialist area after Year 2 or can choose a specialist area at CAO stage.

What is this course about?

This course equips students with a broad skill-base ensuring graduates will have a wide range of career options. The first two years of this course provides students with a foundation in business and subjects are common for all students.

After two years students separate into their chosen specialist area from a choice of six areas:

- Business Management (BMT)
- Human Resource Management (HRM)
- International Business (INT)
- Supply Chain Management (SCM)
- Marketing (MKT)
- Finance and Accounting (FAC).

Course options

Common Entry (CEY)
By choosing 'CEY' Common Entry applicants are applying for a place on the course but postponing the decision as to which business speciality to opt for until the end of Year 2. This allows students time to explore the future career choices open to graduates in the different specialism streams. Expert guidance will be available from lecturing staff members in the Institute and ultimate choices can then be considered in light of academic performance across a range of business subject areas.

Business Management (BMT)
This option equips students with the management knowledge, skill and competencies demanded by modern day business. Graduates may find employment as part of a management team in any sector such as banking, industry, public sector, financial services and many more.

Human Resource Management (HRM)
Human resource management is a complex area requiring broad knowledge and skills. This specialism equips graduates for careers as recruitment officers, human resource managers, recruitment specialists or functional managers both in the private and public sector.

International Business (INT)
With increasing industry globalisation, graduates of International Business will be well qualified to meet the complex demands of global organisations and Irish businesses trading internationally. Graduates typically find employment in areas such as banking; international marketing and sales; and customer services.

Supply Chain Management (SCM)
Supply chain management is an increasingly important aspect of business management and it is concerned with managing the flow of goods from material acquisition to final consumption. Graduates typically find employment in all manufacturing sectors from pharmaceuticals to food processing as well as within the logistics and the distribution sector.

Marketing (MKT)
Marketing is practiced around the world in every type of organisation including multi-nationals, local enterprises, political parties, third-world charities, sporting organisations and small businesses. Marketing careers are varied and include: research, advertising, marketing, brand management, product development, public relations, international marketing and sales.

Finance and Accounting (FAC)
Finance and Accounting is a growing sector demanding graduates with key skills and understanding of the context in which this area of business operates including the legal and social environment, the accountancy profession, the business entity, the capital markets and the public sector. Graduates will be equipped to work in the areas of accountancy, banking, financial services and tax.

Special features of this course

- All students, regardless of the original option chose, will be permitted to change their selection at the end of Year 2 and confirm their specialism for Years 3 and 4 at that point.
- Exit Awards - Ordinary Bachelor Degree after Year 3.
- Exit Award – Higher Certificate (NFQ Level 6) after Year 2.

CW908

NFQ LEVEL 8

PROGRAMME DIRECTOR

Joan McCahill, BComm (Hons), MBS, Academic Assoc CIPD
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Bachelor of Business (Honours) **Business Management** (BMT)

What subjects will I study?

YEAR 1

Mandatory Subjects

Financial Accounting 1
Quantitative Techniques
Economics 1
Management
Business Applications 1

Plus One Elective

Communications and Writing Skills
Business Psychology
French 1*
German 1*

YEAR 2

Mandatory Subjects

Management Accounting
Business Applications 2
Business Law
Marketing

Plus Two Electives

Supply Chain Management
Human Resource Management
Economics 2
Financial Accounting 2
French 2*
German 2*

* subject to demand

What is Business Management?

Business touches on almost every aspect of modern human society and careers in business are diverse and often highly paid. At undergraduate level students can gain a foundation in many of these aspects of the business world, before choosing a specialisation.

In the Business Management (BMT) option at year three students will study specialist subjects in more detail including: Business Research Methods, Organisational Behaviour, Operations Management, Business Finance, International Business and more. Additional specialist subjects can be chosen depending on the student's area of interest.

What will I be able to do when I finish the course?

Graduates will be equipped with the knowledge, skills and competencies that are demanded in a modern business environment. The graduate will be qualified to work in a wide range of business settings such as industry, banking, public service, financial services and service industries.

Graduates who achieve a minimum of a second class Honours Degree are eligible to apply to undertake a Research or Taught Masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 3

Mandatory Subjects

Business Research Methods
Organisational Behaviour
Operations Management
Business Finance

Plus Two Electives

Strategic HRM
Enterprise 1
Business Information Systems 1
Managerial Economics
Business English/Project **
Selling
Sales Management

YEAR 4

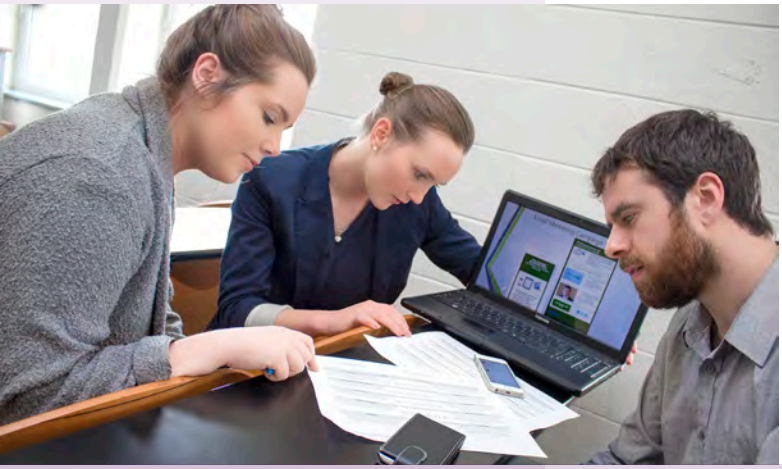
Mandatory Subjects

Strategic Management
Corporate Governance and Business Practice
International Business
Dissertation

Plus Two Electives

Business Information Systems 2
Industrial Relations
The Global Economy
Enterprise 2
Corporate Finance

** Erasmus and International students MUST TAKE Business English/Project as one of their electives.



CW908

NFQ LEVEL 8

Bachelor of Business (Honours)

Common Entry (CEY), **Business Management** (BMT), **Human Resource Management** (HRM), **International Business** (INT), **Supply Chain Management** (SCM), **Marketing** (MKT) or **Finance and Accounting** (FAC)

Bachelor of Business (Honours)

Human Resource Management (HRM)

PROGRAMME DIRECTOR

Dr Chitra Meade
BSc (Hons), MA, PhD
E: chitra.meade@itcarlow.ie

What is Human Resource Management?

Human Resource Management (HRM) is the function within an organisation that focuses on recruitment of, management of, and providing direction for the people who work in the organisation. The HRM function deals with issues related to people such as compensation, hiring, performance management, organisation development, safety, wellness, benefits, employee motivation, communication, administration, and training.

In the Human Resource Management (HRM) option at Year 3, students will study specialist HR subjects in more detail including: Strategic HRM, Organisational Behaviour and Employment Law. In Year 4, students study Applied HRM, Industrial Relations and Contemporary HRM.

What will I be able to do when I finish the course?

A business degree in HRM is internationally recognised and offers a passport for graduates to work anywhere in the world. Careers in HR are varied and include: generic HR management, specialist HR roles such as HR recruitment, training and learning coordinator, talent manager, HR leadership, organisational and change coordinator. Graduates may find employment in the private or public sector across all industries including: banking; education; retail and manufacturing.

Graduates may apply to undertake a Research or Taught Masters at Institute of Technology Carlow or other institutions.

CIPD
Approved centre

What subjects will I study?

YEAR 3

Mandatory Subjects

Strategic HRM
Organisational Behaviour
Business Finance
Employment Law
Business Research Methods

Plus One Elective

Enterprise 1
Managerial Economics
Operations Management
Selling
Business English/Project*
Business Information Systems 1
Sales Management

YEAR 4

Mandatory Subjects

Strategic Management
Contemporary Development in HRM
Applied HRM
Industrial Relations
Dissertation

Plus One Elective

Enterprise 2
Corporate Finance
Corporate Governance and Business Practice
International Business
The Global Economy
Business Information Systems 2

* Erasmus and International students MUST TAKE Business English/Project as one of their electives.

CW908

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dr Sharon Harris-Byrne
BA (Hons), MBS, MA (TL), PhD
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Bachelor of Business (Honours)

International Business (INT)

What subjects will I study?

YEAR 3

Mandatory Subjects

International Marketing
International Business Culture
Business Finance
Research Theory and Practice
Organisational Behaviour

Plus One Elective

Enterprise 1
Strategic Human Resource Management
Selling
Business Information Systems 1
Business English Project*
Sales Management

YEAR 4

Mandatory Subjects

International Business
The Global Economy
Strategic Management
Applied Business Solutions

Plus Two Electives

Business Information Systems 2
Corporate Governance and Business Practice
Enterprise 2
Corporate Finance
International Services Marketing

* Erasmus and International students MUST TAKE Business English/Project as one of their electives.

What is International Business?

Culture, language, political systems, geography, finance and socio-economic factors all shape and influence business and must be understood by organisations wishing to conduct business in a global marketplace. An international business degree equips students with the skills to manage people, diversity in culture, and ways of conducting business in a diverse marketplace.

Students who choose the International Business (INT) option at year three will study specialist subjects in more detail including: International Marketing, International Business Culture, Research Theory and Practice, and International Business. Additional specialist subjects can be chosen from the elective list depending on the student's area of interest.

What will I be able to do when I finish the course?

An International Business Degree enables graduates to embark on a career path with plenty of flexibility and variety. Graduates of this course will have excellent employment opportunities with global organisations and domestic companies with international importing and exporting operations. Typical roles include international marketing, sales management and customer service management. Many graduates start their careers with domestic operations of an organisation and then progress to managing and co-ordinating global organisations.

Graduates who achieve a minimum of a second class Honours degree are eligible to apply to undertake a Research or Taught Masters at Institute of Technology Carlow or other institutions.

CW908

NFQ LEVEL 8

Bachelor of Business (Honours)

Common Entry (CEY), **Business Management** (BMT), **Human Resource Management** (HRM), **International Business** (INT), **Supply Chain Management** (SCM), **Marketing** (MKT) or **Finance and Accounting** (FAC)

Bachelor of Business (Honours)

Supply Chain Management (SCM)

PROGRAMME DIRECTOR

Michael O'Fearghail
MA, FCCA
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What is Supply Chain Management?

Supply chain management is an increasingly important aspect of business management. It is concerned with managing the flow of goods from material acquisition to final consumption. SCM is about being right: it is about getting the right product, in the right quantity, at the right quality, in the right place at the right time, for the right customer at the right cost. This speciality equips learners with skills in forecasting, inventory management, purchasing, storage, information technology and transport management.

Students who choose the Supply Chain Management (SCM) option at year three will study specialist subjects in more detail including: Purchasing and Supplier Management, Inventory and Material Management, Operations Management, Global Supply Chain Management, Industrial Purchasing Management and more. Additional specialist subjects can be chosen from the elective list depending on the student's area of interest.

What will I be able to do when I finish the course?

Graduates of this course may find employment in all manufacturing sectors in a variety of roles such as: Supply Chain Manager, Purchasing Manager, Operations Manager, Production Manager, Procurement Manager and Logistics Consultant to name a few. Typically this work involves using sophisticated computerised planning tools such as MRP/ERP, interacting and negotiating with external suppliers and internal customers and contributing to project management as members of cross-functional teams.

Graduates who achieve a minimum of a second class Honours Degree are eligible to apply to undertake a Research or Taught Masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 3

Mandatory Subjects

Purchasing and Supplier Management
Inventory and Material Management
Operations Management
Business Finance
Business Research Methods

Elective Options

Business Information Systems
Strategic Human Resource Management
Managerial Economics
Enterprise
Organisational Behaviour
Business English/Project*
Selling
Sales Management

YEAR 4

Mandatory Subjects

Supply Chain Planning and Control
Global Supply Chain Management
Industrial Purchasing Management
Strategic Management
Dissertation

Elective Options

Corporate Governance and Business Practice
Enterprise
International Economics
Industrial Relations
International Business
Corporate Finance
eBusiness
Business Information Systems 2

* Erasmus and International students MUST TAKE Business English/Project as one of their electives.

PROGRAMME DIRECTOR
Dr Deirdre Fleming
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Bachelor of Business (Honours) **Marketing** (MKT)

What subjects will I study?

YEAR 3

Mandatory Subjects

Services Marketing
Consumer Psychology and Insights
Integrated Marketing Communications
Marketing Research Theory Practice
Business Finance

Plus One Elective

Selling and Sales Management
Business English Project*

YEAR 4

Mandatory Subjects

Strategic Management
Marketing Management
Client Research Project
International Marketing
Category Management
New Product Innovation

Plus One Elective

Digital Marketing
Corporate Governance and Business Practice

* Erasmus and International students MUST TAKE Business English/Project as one of their electives.

What is Marketing?

Marketing is the management process through which goods and services move from concept to the customer. It includes diverse disciplines such as: sales, public relations, pricing, packaging and distribution. Marketing is practiced around the world in every type of organisation including multi-nationals, local enterprises, political parties, third-world charities, sporting organisations or small businesses. A marketing degree equips graduates with the skill set to pursue a variety of careers both in marketing and business.

In the Marketing (MKT) option students will study a variety of up-to-date specialist marketing subjects such as: New Product Innovation, Digital Marketing, Integrated Marketing Communications, Market Research, Consumer Psychology, Services Marketing, International Marketing and Sales and Strategic Management. Students have a range of elective options depending on their area of interest.

What will I be able to do when I finish the course?

A Marketing Degree is internationally recognised and offers a passport for graduates to work anywhere in the world. Marketing careers are varied and include: research, advertising, marketing, brand management, product development, public relations, international marketing and sales.

Graduates who achieve a minimum of a second class honours degree are eligible to apply to a range of Masters and Post Graduate courses within Institute of Technology Carlow (e.g. MSc in Digital Marketing or Masters of Business) or those available in other institutions.

Customer Experience Seminar at Institute of Technology Carlow
L - R: Úna Grant, Marketing lecturer, Institute of Technology Carlow; Mr Michael Killeen, Founder of Dialogue Marketing and Cxi.ie; Guest Speaker, Mr Mark Gould, Head of Retail Transformation at AIB; Guest Speaker, Ms Rita Byrne-Kelly, Marketing Lecturer, Institute of Technology Carlow.

CW908

NFQ LEVEL 8

Bachelor of Business (Honours)

Common Entry (CEY), **Business Management** (BMT), **Human Resource Management** (HRM), **International Business** (INT), **Supply Chain Management** (SCM), **Marketing** (MKT) or **Finance and Accounting** (FAC)

Bachelor of Business (Honours)

Finance and Accounting (FAC)

PROGRAMME DIRECTOR

Susan Brennan
BA (Hons), FCA, PG Cert (TL)
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What is Finance and Accounting?

Accounting focuses on the day-to-day management of financial reports and records across the business world while finance uses this same information to project future growth and to analyse expenditure in order to strategise company finances. Combining these areas gives an overview of financial strategy and control while providing focus on professional principles and processes used in order to manage numbers.

This degree will provide a foundation for specialised accounting careers, as well as many other related careers. Accounting careers typically involve analysing and utilising financial information in order to evaluate a business' financial position. This can involve anything from basic book-keeping to managing balance sheets and income statements. A degree in this area is a great starting point for careers in financial services across business, banking and consultancy sectors. Those in finance careers often have the added responsibility of predicting and analysing the potential for profit and growth, assessing monetary resources, utilising accounting statistics and reports, and also looking externally for future funding options.

What will I be able to do when I finish the course?

Finance and Accounting is a growing sector demanding graduates with key skills and understanding of the contexts in which this area of business operates including the legal and social environment, the accountancy profession, the business entity, the capital markets and the public sector. Graduates will be equipped to work in the areas of accountancy, banking, financial services and tax. Although many of these careers are open to graduates from many disciplines, a degree in Finance and Accounting will lead employers to give preference to graduates to work and undertake further study as a:

- Chartered Accountant
- Chartered Certified Accountant
- Chartered Management Accountant
- Investment Banker
- Retail Banker
- Tax Adviser.

What subjects will I study?

YEAR 3

Mandatory Subjects

Management Accounting
Financial Accounting 2
Corporate Finance
Information Systems
Corporate Laws and Governance
Marketing
Taxation 1

YEAR 4

Mandatory Subjects

Advanced Management Accounting
Audit and Assurance
Financial Reporting
Advanced Corporate Finance
Strategic Management
Taxation 2

Special features of this course

- A range of exemptions are available to graduates from professional bodies:

  Institute of Certified Public Accountants in Ireland (CPA)
  - Formation 1 and Formation 2 – all subjects
  - Professional 1 – Corporate Reporting, Managerial Finance and Auditing

  Institute of Chartered Accountants in Ireland (ICAI)
  - CA Proficiency 1 (CAP 1) – all subjects

  Subject to a minimum 2.2 Honours Degree and a minimum mark of 50% in exempted topics, with 40% minimum in prior years in identified base subjects.

  The Association of Chartered Certified Accountants (ACCA)
  - Certified Accounting Technician – All subjects
  - ACCA Qualification - Fundamental Level – All subjects

  The Chartered Institute of Management Accountants (CIMA)
  - Certificate level – all subjects
  - Operational Level – P1 Performance Operations and F1 Financial Operations
  - Management Level - P2 Performance Management and F2 Financial Management.
- Strong emphasis on communications and computing equips graduates with real-world skills required by employers.

Bachelor of Business (Honours) – Add on

Accounting and Finance

CW968

NFQ LEVEL 8

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Susan Brennan BA (Hons), FCA, PG Cert (TL) **E**: susan.brennan@itcarlow.ie	**20**	**N/A**	**2 YEARS**	**N/A**

What subjects will I study?

YEAR 3

Mandatory Subjects

Taxation 1
Financial Accounting 2
Information Systems
Management Accounting
Corporate Finance
Marketing
Corporate Laws and Governance

YEAR 4

Mandatory Subjects

Advanced Management Accounting
Advanced Corporate Finance
Financial Reporting
Audit and Assurance
Strategic Management
Taxation 2

This is an advanced entry course open to applicants who have completed the first 2 years of business courses at Level 6, 7 or 8 and who have achieved specified minimum requirements.

What is Accounting and Finance?

Accounting and finance are an integral part of any organisation. Accountants provide essential information and professional advice to help individuals and organisations make the right financial and business decisions.

The course will equip students with a high level of competence in accountancy, information technology and management skills, qualifying graduates to make an immediate contribution to the business community.

In Year 3, students who opt for Accounting study specialist subjects in more detail. Additional specialist choices can be made from the elective list depending on student's area of interest.

What will I be able to do when I finish the course?

Accountants play a pivotal role in most organisations and the Bachelor of Business (Honours) in Accounting and Finance Degree opens many diverse and challenging career opportunities. Many graduates find employment in the financial services sectors such as banking, insurance, financial analysis and fund management. A period of further study will allow the graduate to qualify as a professional accountant. There are many career opportunities available in sectors such as: consultancy, taxation, financial markets, banking and insurance.

Graduates are eligible to progress to a Research or Taught Masters Degree at Institute of Technology Carlow and other institutions. Graduates may also take professional accountancy exams to further their qualifications.

Special features of this course

- A range of exemptions are available to graduates from professional bodies:

  Institute of Certified Public Accountants in Ireland (CPA)
  - Formation 1 and Formation 2 – all subjects
  - Professional 1 – Corporate Reporting, Managerial Finance and Auditing

  Institute of Chartered Accountants in Ireland (ICAI)
  - CA Proficiency 1 (CAP 1) – all subjects

  Subject to a minimum 2.2 Honours Degree and a minimum mark of 50% in exempted topics, with 40% minimum in prior years in identified base subjects.

  The Association of Chartered Certified Accountants (ACCA)
  - Certified Accounting Technician – All subjects
  - ACCA Qualification - Fundamental Level – All subjects

  The Chartered Institute of Management Accountants (CIMA)
  - Certificate level – all subjects
  - Operational Level – P1 Performance Operations and F1 Financial Operations
  - Management Level - P2 Performance Management and F2 Financial Management.
- Strong emphasis on communications and computing equips graduates with real-world skills required by employers.

CW938

NFQ LEVEL 8

Bachelor of Arts (Honours)

Business with Law

PLACES	POINTS	DURATION	EXIT AWARD
15	290	4 YEARS	YES

PROGRAMME DIRECTOR
Ivan Sheeran
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What is business with law?

Historically, the disciplines of business and law have been closely associated in both the public and private sector. In the global economy, businesses deal with more complex issues concerning government regulations and international trade policies. Equally, legal expertise is required to contend with constantly evolving commercial organisations and business practices.

There are three broad themes running through the course:

- Business
- Law
- Transferable Skills (Research and Communications, IT, Statistics/ Mathematics and Team skills).

Years 1 and 2 introduce students to essential business areas such as economics, management, IT, accounting, mathematics, marketing and fundamental legal subjects relevant to business such as: Contract Law and Tort Law. Years 3 and 4 have a strong emphasis on core management competencies (Year 3), strategic management, international aspects of business (Year 4) complemented by legal knowledge and skills relevant to these areas in subjects such as: Company Law, Employment Law, Media Law and the Digital Environment, Consumer Law and EU Law.

This course provides maximum flexibility to students. After completing Year 2, students have the option of transferring into any of the other Honours Business Degree courses at Institute of Technology Carlow including: Marketing, International Business, Business Management, Human Resource Management, Supply Chain Management, and Finance and Accounting. Alternatively, students may opt to join Year 2 of the LLB (Law) course.

What will I be able to do when I finish the course?

Graduates will be qualified to work as fully-trained legal executives or can also pursue careers in law, banking, stockbroking, politics, lecturing, journalism, property management, taxation, accounting and many other areas.

Graduates achieving a minimum of a second class Honours Degree are eligible to apply to undertake a Research or Taught Masters at Institute of Technology Carlow or other third level institutions.

Special features of this course

- Maximum flexibility – Higher Certificate in Business and Law (NFQ Level 6) after Year 2 and Ordinary Degree in Business and Law (NFQ Level 7) after Year 3. Transfer option after Year 2 into other Honours Business Degree courses (See CW908 or LLB).

What subjects will I study?

YEAR 1

Mandatory Subjects

The Irish Legal System
Introduction to Law and legal Methods
Business Applications 1
Quantitative Techniques
Economics
Financial Accounting

YEAR 2

Mandatory Subjects

Contract Law
Law of Tort
Management
Principles of Marketing

Plus One Elective

Economics 2
Constitutional Law
Management Accounting
Supply Chain Management
Financial Accounting 2

YEAR 3

Mandatory Subjects

Taxation
Strategic Human Resource Management
Business Finance
Employment Law

Plus One Elective

Media Law and the Digital Environment
Administrative Law
Managerial Economics
Business Applications 2

YEAR 4

Mandatory Subjects

Strategic Management
International Business
Company Law

Plus One Elective From:

Industrial Relations
Organisational Behaviour
Corporate Finance
The Global Economy

Plus One Elective From:

Consumer Protection Law
EU Law

Bachelor of Arts (Honours)

Accounting

CW948

NFQ LEVEL 8

PROGRAMME DIRECTOR

Susan Brennan
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PLACES	POINTS	DURATION	EXIT AWARD
20	317	3 YEARS	N/A

What subjects will I study?

YEAR 1

Mandatory Subjects

Business Law
Economics
Financial Accounting 1
Computer Applications 1
Management
Quantitative Techniques
Communications

YEAR 2

Mandatory Subjects

Taxation 1
Financial Accounting 2
Information Systems
Management Accounting
Corporate Laws and Governance
Marketing
Corporate Finance

YEAR 3

Mandatory Subjects

Advanced Management Accounting
Advanced Corporate Finance
Financial Reporting
Audit and Assurance
Strategic Management
Taxation 2

What is Accounting?

Accounting is a vital part of any organisation's operations. Accountants provide essential information and professional advice to help individuals and organisations make the right financial and business decisions.

This course will equip students with a high level of competence in accountancy, information technology and management skills.

Modules include: Economics, Business Law, Finance, Financial Accounting, Management Accounting, Computer Applications, Management, Communications, Taxation, Information Systems, Financial Reporting and many more. Students also have the opportunity to change specialism at the end of Year 2 and may transfer to any one of the Honours Degrees in the Faculty of Business and Humanities including: International Business, Marketing, Business, Human Resource Management, Supply Chain Management or Finance and Accounting.

What will I be able to do when I finish the course?

Graduate opportunities exist as a trainee accountant in practice or industry. Many graduates also find employment in the financial services sectors such as banking, insurance, financial analysis and fund management. A period of further study will allow the graduate to qualify as a professional accountant.

Graduates are eligible to progress to a Taught or Research Masters Degree at Institute of Technology Carlow and other institutions. Graduates may also take professional accountancy exams to further their qualifications.

Special features of this course

- A range of exemptions are available to graduates from professional bodies:

  Institute of Certified Public Accountants in Ireland (CPA)
  - Formation 1 and Formation 2 – all subjects
  - Professional 1 – Corporate Reporting, Managerial Finance and Auditing

  Institute of Chartered Accountants in Ireland (ICAI)
  - CA Proficiency 1 (CAP 1) – all subjects

  Subject to a minimum 2.2 Honours Degree and a minimum mark of 50% in exempted topics, with 40% minimum in prior years in identified base subjects.

  The Association of Chartered Certified Accountants (ACCA)
  - Certified Accounting Technician – All subjects
  - ACCA Qualification - Fundamental Level – All subjects

  The Chartered Institute of Management Accountants (CIMA)
  - Certificate level – all subjects
  - Operational Level – P1 Performance Operations and F1 Financial Operations
  - Management Level - P2 Performance Management and F2 Financial Management.
- Strong emphasis on communications and computing in this course to equip graduates with real-world skills required by employers.

CW917

NFQ LEVEL 7

Bachelor of Business

Common Entry (CEY), **Business Management** (BMT), **Human Resource Management** (HRM), **International Business** (INT), **Supply Chain Management** (SCM) or **Marketing** (MKT)

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
30	200	3 YEARS	YES	**Enda Cassin** BA (Hons), MA, HDip in EdD **E**: cassine@itcarlow.ie

	Business – When you apply for Business you must select ONE of the following options: CEY; BMT; HRM; INT; SCM; MKT or FAC					
CW917	**CEY** Common Entry	**BMT** Business Management	**HRM** Human Resource Management	**INT** International Business	**SCM** Supply Chain Management	**MKT** Marketing
	Applicants who select a specific degree option (i.e. CW917 BMT, HRM, INT, SCM or MKT) are guaranteed a place on that course subject to meeting the entry requirements and points. Applicants who are undecided on choices should choose CW917 CEY (Common Entry). All applicants may change their selection up to the end of year 2 and must confirm their specialism at that point.					

Application procedure

Students now have the option to choose either a common entry option at CAO stage and choose a specialist area after Year 2 or can choose a specialist area at CAO stage.

What is this course about?

This three-year degree course equips students with a broad skill-base ensuring graduates will have a wide range of career options. The first two years provide students with a foundation in business and subjects are common for all students.

After two years, students separate into their chosen specialist area from a choice of five areas:

- Business Management (BMT)
- Human Resource Management (HRM)
- International Business (INT)
- Supply Chain Management (SCM)
- Marketing (MKT).

Course options

Common Entry (CEY)

By choosing 'CEY' Common Entry applicants are applying for a place on the course but postponing the decision as to which business speciality to opt for until the end of Year 2. This allows students time to explore the future career choices open to graduates in the different specialism streams. Expert guidance will be available from lecturing staff members in the Institute and ultimate choices can then be considered in light of academic performance across a range of business subject areas.

What subjects will I study?

YEAR 1

Mandatory Subjects

Financial Accounting 1
Business Applications 1
Management
Economics 1
Quantitative Techniques

Plus One Elective

Communications and Writing Skills
Business Psychology
French 1 *
German 1 *

YEAR 2

Mandatory Subjects

Management Accounting
Business Applications 2
Marketing
Business Law

Plus Two Electives

Supply Chain Management
Human Resource Management
Economics 2
Financial Accounting 2
French 2 *
German 2 *

* subject to demand

Special features of this course

- Exit award – Higher Certificate in Business (NFQ Level 6) after Year 2.
- Maximum flexibility enabling students to choose a speciality after Year 2 .

Business Management (BMT)

This option equips students with the management knowledge, skill and competencies demanded by modern day business. Graduates may find employment as part of a management team in any sector such as banking, industry, public sector, financial services and many more.

YEAR 3 (BMT)

Mandatory Subjects

Business Research Methods
Organisational Behaviour
Operations Management
Business Finance

Plus Two Electives

Strategic HRM
Enterprise 1
Business Information Systems 1
Managerial Economics
Business English/Project *
Selling
Sales Management

Human Resource Management (HRM)

Human resource management is a complex area requiring broad knowledge and skills. This specialism equips graduates for careers as recruitment officers, human resource managers, recruitment specialists or functional managers both in the private and public sector.

YEAR 3 (HRM)

Mandatory Subjects

Strategic HRM
Organisational Behaviour
Business Finance
Employment Law
Business Research Methods

Plus One Elective

Enterprise 1
Managerial Economics
Operations Management
Selling
Business English/Project *
Business Information Systems 1
Sales Management

International Business (INT)

With increasing industry globalisation, graduates of International Business will be well qualified to meet the complex demands of global organisations and Irish businesses trading internationally.

Graduates typically find employment in areas such as banking, international marketing and sales, and customer services.

YEAR 3 (INT)

Mandatory Subjects

International Marketing
International Business Culture
Business Finance
Research Theory and Practice
Organisational Behaviour

Plus One Elective

Enterprise 1
Strategic Human Resource Management
Selling
Business Information Systems 1
Business English/Project *
Sales Management

Supply Chain Management (SCM)

Supply chain management is an increasingly important aspect of business management and it is concerned with managing the flow of goods from material acquisition to final consumption. Graduates typically find employment in all manufacturing sectors from pharmaceuticals to food processing as well as within the logistics and the distribution sector.

YEAR 3 (SCM)

Mandatory Subjects

Purchasing and Supplier Management
Inventory and Material Management
Operations Management
Business Finance
Business Research Methods

Elective Options

Business Information Systems
Strategic Human Resource Management
Managerial Economics
Enterprise
Organisational Behaviour
Business English/Project *
Selling
Sales Management

Marketing (MKT)

Marketing is practiced around the world in every type of organisation including multinationals, local enterprises, political parties, third-world charities, sporting organisations and small businesses. Marketing careers are varied and include: research, advertising, marketing, brand management, product development, public relations, international marketing and sales.

YEAR 3 (MKT)

Mandatory Subjects

Services Marketing
Consumer Psychology and Insights
Integrated Marketing Communications
Marketing Research Theory and Practice

Plus One Elective

Selling and Sales Management
Business English/Project *

* Erasmus and International students MUST TAKE Business English/ Project as one of their electives.

CW927

NFQ LEVEL 7

Bachelor of Business

Business Administration

PLACES	POINTS	DURATION	EXIT AWARD
20	205	3 YEARS	YES

PROGRAMME DIRECTOR
Dara McHugh
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What is Business Administration?

Business administration is the process of organising resources to ensure the efficient running of a business. Modules studied during this three-year degree provide a deep understanding of business operations and processes, in addition to high level IT and communication skills.

There are two key elements that set this course apart from other business courses:

- **Practical transferable skills**: Students learn skills such as time management, multi-tasking, organisational and problem-solving skills, which are highly sought after by employers.
- **Work placement**: Students work for 2 days per week throughout Year 3, providing them with real-world experience.

Universal functions for business administrators include providing operational support to business teams, planning and organising meetings and events, co-ordinating activities between departments and managing client relationships.

What will I be able to do when I finish the course?

Graduates of Business Administration are equipped with the business knowledge and practical skills necessary to work in both the private and public sector in areas such as administration, human resources, financial services, insurance, marketing, customer service, health service and local authorities. Graduates are qualified for a wide range of roles such as: personal assistants, leadership support specialists, office managers, business administrators and executive officers. Students who graduate from this course will be eligible to progress to Year 4 of CW908 Bachelor of Business (Honours) and specialise in one of the following areas: Human Resource Management (HRM), International Business (INT), Business Management (BMT).

What subjects will I study?

YEAR 1

Mandatory Subjects

Document Design and Presentation
IT for Administration 1
Communications and Customers
Quantitative Techniques
Financial Accounting 1
Management
Economics 1

YEAR 2

Mandatory Subjects

IT for Administration 2
Human Resource Management
Management Accounting
Business Law
Marketing

Plus One Elective

Supply Chain Management
Economics 2
Financial Accounting 2

YEAR 3

Mandatory Subjects

Work Placement
Business Information systems
Business Finance
Organisational Behaviour
Business Research Methods

Special features of this course

- This course incorporates a substantial work placement in Year 3 with students working 2 days per week throughout the year.
- Exit award: Higher Certificate in Business Administration (NFQ Level 6) after Year 2.
- Specialised training in business administration and technology is provided in our state-of-the-art administration centre here at Institute of Technology Carlow.

Higher Certificate

Business

CW906

NFQ LEVEL 6

PROGRAMME DIRECTOR

Sharon McDonald
BA (Hons), MEd, MA
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PLACES	POINTS	DURATION	EXIT AWARD
25	170	2 YEARS	N/A

What subjects will I study?

YEAR 1

Mandatory Subjects

Financial Accounting 1
Management
Economics 1
Quantitative Techniques
Business Applications 1

Plus One Elective

Communications and Writing Skills
Business Psychology
French 1 *
German 1 *

YEAR 2

Mandatory Subjects

Business Applications 2
Management Accounting
Business Law
Marketing

Plus Two Electives

Economics 2
Financial Accounting 2
Supply Chain Management
Human Resource Management
French 2 *
German 2 *

* subject to demand

What is Business about?

This course provides an academic qualification for anyone interested in a career in business and management. This Higher Certificate in Business equips students with a broad skill-base ensuring graduates will have a wide range of career options. The course provides a basic business foundation covering core subjects including: Financial Accounting, Economics, Management, Business Applications, Marketing, and Business Law.

What will I be able to do when I finish the course?

At certificate level, graduates may expect to work in roles such as: Trainee Manager, Personal Assistant, Accounts Assistant, Customer Services Assistant, Bank Official, Sales Representative and many other similar roles.

Graduates of this certificate course will be eligible to progress to Year 3 of the Bachelor of Business (Honours) course (CW908) and can choose a speciality from one of the following: Marketing (MKT), International Business (INT), Supply Chain Management (SCM), Finance and Accounting (FAC), Business Management (BMT) or Human Resource Management (HRM). Graduates can also enter Year 3 of the Bachelor of Business (Honours) Wexford (CW018) or progress to Year 2 of the Bachelor of Arts (Honours) in Accounting (CW948).

Special features of this course

- The Higher Certificate in Business provides students with the flexibility to choose a business career or progress to further study.

CW936

NFQ LEVEL 6

Higher Certificate

Accounting

PLACES	POINTS	DURATION	EXIT AWARD
20	220	2 YEARS	N/A

PROGRAMME DIRECTOR

Mairead Bohan
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What is this Accounting course about?

Accounting identifies, measures and communicates economic information to the managers/owners of a business. It facilitates informed judgments and decisions about the resources and activities of the business. Accounting is an important part of any organisation.

This two-year course will equip students with a foundation level of competence in accountancy and tax and business skills. Modules include: Financial Accounting, Quantitative Techniques, Business Applications, Economics, Management, Business Law, Taxation and Financial Management. There is a strong emphasis over the two years on computer applications ensuring graduates have the IT skills required for modern business environments. The broad foundation base also enables students to pursue further studies in business or accounting.

What will I be able to do when I finish the course?

At certificate level, graduates may expect to work in accounting positions in a variety of sectors including manufacturing, financial services and the public sector.

Graduates can progress to Year 2 of the Bachelor of Arts (Honours) in Accounting (CW948). Graduates can also choose to take further studies in business and progress to Year 3 of the Bachelor of Business (Honours) (CW908) and choose a specialist area from one of the following options:

- Business Management (BMT)
- Human Resource Management (HRM)
- International Business (INT)
- Supply Chain Management (SCM)
- Marketing (MKT).

What subjects will I study?

YEAR 1

Mandatory Subjects

Financial Accounting 1
Quantitative Techniques
Business Applications 1
Economics
Management
Business Law

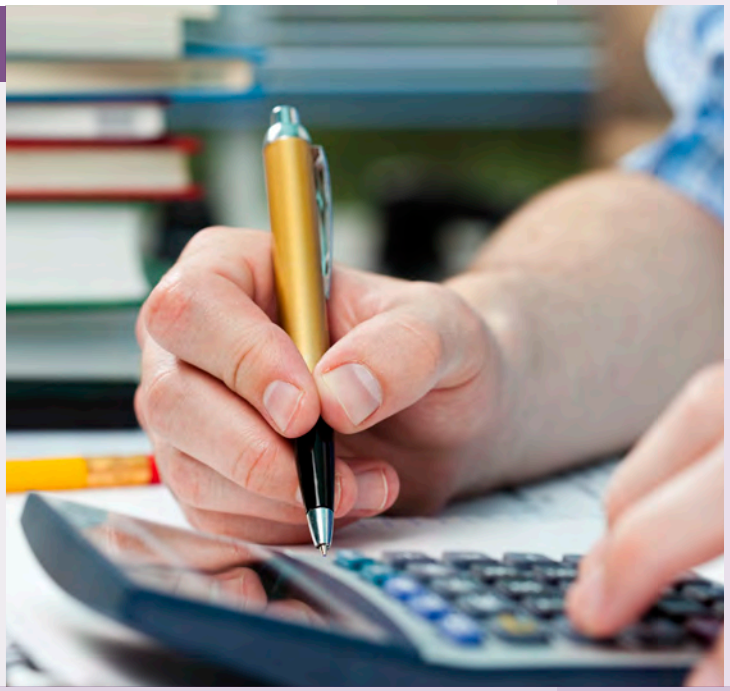
YEAR 2

Mandatory Subjects

Financial Accounting 2
Management Accounting
Business and Accounting Applications
Taxation
Marketing
Financial Management

Special features of this course

- Higher Certificate in Accounting graduates should be able to apply accounting, tax and business skills necessary for common accounting functions. In addition they should be able to gather, assemble, display and communicate information and data while working as part of a team in structured, supervised accounting and business scenarios.
- There is a strong emphasis on computer applications in this course with practical IT elements incorporated in several subjects, equipping graduates with skills required by modern businesses.
- In general, the various accountancy bodies will exempt holders of Higher Certificates in Accounting from the first year of their professional qualifications. Exemptions depend upon the policy of the various institutes and the relevant marks obtained by students in various exams.



Bachelor of Arts (Honours)

Sport Management and Coaching

(with options in: **GAA**, **Rugby** or **Soccer**)

CW858

NFQ LEVEL 8

PROGRAMME DIRECTOR

Denis O'Brien
ACMA, MBA
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PLACES
30

POINTS
***
see page 180

DURATION
4 YEARS

EXIT AWARD
YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Player Development 1
Coach Education 1
Applied Anatomy and Sports Physiology
Effective Writing and Research
Foundations of Sport Management
Information Technology

YEAR 2

Mandatory Subjects

Player Development 2
Coach Education 2
Functional Screening and Fitness Testing
Strength and Conditioning
Finance for Sports 1
Sports Marketing
Sports Economics

YEAR 3

Mandatory Subjects

Applied Programme Planning
Finance for Sports 2
Sponsorship and Media Management in Sport
Legal Studies for Sport
People Management Skills (Sport)

Elective Subjects

Player Development 3
Coach Education 3
Community Sport and Social Inclusion

YEAR 4

Mandatory Subjects

Coach Development and Mentoring
Performance Analysis
Operations Management
Event Management
Contemporary Issues in Sport Management and Leadership
Sports Research Project
Preparation for the Workplace

What is Sports Management and Coaching?

The field of sports management and coaching is changing rapidly. Professional sporting bodies require their management and coaching staff to not only have an excellent understanding of their chosen sport, but to equally have strong business skills.

On completion of the course, students will have a detailed understanding of:

- Player development
- Coach education
- Strength and conditioning
- Programme planning
- Performance analysis
- Sport finance
- Sport media and marketing.

What will I be able to do when I finish the course?

Graduates will be qualified to work in a variety of sports-related careers including sports development officers, sports management, club development, club administration, sport coaching and fitness instruction.

Graduates of this course may be eligible to progress to Masters level in the areas of Performance Analysis, Strength and Conditioning and Business or the MSc in Strength and Conditioning.

Special features of this course

- This is the only course of its kind in Ireland and is delivered in association with the GAA, FAI and Leinster Rugby.
- Competitive Institute of Technology Carlow team Environment in GAA, rugby and soccer with 2017 national title wins including; Senior Hurling Division 1 League Champions (3 in a row); Fitzgibbon Cup Finalists; Sigerson Cup Quarter Finalists; Women's CCAO Purcell Cup Semi Finalists; Men's CFAI Umbro Cup Winners (6 in a row); Women's WSCAI Futsal Cup Winners 2017 (2 in a row); Student Sport Ireland (SSI) Fresher U20 O'Boyle Cup Winners; IRFU Student Sport Ireland (SSI) Brendan Johnston Cup Winners.
- Experienced coaches and coach educators from each of the sporting bodies deliver the player development and coach education modules of the course.
- Premium sporting facilities including elite sports gym, general student gym, GAA and rugby pitches with full changing facilities and viewing stands.
- Exit award – Bachelor of Arts Sports Coaching and Business Management (GAA, Soccer, Rugby) after Year 3.

CW807

NFQ LEVEL 7

Bachelor of Arts

Sports Coaching and Business Management (GAA)

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
20	*** see page 180	3 YEARS	YES	**Brian Dunne** BSc (Hons), MSc **E**: brian.dunne@itcarlow.ie

What is a Sports Coaching and Business Management?

Sports bodies require their management and coaching staff to have a well-rounded understanding and knowledge of their chosen sport but also of business and management. A Sports Coaching and Business Management (GAA) degree explores the cross-functional nature of business and sport and equips students with the necessary skills to attain careers in: sports management, club development, games development and club administration.

Applicants can apply for both the BA (Honours) Sport Management and Coaching (CW858 - NFQ Level 8) Sports Coaching and Business Management (GAA), (CW807 - NFQ Level 7) on the CAO application. Both courses run concurrently for the first three years.

What will I be able to do when I finish the course?

Graduates will be qualified to work in a variety of sport related careers, including sport development officers, sport management, club development and/or administration, sport coaching and fitness instruction.

Graduates of this course may be eligible to progress to Year 4 of the BA (Honours) Sport Management and Coaching (CW858).

What subjects will I study?

YEAR 1

Mandatory Subjects

Player Development 1
Coach Education 1
Applied Anatomy and Sports Physiology
Effective Writing and Research
Foundations of Sport Management
Information Technology

YEAR 2

Mandatory Subjects

Player Development 2
Coach Education 2
Functional Screening and Fitness Testing
Strength and Conditioning
Finance for Sports 1
Sports Marketing
Sports Economics

YEAR 3

Mandatory Subjects

Applied Programme Planning
Finance for Sports 2
Sponsorship and Media Management in Sport
Legal Studies for Sport
People Management Skills (Sport)

Elective Subjects

Player Development 3
Coach Education 3
Community Sport and Social Inclusion

DJ Carey, Institute of Technology Carlow Ambassador for Hurling

Institute of Technology Carlow BA Sports Coaching and Business Management (GAA) graduates currently working with Leinster GAA

Special features of this course

- This is the only course of its kind in Ireland and is delivered in association with the GAA.
- Competitive Institute of Technology Carlow team Environment in GAA, with 2017 national title wins including; Senior Hurling Division 1 League Champions (3 in a row); Fitzgibbon Cup Finalists; Sigerson Cup Quarter Finalists;Women's CCAO Purcell Cup Semi Finalists
- Experienced coaches and coach educators from each of the sporting bodies deliver the player development and coach education modules of the course.
- Premium sporting facilities including elite sports gym, general student gym, GAA and rugby pitches with full changing facilities and viewing stands.

Bachelor of Arts

Sports Coaching and Business Management (Soccer)

CW827

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Luke Hardy **E:** luke.hardy@itcarlow.ie	20	*** see page 180	3 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Player Development 1
Coach Education 1
Applied Anatomy and Sports Physiology
Effective Writing and Research
Foundations of Sport Management
Information Technology

YEAR 2

Mandatory Subjects

Player Development 2
Coach Education 2
Functional Screening and Fitness Testing
Strength and Conditioning
Finance for Sports 1
Sports Marketing
Sports Economics

YEAR 3

Mandatory Subjects

Applied Programme Planning
Finance for Sports 2
Sponsorship and Media Management in Sport
Legal Studies for Sport
People Management Skills (Sport)

Elective Subjects

Player Development 3
Coach Education 3
Community Sport and Social Inclusion

What is Sports Coaching and Business Management?

Sports bodies require their management and coaching staff to have a well-rounded understanding and knowledge about their chosen sport but also of business and management. A Sports Coaching and Business Management degree explores the cross-functional nature of business and sport and equips students with the necessary skills to attain careers in: sport management, club development, games development and club administration.

Applicants can apply for both the BA (Honours) Sport Management and Coaching (CW858 – NFQ Level 8) and the BA Sports Coaching and Business Management (CW827 – NFQ Level 7) on the CAO application. Both courses run concurrently for the first three years.

What will I be able to do when I finish the course?

Graduates will be qualified to work in a variety of sports related careers including:

- FAI Development Officer
- FAI Administration
- Sports Management
- Club Development
- Academy Football Coach
- Fitness Instructor
- Video Analyst
- Coach Education
- Business Administrator
- International Coaching Positions
- Professional/Semi Professional Footballer.

Graduates of this course may be eligible to progress to Year 4 of the BA (Honours) Sport Management and Coaching (CW858).

Special features of this course

- Course delivered in association with the FAI.
- Graduates will acquire an academic qualification while gaining the opportunity to develop as a footballer and to obtain coaching qualifications.
- Competitive Institute of Technology Carlow team environment in Soccer. Men's CUFL Premier Winners 2015/16 and Women's Intervarsity Premier Winners 2015/16.
- Player development and football education modules are delivered by experienced coaches and coach educators from FAI with the opportunity to attain your UEFA B Coaching Qualification in the 3rd year of the course.
- Premium sporting facilities including elite sports gym, general student gym, and floodlit soccer pitch.

CW817

NFQ LEVEL 7

Bachelor of Arts

Sports Coaching and Business Management (Rugby)

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME LEADER
20	*** see page 180	3 YEARS	YES	**Brett Igoe** BSc (Hons) **E**: brett.igoe@itcarlow.ie

What is a Sports Coaching and Business Management?

Sports bodies require their management and coaching staff to have a well-rounded understanding and knowledge not only about their chosen sport but also of business and management. A Sports Coaching and Business Management (Rugby) degree explores the cross-functional nature of business and sport and equips students with the necessary skills to attain careers in: sports management, club development, games development and club administration.

Applicants can apply for both the BA (Honours) Sport Management and Coaching (CW858 – NFQ Level 8) and the BA Sports Coaching and Business Management (Rugby) (CW817 – NFQ Level 7) on the CAO application system. Both courses run concurrently for the first three years.

What will I be able to do when I finish the course?

Graduates will be qualified to work in a variety of sports-related careers including: games development, sports management, club development, personal coaching, coaching-fitness and business management.

Graduates of this course may be eligible to progress to Year 4 of the BA (Honours) Sport Management and Coaching (CW858).

What subjects will I study?

YEAR 1

Mandatory Subjects

Player Development 1
Coach Education 1
Applied Anatomy and Sports Physiology
Effective Writing and Research
Foundations of Sport Management
Information Technology

YEAR 2

Mandatory Subjects

Player Development 2
Coach Education 2
Functional Screening and Fitness Testing
Strength and Conditioning
Finance for Sports 1
Sports Marketing
Sports Economics

YEAR 3

Mandatory Subjects

Applied Programme Planning
Finance for Sports 2
Sponsorship and Media Management in Sport
Legal Studies for Sport
People Management Skills (Sport)

Elective Subjects

Player Development 3
Coach Education 3
Community Sport and Social Inclusion

Special features of this course

- Course delivered in association with Leinster Rugby and the IRFU Leinster Rugby.
- Institute of Technology Carlow has a strong rugby tradition of teams that compete in third level competitions. The men's teams won the Freshers U20 O'Boyle Cup in 2016/2017 and the Senior Men's team won the Brendan Johnson Cup in 2017 (5 times winners in the last seven years). The women's team were the Student Sport Ireland Intervarsity champions in 2015.
- Player development and coach education modules are delivered by experienced coaches and coach educators from Leinster Rugby.
- Premium sporting facilities including elite sports gym, general student gym, and rugby pitches.

Bachelor of Arts (Honours)

Media and Public Relations

CW808

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dr Pauline Madigan
BA, PG Dip, MA, EdD
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PLACES	POINTS	DURATION	EXIT AWARD
30	270	3 YEARS	N/A

What subjects will I study?

YEAR 1

Mandatory Subjects

Media Studies 1
Public Relations 1
Information Technology
Social Psychology
Management
Effective Writing and Research

YEAR 2

Mandatory Subjects

Media Studies 2
Public Relations 2
IT and New Media
Law and The Media
Marketing
Visual Language and Media

YEAR 3

Mandatory Subjects

Media Studies 3
Public Relations 3
Contemporary Film and Literature Studies
New Media and Society
Design Process and Terminology
Dissertation

What is Media and Public Relations?

'Media' is a collective term for the platforms used to send messages to mass audiences. Examples of common media utilized daily are: TV, online video streaming and social media sites. Media is also recognised as a very powerful messenger in all our lives that tells us what and how to think about global, local and even family events. People who work in the media love to create messages using words, pictures and sound in order to communicate with wide audiences. Media interacts seamlessly with the profession of Public Relations (PR) as PR helps maintain lines of communications between an organization and its publics. PR professionals help manage reputations and the BA in Media and Public Relations shows students how to work as thoughtful practitioners by using personal skills and media technology skills to influence and persuade audiences and publics.

What will I be able to do when I finish the course?

Given the growing influence of the media and PR industries the job opportunities in the sector are many and varied. Graduates are working in traditional media such as radio and TV; others are working as executives in media marketing careers and many graduates are working at advanced levels in the public relations departments of 'blue chip' companies and organsiations. Our graduates are particularly skilled at corporate communications tasks such as web content development, crafting press releases, creating video and audio artifacts, and the management of internal and external communications. Graduates are also prepared to pursue careers as presenters and storytellers in TV, radio and new media.

Graduates of the Media and Public Relations degree course have the option to progress to postgraduate studies at Masters level within Institute of Technology Carlow or elsewhere.

PRII Award: Public Relations graduates, Maria Byrne (left) and Ciara Byrne (right) pictured with Mr John Moore, Chair of Institute of Technology Carlow Governing Body. The graduates were presented with an award from the PRII for work completed on a public relations project in their final year studies which focused on how Institute of Technology, Carlow could maximise PR opportunities during the 1916 centenary year.

Special features of this course

- This course includes extensive use of our first-class TV and radio studios on campus.

CW728

NFQ LEVEL 8

Bachelor of Arts (Honours)

Product Design Innovation

PLACES	POINTS	DURATION	EXIT AWARD
20	300	4 YEARS	YES

PROGRAMME DIRECTOR
Colin Deevy
BDes (Hons)
E: colin.deevy@itcarlow.ie

What is Product Design Innovation?

Product Design Innovation is a creative and collaborative activity which uses design-led approach to identify and develop new products and services to enhance and improve people's lives.

From the physical products we engage with every day, such as homewares, entertainment, sports and gaming electronics to specialist high-end technology tools and medical devices, all are carefully designed to be intuitive, efficient and engaging. The complex systems and interfaces which support these products are also part of a carefully considered eco-system.

Through creative problem solving, enterprise and leadership, Product Design develops deep insight into how people choose to live, work and play. Using design-thinking, research, process and practice, human-centred and elegant solutions are created to assist people engage and perform at their best.

What will I be able to do when I finish the course?

Graduates of Product Design Innovation from designCORE at Institute of Technology Carlow, have membership in the IDI, Institute of Designers of Ireland.

Our graduates are employed across a wide range of sectors from services, manufacturing, hi-tech and pharmaceuticals. Specialisms include product and industrial design consultancy, furniture and environmental design, visual communications, packaging and the print sectors, web, digital technologies and user-experience (UX). Ireland's ever expanding indigenous SME industry offers superb opportunities as they seek commercial and competitive advantage through excellent design.

Graduates achieving an honours grade can qualify to undertake postgraduate studies in design including a Master in Interaction Design, Research Master through designCORE or an MSc in Medical Devices, among other post-graduate opportunities in Ireland and abroad.

What subjects will I study?

YEAR 1

Mandatory Subjects

Design Introduction
Workshop Practice
Model-Making and Ergonomics
Materials and Process
Graphics
Design Education
Principles of Research
Professional Practice and Professional Development

YEAR 2

Mandatory Subjects

Design
Design Visualisation
3D Computer Modelling
Model Detailing
International Design Movement
Applied Project Planning
Work Placement/Erasmus *

YEAR 3

Mandatory Subjects

Research Visualisation and Graphics
Industrial Design
Advanced 3D Computer Modelling
Prototyping and Surfaces
Design, Culture and Society
Design Literature Review
Marketing for Design

YEAR 4

Mandatory Subjects

Design Communications
Product Design Innovation
Detailing and Specification
Enterprise and Leadership
Human Centered Design and Interaction
Project Management
Thesis

* Students must choose to complete either a one semester long work placement or study abroad option.

Special features of this course

- All learning is project-based in a studio environment, with a continuous assessment approach. The course structure ensures full integration of all creative, academic and technical module components. Project activity is both individual and group based to help each student develop a wide range of social, research and creative skills required for the design and development of new commercial product and service opportunities. Creative problem solving, collaborative action and design-thinking are utilised and developed to address broad social and organizational issues.
- Facilities for students include: customised studios and design offices, dedicated access to computing and industry standard design software, printing/plotting resources, multiple 3D modeling and rapid-prototyping solutions as well as traditional model workshop equipment, testing labs and finishing booths to demonstrate design proposals.
- Deep collaboration with industry partners across all years of the course to allow students to experience the design process in action.
- One semester work placement or study abroad option in year 2.
- Students are encouraged to enter national and international design competitions and have a strong record of success including the Dyson Awards, FP7 Marie Curie Awards, Universal Design Awards and Student Graduate Awards.
- SHOWCASE and exhibition of work occurs throughout the course allowing students present their work to industry, commercial partners, agencies and the community.
- The designCORE Research Centre is the postgraduate research and industry-facing facility of the undergraduate course, working on cutting-edge design and design-led research for the SME sector. Enterprise Ireland has identified Institute of Technology Carlow as the National Gateway through DESIGN+ in Design, which coordinates high-level multidisciplinary research action for economic development.
- Exit award – Bachelor of Arts.

Bachelor of Arts

Industrial Design

CW707

NFQ LEVEL 7

PROGRAMME DIRECTOR

Emmet Sexton
BA (Hons)
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PLACES	POINTS	DURATION	EXIT AWARD
15	260	3 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Design Introduction
Workshop Practice
Model-Making and Ergonomics
Materials and Process
Graphics
Design Education
Principles of Research
Professional Practice

YEAR 2

Mandatory Subjects

Design
Design Visualisation
3D Computer Modelling
Model Detailing
International Design Movements
Business Environment
Work Placement/Erasmus

YEAR 3

Mandatory Subjects

Research Visualisation and Graphics
Industrial Design
Advanced 3D Computer Modelling
Prototyping and Surfaces
Design, Culture and Society
Research Methods
Marketing for Design

What is Industrial Design?

Industrial design is a creative problem solving activity focusing on humans. Through an understanding of human needs, wants, limitations and desires, product opportunities are identified, researched and solved.

Industrial designers work across many industries like electronic goods, domestic appliances, medical equipment and sports equipment as well as service systems and product interaction.

This course equips students with knowledge and skills in design, presentation, technical detailing, model making, professional practice and research.

The course blends creative problem solving design skills with business and an entrepreneurial spirit, ensuring graduates emerge with a pragmatic approach to industrial design. In Year 2 students must take either a semester-long work placement or a study abroad option.

Students develop through individual and group focused project work, helping to foster the skills required for a dynamic new product development team.

What will I be able to do when I finish the course?

Graduates of this course may pursue a wide range of careers including: in-house product designers, designers within consultancy, freelance designer, research and development, computer aided modelling/technical drafting, model making and project management.

Special features of this course

- Studio-based course that nurtures a culture of investigation and creativity. Each year group have their own studio space with access to workshops and computer facilities.
- Facilities for students include: design studios, 3D modelling studio, traditional workshop, suite of rapid prototyping equipment, testing room and equipment, model finishing room, design research centre and printing/plotter facilities.
- On-going collaboration with industry across all years of the course to allow students to experience the design process in action.
- One semester work placement or study abroad option in Year 2.
- Students are encouraged to enter national and international design competitions and have a strong record of success including the Dyson Awards, FP7 Marie Curie Awards, Universal Design Awards and Student Graduate Awards.
- Annual design exhibition to allow students to present their work and demonstrate their skills to industry and community.
- The designCORE Research Centre provides cutting-edge research and is directly linked with the undergraduate course enabling knowledge transfer.

CW926

NFQ LEVEL 6

Higher Certificate

Business with Law

PLACES	POINTS	DURATION	EXIT AWARD
20	165	2 YEARS	N/A

PROGRAMME DIRECTOR
Ivan Sheeran
BCL, B.L., Barrister-at-Law
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What is Business with Law?

Historically, the disciplines of business and law have been closely associated in both the public and private sector. In the global economy, businesses deal with more complex issues concerning government regulations and international trade policies. Equally the law has to contend with constantly evolving commercial organisations and business practices. With the expansions of the legal profession into areas of mergers, acquisitions and taxation, the skills of legal and business graduates have merged in many aspects.

This two-year Higher Certificate in Business with Law provides students with a basic undergraduate education in both disciplines. Modules include: The Irish Legal System, Legal Research and Communications, Business Applications, Economics, Quantitative Techniques, Law of Tort, Management Accounting, Principles of Marketing and a choice of electives.

What will I be able to do when I finish the course?

Graduates of this course will have core business skills combined with a knowledge and understanding of law as it applies to business. Graduates will have a choice of career options in either mainstream business areas or in legal careers.

Graduates can progress to Year 3 of the Business with Law (Honours) Degree course (CW938) or Year 2 of the Bachelor of Laws LLB (CW708). Graduates may also progress to Bachelor of Business Degrees (CW917 and CW908).

What subjects will I study?

YEAR 1

Mandatory Subjects

The Irish Legal System
Introduction to Law and Legal Methods
Business Applications
Quantitative Techniques
Economics
Management

YEAR 2

Mandatory Subjects

Contract Law
Law of Tort
Management
Marketing

Plus One Elective

Constitutional Law
Economics 2
Management Accounting
Supply Chain Management
Financial Accounting 2

Special features of this course

- The Higher Certificate in Business with Law is a broad foundation level course in both business and law providing students with flexibility to choose a career or further study in either discipline.

Honours Bachelor

Law (LLB)

CW708

NFQ LEVEL 8

PROGRAMME DIRECTOR

John Tully, LLB (Hons), LLM (NUI), Barrister (Middle Temple)
E: john.tully@itcarlow.ie

PLACES	POINTS	DURATION	EXIT AWARD
25	300	3 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

The Irish Legal System
Criminal Law
Tort Law
Constitutional Law
Legal Research and Communications
Legal Practice and Procedure

YEAR 2

Mandatory Subjects

Contract Law
Land Law and Succession

Plus any Three Elective subjects

Administrative Law
Employment Law
The Law of Evidence
Media Law and the Digital Environment

YEAR 3

Mandatory Subjects

Company and Partnership law
EU Law
Equity and Trusts

Plus One Elective

Family and Child Law
Jurisprudence
Consumer Protection and Personal Insolvency Law

Course overview

The LLB is a traditional law degree offering a curriculum of core and elective law subjects. Students are encouraged and supported in acquiring skills in legal analysis, legal research and written and oral communication. The course seeks to impart a sound understanding of law and the intellectual foundation necessary to prepare for a career as a legal professional.

The LLB is a three-year course in which the core law subjects are covered as well as a number of elective subjects. The course offered by Institute of Technology Carlow is a qualifying degree in that it is approved by the relevant lawyers' professional bodies.

What will I be able to do when I finish the course?

A law degree provides excellent preparation for work in a legal capacity in both the public and private sectors, and most graduates undertake professional training to qualify as a solicitor or barrister. However, there are many other careers for which a law degree is advantageous, such as journalism, business, politics, human resources, mediation, research, policing, and education.

Graduates who achieve an honours degree will be eligible to apply to study for a Research Masters at Institute of Technology Carlow, or postgraduate opportunities at other higher education institutions.

Special features of this course

- One of the only law degrees available outside the major cities of Ireland providing students of Leinster with an alternative option to study law.
- Degree approved by the Honourable Society of Kings Inns and students are eligible to sit the entrance exam to the Barrister at Law Degree course (see www.kingsinns.ie).
- Graduates are exempted from the Law Society's Preliminary examination.
- Modules in legal research and writing provide students with the skills required by this discipline for independent learning and research.

CW706

NFQ LEVEL 6

Higher Certificate

Legal Studies

PLACES	POINTS	DURATION	EXIT AWARD
20	211	2 YEARS	N/A

PROGRAMME DIRECTOR

Eimear Lane, BComm (Hons), Dip LS, PD T & EP, Solicitor
E: eimear.lane@itcarlow.ie

What is Legal Studies?

Knowledge of the law and legal systems is important for people in many walks of life. Many professionals need to understand what the legal system is, how it works and how it assists people in asserting their rights. Legal studies provides the professional and scholarly skills necessary for a general understanding of the law as well as for law-related careers, public service or further graduate level study.

There are 2 broad themes running through the course, Law and transferable Business Skills, as set out in the table of subjects.

The Legal Studies course will equip students with a broad knowledge of the Irish legal system and of the fundamental legal principles and subjects.

Students will take modules on the core law subjects of: Constitutional Law, Criminal Law, the Law of Torts, Contract Law, Land Law, and Legal Research and Communications. In addition, the course also provides some non-law subjects that are designed to improve students' IT, communications and office management skills. These business modules include: Information Technology, Management, Accounting, Marketing and Human Resources Management.

What will I be able to do when I finish the course?

Graduates of the Higher Certificate course have many diverse career options available including legal roles such as Legal Executive, Law Clerk or Legal Secretary. There are also a range of diverse careers available in many sectors such as the Gardai, Defence Forces, government agencies, banking, property management, insurance, taxation, accounting, retail management and many others.

Graduates who obtain an overall pass can apply to progress to Year 2 of the Honours LLB (CW708).

What subjects will I study?

YEAR 1

Mandatory Subjects

The Irish Legal System
Financial Accounting 1
Business Applications
Legal Office Systems
Business Law
Management
Legal Research and Communications

YEAR 2

Mandatory Subjects

Criminal Law
The Law of Torts
Constitutional Law
Legal Practice and Procedure
Principles of Property Law

Plus Any Two Electives

Financial Accounting 2
Constitutional Law
Human Resource Management
Marketing

Special features of this course

- This course provides the core stream of law modules combined with transferable business skills, providing graduates with a wide choice of options for a diverse range of careers or further study.
- Modules in legal research and writing provide students with the skills required by this discipline for independent learning and research.

Bachelor of Arts (Honours)

Youth and Community Work

CW788

NFQ LEVEL 8

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Majella Finnegan BA (Hons), HCert Youth Work, MA **E:** majella.finnegan@itcarlow.ie	**24**	** see page 180	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1

Mandatory Subjects

- Preparation for Professional Practice
- Group Work and Creative Skills
- Introduction to Psychology
- Introduction to Sociology and Social Policy
- Principles and Practices of Youth Work
- Principles and Practices of Community Work
- Academic Writing and Inquiry

YEAR 2

Mandatory Subjects

- Supervised Professional Practice 1
- Sociology 2
- Working with Individuals, Groups and Volunteers in Youth and Community Work
- Equality Studies for Youth and Community Work
- Critical Thinking for Youth and Community Workers
- Young People and Society

YEAR 3

Mandatory Subjects

- Management and Governance for Youth and Community Work
- Supervised Professional Practice 2
- Contemporary Social Issues for Young People
- Global Justice Perspectives for Youth and Community Work
- Social Research for Youth and Community Work

What is Youth and Community Work?

Youth work supports the social and personal development of young people through non-formal participatory, empowering educational approaches. Community work functions collectively to empower marginalised communities and to challenge the inequalities.

This course provides a recognised professional qualification in youth and community work that is also recognised in the UK, Europe, Australia and Canada. Graduates typically work in the following areas: local youth services, community development projects, youth clubs, neighbourhood youth projects, Garda youth diversion projects, local drugs task force projects, youth mental health programmes and school completion programmes. According to Jenny, a youth worker:

"At the moment I'm working one-on-one supporting a young person who has recently been bereaved through suicide. In the afternoons, I am working with a group who are developing their own music programme."

What will I be able to do when I finish the course?

Careers in Youth and Community Work are varied, challenging and rewarding and can include mainstream youth work or special project work. Graduates of the course can expect to find employment in areas such as: community development, family support, youth work and as project workers with specific target groups such as: the homeless, youth diversion programmes, alcohol/drug abuse and early school leavers programmes. Employers can include: government departments, health organisations and departments, charities and voluntary organisations, youth service organisations and minority groups.

Graduates are eligible to progress to MA or PhD courses, including the MA in Child, Youth and Family Studies at Institute of Technology Carlow.

NSETS
North South Education and Training Standards Committee for Youth Work

Special features of this course

- Endorsed by NSETS – North South Education and Training Standards Committee for Youth Work.
- Focus on active learning, continuous assessment projects and the development of research skills.
- Students undertake two work placements of 14-weeks duration - one in Year 2 and one in Year 3. A dedicated supervised Professional Practice Coordinator guides and supports students through this process.
- Wide variety of expert industry and academic guest lectures.
- Exit award – Certificate in Youth Studies (NFQ Level 6) after Year 1.

CW748

NFQ LEVEL 8

Bachelor of Arts (Honours)

Early Childhood Education and Care

PLACES	POINTS	DURATION	EXIT AWARD
50	270	3 YEARS	YES

PROGRAMME DIRECTOR

Mary Beare Aust, BEd (Hons), MA (ed), AdvMontDip, FHEA
E: mary.aust@itcarlow.ie

What is Early Childhood Education and Care?

Children require high-quality education and care during their formative years. Research indicates that the higher the professional qualification of the educator working with the children, the higher the quality of the setting. This honours degree in Early Childhood Education and Care enables the student to study a diverse range of subjects in order to gain a deep understanding of babies and children from birth to 6 years of age. The importance of play and interactions in supporting learning is emphasised throughout. Students develop a knowledge and understanding of Aistear, the Early Childhood Curriculum Framework and Siolta, the National Quality Framework for Early Childhood Education, essential for professional work in this area of practice.

What will I be able to do when I finish the course?

Graduates of this course will have the knowledge, competencies and skills to work directly with, or on behalf of, babies and young children in a range of early childhood settings, particularly in the ECCE 'free' pre-school year funded by the Department of Children and Youth Affairs. Professional employment opportunities can include roles as room leaders, managers and leaders in early childhood settings such as: pre-schools, crèches, special needs services, family support centres and community services. Opportunities may include leadership roles in county childhood care committees, specialists with Better Start, inspectors with the Department of Education and Skills. Graduates have also found employment in International and other overseas schools.

Graduates have gone on to pursue Masters' qualifications in Speech and Language Therapy, Primary School Teaching, Equality Studies, Legal Studies, Play Therapy, Montessori Education, Applied Behaviour Analysis, Child, Family and Youth Studies, Adult and Community Education and Further Education Studies (leading to registration with the Teaching Council). Graduates have also pursued research Masters and Doctoral studies.

What subjects will I study?

YEAR 1

Mandatory Subjects

Early Childhood Education
Caring for the Developing Child
Professional Development for Early Childhood Education and Care
Communications and Study Skills
Introduction to Psychology
Introduction to Sociology and Social Policy
Visual Arts in Early Childhood

YEAR 2

Mandatory Subjects

Pedagogy and Curriculum
Child Health and Well Being
Outdoor and After School Education and Care
The Psychology of Children and Childhood
Children's Literature in Early Childhood
Philosophy in EC Education
Supervised Professional Practice 1
Literacy, Numeracy, Science and Technology in Early Childhood Education and Care

YEAR 3

Mandatory Subjects

Children with Additional Needs
Ethics and Practice
Early Childhood Research Project
Leading Contemporary and Quality Practice
Working with Families and Communities
Legal Issues in Child Education and Care
Supervised Professional Practice 2

Special features of this course

- Professional work placement is an integral part of the course, supported by preparation and on-going workshops.
- Professional placement in a national support service.
- Continuous Assessment to include practical activities.
- Engagement with the sector through guest lectures.
- Cultural and education visits.

Bachelor of Arts (Honours)

Applied Social Studies — Professional Social Care

CW758

NFQ LEVEL 8

PROGRAMME DIRECTOR

Fionnuala Hunter
BSocSc (Hons), MSW, NQSW
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PLACES	POINTS	DURATION	EXIT AWARD
45	295	4 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

- Communications, Research and Study Skills
- Professional Development for Social Care
- Practice
- Creative Skills
- Introduction to Psychology
- Introduction to Social Care
- Introduction to Sociology and Social Policy
- Health, Wellbeing and Nutrition

YEAR 2

Mandatory Subjects

- Legal Studies 1
- Supervised Professional Practice 1
- Protection of Children and Vulnerable Persons
- Disability Studies
- Ageing Studies
- Cognitive and Social Psychology
- Sociology 2

YEAR 3

Mandatory Subjects

- Legal Studies 2
- Management for Social Care
- Supervised Professional Practice 2
- Social Research Studies
- Creative Skills 2
- Abnormal Psychology
- Alternative to Home Care
- Children and Families

YEAR 4

Mandatory Subjects

- Leadership and Change Management
- Ethics, Equality and Human Rights
- Global Perspectives on Sociology
- Contemporary Issues in Social Care
- Psychology: Adjustment and Positive Change
- Social Research Dissertation

What is Applied Social Studies?

Social care professionals provide vital support, advocacy and care to some of the most vulnerable and marginalised groups in society including people with disabilities, children and families at risk, asylum seekers, people with addiction, mental health issues and the elderly. This course provides graduates with the skills and expertise they need to register as a social care professional and work across this diverse sector typically in fields such as residential care, disability and community based services. Our strong links to industry allow us to facilitate students in professional practice placements throughout the course, further developing their professional skills and knowledge for future employment in areas of social care, social policy and social justice.

What will I be able to do when I finish the course?

Graduates can complete postgraduate studies to Masters or Doctoral level within the social care or associated social science field or progress into probation and social work. Graduates are also eligible to apply to progress onto the Masters in Child, Youth and Family Studies at Institute of Technology Carlow.

Special features of this course

- A variety of teaching, learning and assessment methodologies are used such as discussions, group projects, placements, facilitations, poster displays, problem-based learning and case studies.
- Supervised professional practice placements (taking place in year 2 and year 3) are an essential part of this course.
- Students are encouraged to take part in national and international competitions such as the SPARK Social Enterprise Awards and Social Care Ireland Awards for high academic achievement.
- A wide variety of external speakers from the sector deliver guest lectures on an annual basis.
- Final year students take part in an Annual Research Symposium, presenting their work to leaders in the sector. Students have also given poster presentations at the Social Care Ireland Annual Conference.
- Graduates are employed in a wide range of agencies providing social care services to clients with a variety of social care needs, including the HSE and the TUSLA Child and Family Agency.
- Exit award – Bachelor of Arts Applied Social Studies – Professional Social Care (NFQ Level 7) after Year 3 and Higher Certificate in Applied Social Studies – Professional Social Care (NFQ Level 6) after Year 2.

CW717

NFQ LEVEL 7

Bachelor of Arts

Applied Social Studies — Professional Social Care

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
45	245	3 YEARS	YES	**Vicky Anderson** BA (Hons), MA **E**: vicky.anderson@itcarlow.ie

What is Applied Social Studies?

This course provides graduates with the skills and expertise they need to register as a social care professional and work across a diverse sector, typically in fields such as residential care, disability and community based services. Our strong links to industry allow us to facilitate students in professional practice placements throughout the course further developing their professional skills and knowledge for future employment in areas of social care, social policy and social justice.

Social care professionals provide vital support, advocacy and care to some of the most vulnerable and marginalised groups in society including people with disabilities, children and families at risk, asylum seekers, people with addiction, mental health issues and the elderly.

What will I be able to do when I finish the course?

Graduates may be eligible to progress to Year 4 of the BA (Honours) in Applied Social Studies – Professional Social Care (CW758).

What subjects will I study?

YEAR 1

Mandatory Subjects

- Communications, Research and Study Skills
- Professional Development for Social Care Practice
- Creative Skills
- Introduction to Psychology
- Introduction to Social Care
- Introduction to Sociology and Social Policy
- Health, Wellbeing and Nutrition

YEAR 2

Mandatory Subjects

- Legal Studies 1
- Supervised Professional Practice 1
- Protection of Children and Vulnerable Persons
- Disability Studies
- Ageing Studies
- Cognitive and Social Psychology
- Sociology 2

YEAR 3

Mandatory Subjects

- Legal Studies 2
- Management for Social Care
- Supervised Professional Practice 2
- Social Research Studies
- Creative Skills 2
- Abnormal Psychology
- Alternative to Home Care
- Children and Families

Special features of this course

- A variety of teaching, learning and assessment methodologies are used such as discussions, group projects, placements, problem-based learning and case studies.
- Supervised professional practice placements (taking place in year 2 and year 3) are an essential part of this course.
- Students are encouraged to take part in national and international competitions such as the SPARK Social Enterprise Awards and Social Care Ireland Awards for high academic achievement.
- A wide variety of external speakers from the sector deliver guest lectures on an annual basis.
- Graduates are employed in a wide range of agencies providing social care services to clients with a variety of social care needs, including the HSE and TUSLA Child And Family Agencies.
- Exit award –Higher Certificate in Applied Social Studies – Professional Social Care (NFQ Level 6) after Year 2.

Graduate Profiles

Una McBreen

Media and Public Relations

What are you doing now?

I started my career with an internship in Edelman Dublin, a leading global communications marketing firm. I am currently working for Thames Valley Police, the UK's second largest police force. My role has involved establishing social media as a key communication tool for TVP. I am also a key player in aiding other police forces to do the same and was invited to present my work on this topic at the Home Office. My role sees me apply my knowledge and skills to provide varied content and social media guidance to support operations for the Police. I can often be found Instagramming from a drugs raid or live streaming from a press conference.

How did the course prepare you for the job you are doing now?

Studying Media and Public Relations at Institute of Technology Carlow prepared me incredibly well for a career in social media. In particular, the practical skills in video creation I acquired through our studio practice, has directly resulted in me supporting major incidents. My social media videos have been shown on many UK news channels including BBC, ITV and Sky and featured on various news sites including The Independent.co.uk and TheTimes.co.uk. Also, one of my final year projects at Institute of Technology Carlow involved working with a company to create a PR plan. I feel this real world experience boosted me above other graduates and was one of the deciding factors in me being offered a highly sought after Intern position and ultimately guiding me on the career path I find myself on today.

Emma Carey

Media and Public Relations

What are you doing now?

As Press Officer for the BBC, I am the first port of call for journalists with inquiries about the corporation in the UK and across the world. I manage corporate announcements, reputational issues, develop and implement publicity campaigns for TV programmes. It's an exciting and challenging job. Prior to this role, I specialised in technology PR for four years where I developed media relations strategies for global tech brands such as AT&T, Dell, SAP, IPsoft, Avaya and Philips.

How did the course prepare you for the job you are doing now?

The BA in Media and Public Relations at Institute of Technology Carlow set me up with vital knowledge and understanding of the TV and new media industries. It also taught me how to juggle several projects, which is vital when working in a busy PR environment with conflicting deadlines.

Phil Murphy

BBS Marketing

What did you like about the course?

I thoroughly enjoyed my time at Institute of Technology Carlow. Of all the things I learned, I think the approachability of the lecturers enabled me to be confident in dealing with senior people when I moved from the academic to the business environment. The lecturers were very open and willing to take time to help you. I would highly recommend studying marketing at Institute of Technology Carlow.

What are you doing now?

I lead Glanbia's global digital team which acts as a central digital media agency that sits at the centre of Glanbia, serving their global brands. The team comprises of digital marketers, creatives, UX designers, social media analysts and developers. The team manages the digital marketing and social media marketing for category leading brands such as Optimum Nutrition, BSN, Avonmore, Gain, and Nutramino.

Graduate Profiles

Gary Sweeny

Sports Coaching and Business Management (Soccer)

What did you like about the course?
During my four years at Institute of Technology Carlow I studied the BA Sports Coaching and Business Management (Soccer) and the BA (Honours) Sport Management and Coaching.

The courses provided a good balance between sport and academic work while giving students an insight in to what it would be like to work in a professional sports environment. The wide range of subjects on the course offered me a chance to explore areas such as coaching, performance analysis, player development, strength and conditioning, sports marketing, economics, finance and media management.

What are you doing now?
I am a performance analyst at the scouting department of Manchester United FC. The role involves the collation, analysis and feedback of scouting information to help aid decision-making on players who could potentially play for Manchester United first team.

How did the course prepare you for the job you are doing now?
The facilities on campus are second to none, I was able to make full use of the performance analysis lab with industry leading equipment that I still use in my position today. I gained valuable analysis experience working with teams at Institute of Technology Carlow, Irish international teams and various other individuals and organisations. I was also lucky enough to travel to the World University Games as the performance analyst for the Men's football team on two occasions (Kazan, Russia in 2013 and Gwangju, South Korea in 2015), something that wouldn't have been possible without the help from my lecturers while I was there. The staff (on both the sport and academic side) that deliver the courses are enthusiastic, approachable and most importantly, want all their students to genuinely do well and be successful. Institute of Technology Carlow also has a great social environment, the sports clubs are well run, very successful and offered a great opportunity to talk with like-minded students who love sport.

Upon graduating from Institute of Technology Carlow I was able to gain employment immediately. I went to Reading FC as an Academy Performance Analyst where I spent 3 successful years before moving to my current position last March at Manchester United. I thoroughly enjoyed the time I spent at Institute of Technology Carlow and I highly recommend it to anyone who wants to work in sport.

Emma Byrne

Sport Management and Coaching

What did you like about the course?
I was always interested in coaching and sports management and wanted to gain a deeper understanding and knowledge in this area. Sport and coaching is a passion of mine and the course provided an opportunity to merge both. The balance of theoretical and practical content was very enjoyable and helped to relate the theory and science to the practical setting. Practical subjects such as player development, coach education and exercise and fitness instruction where balanced with theory subjects ranging from marketing and sponsorship to finance for sport.

I continually broadened my knowledge in coaching and business practices by volunteering for many projects in my free time. I gained practical experience in many areas such as fitness testing, strength and conditioning, performance analysis, sports management and GAA club administration.

What are you doing now?
GAA Games Promotions Officer with Dublin GAA in St Vincents GAA Club involves:

- promoting Gaelic football and hurling in local primary and secondary schools;
- coaching 800 children per week in local feeder schools;
- providing club assistance to all team mentors within the club;
- delivering coach education workshops and programmes blitz camps;
- coordinating weekly academy and nursery programmes.

How did the course prepare you for the job you are doing now?
I got the opportunity to develop both as a player and person. I have gained in-depth knowledge in the areas of Sports management and coaching through theory and practical learning. I completed a work placement in China. I worked with various GAA Clubs on areas such as club development, club administration roles, club structures and coaching assistance in 6 major cities-Shanghai, Beijing, Guangzhou, Shenzhen, Suzhou and Dalian. I also have been involved working as a Performance Analyst with Kilkenny senior hurlers for the last 4 years while completing my studies. Institute of Technology Carlow provides top class facilities and staff that allow each student reach their potential. The variety of modules provided a wide range of disciplines to focus in on. It has also allowed me to continue my education by completing a Master's course in Strength and Conditioning in Institute of Technology Carlow.

Corey Carty

Sport and Exercise (Rugby)

What did you like about the course?

I learned so much at Institute of Technology Carlow including coaching development to IRFU Level 1. I was surrounded by a professional environment from day one. When not taking part in my academic studies, I was lucky enough to win three All-Ireland rugby medals - one as captain of the team. On qualifying, I became the Clubs and Societies intern in the college which gave me a much better understanding of the management side of rugby such as planning buses, meals and physios etc.

What are you doing now?

Since leaving Institute of Technology Carlow, I have gone on to become the Club Community Rugby Officer for both West Offaly Lions and Wexford Wanderers. Alongside this, I also handle the screening and coaching of youth players entering the Leinster System in the south east. This year I was appointed coach of the Institute of Technology Carlow's men's team.

How did the course prepare you for the job you are doing now?

Institute of Technology Carlow gave me both the knowledge and the experience to start coaching at an elite level and I firmly believe I would not be in the position I am now without them.

Jonathan Kearns

Product Design and Innovation

What did you like about the course?

I found the Product Design and Innovation course quite unique. The majority of work conducted was project-based and focused on developing the students' skills through practical and group participation.

What are you doing now?

I currently work as a Human Factors Engineer for Pfizer's main R&D facility. Pfizer is the world's largest pharmaceutical company and as one of the leading fortune 500 companies, they put billions of dollars into research and development to benefit the care and treatment of patients across the world. My role involves managing the possibility of design for error within products as they go through clinical trials and in turn, provide the regulatory information to the FDA for approval.

How did the course prepare you for the job you are doing now?

The course prepared me to stand out from my competitors through the range of skills I learned. Very few courses give students the opportunity to learn SOLIDWORKS, Adobe suites i.e. Photoshop, as well as rapid prototyping. The course is also excellent in developing a student's professional communication skills and I found this to be key in preparing me to adapt to any multi disciplinary team or environment. When I graduated from Institute of Technology Carlow, I had a network of contacts, be that through college projects or participating in college social events. There is a great sense of community and connectivity on campus. I can email any past graduate for advice or help and they are always willing.

Graduate Profiles

Mike McLoughlin

Industrial Design

What did you like about the course?

I thoroughly enjoyed my time studying at Institute of Technology Carlow for many reasons. I found the course very interesting as it challenged common preconceptions on the world around us and how everyday problems can be solved. The course was structured in a manner that allowed valuable time and input from my lecturers while also giving me the freedom to find my own design style and preferences. We were always pushed to challenge the norm and the informal studio environment aided creative thinking greatly.

What are you doing now?

Before my current job I spent 3 years as a design engineer with Oxley Developments Ltd in the Lake District in England. Oxley design and build EMI and LED technology for the commercial and military Aerospace industries. I had the opportunity and pleasure to work with many huge companies, including Gulfstream Aircrafts, Boeing, Sikorsky, Saab, Augusta Westland and Lockheed Martin to name a few. I now work for Siemens AG in the energy and power sector as a design and development engineer. I am based mainly in new product development for subsea use. My main focus is fibre optic product development. I am part of a team of roughly 10 multidiscipline professionals who create and design new product technology to withstand harsh subsea environments.

How did the course prepare you for the job you are doing now?

The course prepared me for the pressures of "real world" product development by enabling my ability to challenge and push the boundaries of what is possible. I still believe the most valuable life skill I have received from the Institute of Technology Carlow design team is my design thinking. Due to constant presentations in the first few years of the design course, I managed to become quite comfortable in front of a group when presenting my own designs, something which I still use to this day! Thanks to the Design course, I feel I can deliver far more focused and concise presentations with confidence. The 3D modelling and computer aided design skills which I learned during the course have also been absolutely critical to my employment success. It is not easy to prepare future design professionals for the tough world of industrial design while they are students, but I feel the team at Carlow did this in a very unique, fun and professional manner.

Jason Meagher

LAW (LLB)

What did you like about the course?

There are many reasons as to why I thoroughly enjoyed the course. However the main reason would have to be the small class sizes. I cannot emphasise enough how beneficial this was as it paved the way for being on a first-name basis with the lecturers, and made participation in discussion in class far less daunting. This, in turn, led to relationships of mutual respect between the lecturers and students, who, on many occasions, listened to my queries long after class had ended.

What are you doing now?

Having completed the LLB, I then attended the King's Inns and was called to the Bar of Ireland. Since then, I have been devilling in the Law Library in Dublin, practising mostly in Commercial Law and Litigation, but also covering Crime and other areas. This entails drafting, making court applications and appearances, and legal research, to name but a few of the tasks required of a Barrister.

How did the course prepare you for the job you are doing now?

Given that my aim, whilst I attended Institute of Technology Carlow, was to become a practising Barrister, it is safe to say that the LLB prepared me immensely for practice at the Bar. Institute of Technology Carlow built the foundations – and strong foundations – necessary to prepare me for the King's Inns and beyond. I cannot recommend this course highly enough. It gave me the necessary skillset to turn a passion into a career. Whatever career path you choose to take, the LLB will be an invaluable asset at your disposal.

Andy Warhol, ***Flowers 72*** (Silk screen print, 1970)

From the Frank X. Buckley and Michael P. Burns Collection
at the Institute of Technology Carlow.

WEXFORD CAMPUS

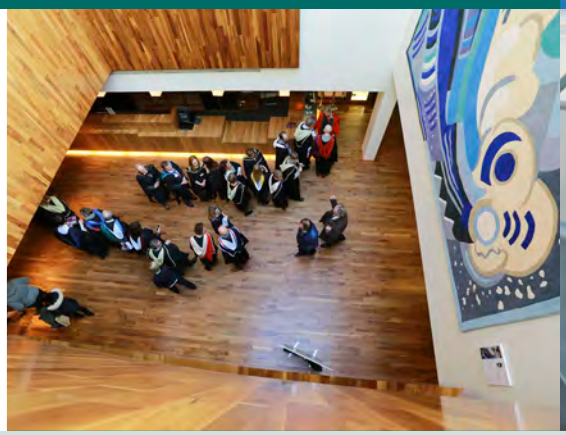
HEAD OF CAMPUS: **Dr Karen Hennessy**, BEd (Hons), MSc, MBA, PhD

DEPUTY HEAD OF CAMPUS (PROGRAMMES)

Dr Janette Davies

BSc (Hons), MSc, PhD, MMII

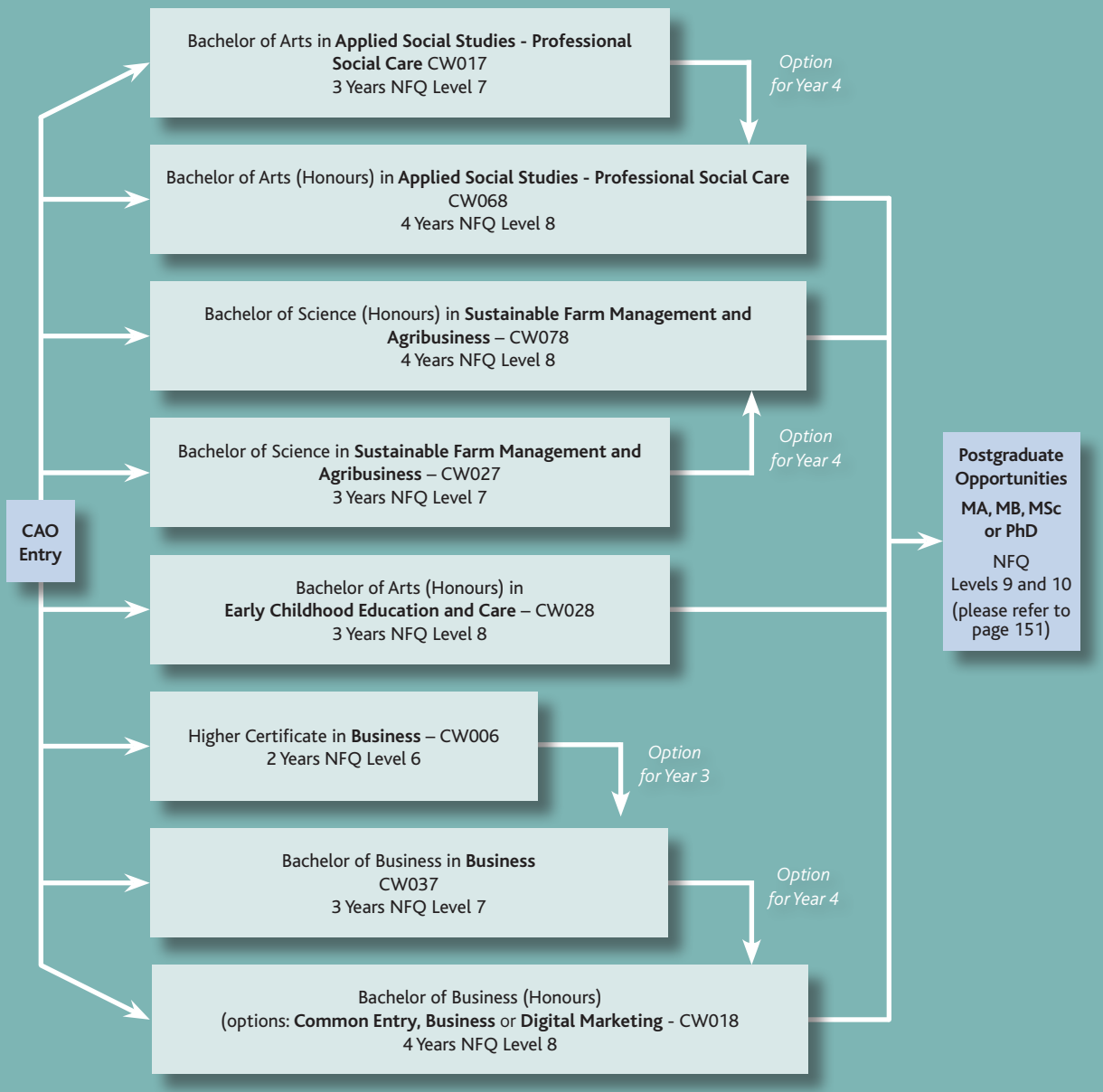
E: janette.davies@itcarlow.ie

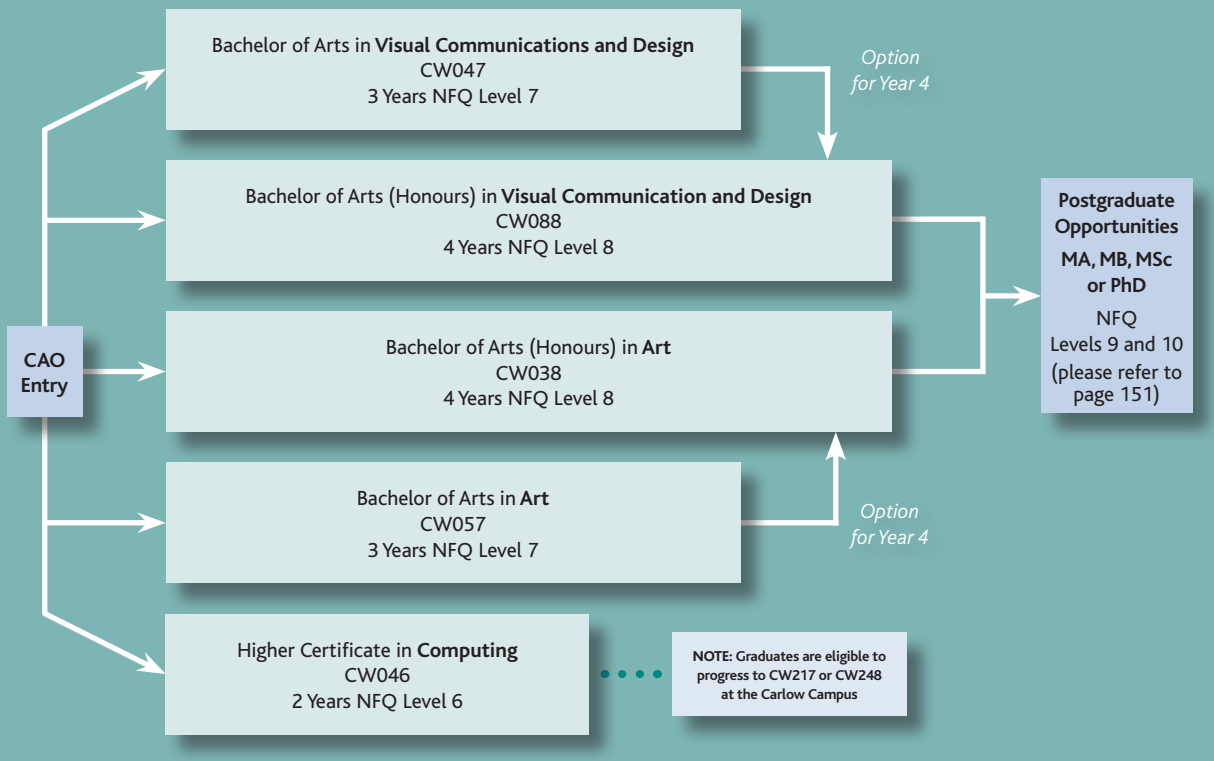


Wexford Campus

T: 053 9185800

Course Progression Chart




Bachelor of Arts in **Visual Communications and Design**
CW047
3 Years NFQ Level 7
Option for Year 4
Bachelor of Arts (Honours) in **Visual Communication and Design**
CW088
4 Years NFQ Level 8
Postgraduate Opportunities
MA, MB, MSc or PhD
NFQ Levels 9 and 10
(please refer to page 151)
CAO Entry
Bachelor of Arts (Honours) in **Art**
CW038
4 Years NFQ Level 8
Bachelor of Arts in **Art**
CW057
3 Years NFQ Level 7
Option for Year 4
Higher Certificate in **Computing**
CW046
2 Years NFQ Level 6
NOTE: Graduates are eligible to progress to CW217 or CW248 at the Carlow Campus

WEXFORD CAMPUS
INSTITUTE OF TECHNOLOGY CARLOW

Institute of Technology Carlow has offered courses in its Wexford Campus since 1995. Degree courses in Business, Computing, Design, Agriculture and Humanities are taught at the campus at Summerhill Road, Wexford while the Art courses are located in the Wexford Campus Faculty of Art and Design at Hill Street, Wexford.

Institute of Technology Carlow Wexford Campus offers an extensive range of award qualifications from Level 6 through to Postgraduate Level 9 on the national Framework of Qualifications (NFQ). Full-time Honours Degree courses are offered in: Business, Digital Marketing, Art, Applied Social Studies, Early Childhood Education and Care, Visual Communications and Design and Sustainable Farm Management and Agribusiness.

Ordinary Degree courses are offered in Applied Social Studies, Art, Business, Sustainable Farm Management, Agribusiness and Digital Marketing. Higher Certificates are offered in Business and Computing

Institute of Technology Carlow Wexford Campus offers a wide range of short term courses on a part-time or evening basis as part of its Lifelong Learning and Professional Development programmes. These courses straddle areas such as Business, Visual Communications, Early Childhood Education and Care and Social Studies. Institute of Technology Carlow Wexford Campus also offers part-time MBA and MB courses. A separate prospectus for these courses is available from the Wexford Campus.

Institute of Technology Carlow has made a substantial investment in the student facilities in its Wexford Campus. Modern computing and library facilities have been developed and students also have access to the software and databases on the Institute of Technology Carlow Campus. Online access to business and educational databases through the Institute of Technology Carlow library website provides students with excellent research facilities to assist them in their project and continuous assessments. This infrastructure, together with the small class sizes in Wexford create an excellent learning environment for students to reach their potential.

In addition to the physical environment there is a dedicated lecturing staff in Wexford. Lecturers are available to their students formally through our tutorial structures and informally as required. Many of the lecturers are also involved with our student clubs and societies and our sports teams. Ongoing course developments and infrastructure improvements will add to the educational opportunities provided by Wexford Campus in the future.

Wexford Campus (Institute of Technology Carlow)
Summerhill Road, Wexford

Dr Karen Hennessy
Head of Campus

Dr Janette Davies
Deputy Head of Campus (Programmes)

Ms Angela Rossiter and
Ms Rebecca O'Brien
Campus Administrators

Tel: 053-9185800 Fax: 053-9185801
www.wexfordcampus.ie

Wexford Town

The energetic town of Wexford is located in the heart of the sunny South East and has a population of approximately 20,000. There is a great sense of community in the town and a warm welcome awaits all students who attend the Institute of Technology Carlow Wexford Campus.

There is a diverse range of leisure and entertainment activities in Wexford to suit all tastes and interests. Wexford boasts many historical attractions such as The Heritage Park and Johnstown Castle to name but a few. Water sport pastimes are organised at the beautiful Curracloe Beach all year round and the famous Wexford Opera Festival also attracts numerous visitors each year. Retailers of all types, from popular high street branches to exceptional boutiques, can be found on the narrow streets of Wexford town. There is also an abundance of restaurants, cafés and bars to choose from.

Institute of Technology Carlow Wexford Campus lies in close proximity to the town and is only a couple of minutes walk from Main Street. The Campus allows for excellent interaction between students from all disciplines, lecturers and college personnel. With a choice of quality accommodation, an excellent transport system and an impressive nightlife Wexford town has it all within a warm, friendly atmosphere that greatly adds to the student life experience.

CW028

NFQ LEVEL 8

Bachelor of Arts (Honours)

Early Childhood Education and Care

PLACES	POINTS	DURATION	EXIT AWARD
30	265	3 YEARS	N/A

PROGRAMME DIRECTOR

John McGarrigle
BA (Hons), MSc, MA (TL)
E: john.mcgarrigle@itcarlow.ie

What is Early Childhood Education and Care?

Children learn and grow when provided experiences that enable them to feel confident about their place in the world. Students of this course become professional Early Years Educators and develop their knowledge, skills and experience in a range of areas such as children's play, creative studies, child development, pedagogy, special needs and social policy.

A supervised work placement in a variety of settings enables students to integrate theory into practice. As supervised work placement brings students into direct contact with children and/or vulnerable adults, offers for the course are conditional and may be withdrawn subject to Garda vetting.

The design and content of the course enables students to become professional, reflective practitioners with an integrated approach to early childhood education and care.

What will I be able to do when I finish the course?

Graduates have the skills to manage and operate at the level of experienced practitioner according to the Model Framework for Education, Training and Professional Development for the Early Childhood Education and Care sector. Graduates are able to work with, or on behalf of young people in a range of settings as managers, directors, coordinators or leaders in a range of settings such as: pre-schools, crèches, special needs services, family support centres and community services in the statutory, voluntary, community, private sectors, government agencies and public agencies.

Graduates may go on to postgraduate study in primary education or Research Masters in Early Childhood Education and Care or Taught Masters in Child, Youth and Family Studies at Institute of Technology Carlow.

What exemptions are available from professional bodies?

Graduates are eligible to join the national Children Nurseries Association or the Irish Preschool Playgroup Association.

What subjects will I study?

YEAR 1

Mandatory Subjects

- Introduction to Psychology
- Introduction to Sociology w Social Policy
- Early Childhood Education
- Communication and Study Skills
- Caring for the Developing Child
- Professional Development for Early Childhood Education and Care
- Visual Arts in Early Childhood

YEAR 2

Mandatory Subjects

- Pedagogy and Curriculum
- The Psychology of Children and Childhood
- Children's Literature in Early Childhood
- Outdoor and After-school Education and Care
- Philosophy in Early Childhood Education
- Child Health and Well Being
- Supervised Professional Practice 1
- Literacy, numeracy, Science and Technology in Early Childhood Education and Care

YEAR 3

Mandatory Subjects

- Children with Additional Needs
- Legal Issues for Child Education and Care
- Ethics, Equality and Early Childhood Practice
- Early Childhood Research Project
- Leading Contemporary and Quality Practice
- Working with Families and Communities
- Supervised Professional Practice 2

Special features of this course

- Innovative practice-led course where students learn how to combine theory and practice and to develop as reflective practitioners.
- Active learning environment achieved through lectures, seminars, workshops, enquiry-based learning with children's learning materials.
- Supervised placements in a variety of early years settings is a key element of the course allowing students to learn from practice as well as theory.

Bachelor of Arts (Honours)

Applied Social Studies — Professional Social Care

CW068

NFQ LEVEL 8

PROGRAMME DIRECTOR

Susan Barnes
BA (Hons), MA
E: susan.barnes@itcarlow.ie

PLACES	POINTS	DURATION	EXIT AWARD
20	270	4 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Communications
Research and Study Skills
Professional Development for Social Care Practice
Creative Skills
Introduction to Psychology
Introduction to Social Care
Introduction to Sociology and Social Policy
Health, Well-being and Nutrition

YEAR 2

Mandatory Subjects

Ageing Studies
Disability Studies
Protection of Children and Vulnerable Persons
Legal Studies 1
Supervised Professional Practice 1
Sociology 2
Cognitive and Social Psychology

YEAR 3

Mandatory Subjects

Management for Social Care
Legal Studies 2
Supervised Professional Practice 2
Social Research Studies
Abnormal Psychology
Creative Skills 2
Alternative to Home Care
Children and Families

YEAR 4

Mandatory Subjects

Global Perspectives on Sociology
Leadership and Change Management
Ethics, Social Justice and Human Rights
Contemporary Issues in Social Care
Psychology - Adjustment and Positive Change
Social Research Dissertation

What is Applied Social Studies?

This course prepares graduates to work in social care providing support and assistance to vulnerable people in the community and in residential services. For example, social care workers gain employment working with groups such as children and young people at risk and/or who have been neglected and abused, people with disabilities and frail older people. The course engages a range of teaching strategies include a 12-week placement in a social care agency in both 2nd and 3rd year (400 hours each year). As these placements involve working with vulnerable people, offers for the course may be withdrawn if applicants do not successfully complete the Garda vetting process.

What will I be able to do when I finish the course?

Graduates are able to take up front line positions in a diverse range of social care services and will act as a base for project coordination, supervision and management. These include: residential services (adolescent, vulnerable older people), community development, family support, community child-care and community disability services.

What follow-on study opportunities are available?

Graduates can complete postgraduate studies to Masters or Doctoral level within the social care or associated social science field and may progress onto the Masters in Child, Youth and Family Studies at Institute of Technology Carlow.

Special features of this course

- A variety of teaching, learning and assessment methodologies are used, such as discussions, group projects, placements, facilitations, poster displays, problem-based learning and case studies.
- Practice placements (300 hours per placement) in Years 2 and 3 allow for the development of skills associated with professional client relationships.
- Research projects are used to develop student's knowledge of the cross-functional nature of social care services.
- Graduates are employed in a wide range of agencies providing social care services to clients with a variety of social care needs, including the HSE and the TUSLA Child and Family Agency.
- Exit award – Bachelor of Arts Applied Social Studies – Professional Social Care after Year 3 and Higher Certificate in Applied Social Studies – Professional Social Care after Year 2.

CW017

NFQ LEVEL 7

Bachelor of Arts

Applied Social Studies – Professional Social Care

PLACES	POINTS	DURATION	EXIT AWARD
20	160	3 YEARS	YES

PROGRAMME DIRECTOR

Susan Barnes
BA (Hons), MA
E: susan.barnes@itcarlow.ie

What is applied social studies?

The professional social care sector is a hugely important service working to provide support, advocacy and guidance for the most vulnerable in society. Typically, a social care worker is employed in areas such as working with people with disabilities, young people at risk, children who have been neglected or abused and elderly people, in settings as diverse as residential care, day care and community-based services.

This three-year course provides graduates with the skills and expertise to work effectively within the interdisciplinary environment of the social care service provision. The course was designed with the cooperation of the HSE and voluntary agencies and includes a variety of teaching, learning and assessment methodologies such as discussions, group projects, placements, facilitations, poster displays, problem-based learning and case studies. A key part of this course is a mandatory professional 12-week placement in Years 2 and 3.

As the course includes work placement that will bring students into direct contact with children and/or vulnerable adults, offers for the course are conditional and may be withdrawn if applicants do not successfully complete the Garda vetting process.

What will I be able to do when I finish the course?

Graduates will be able to take up front-line positions in a diverse range of social care services and will act as a base for project coordination, supervision and management. These include: residential services (adolescent, vulnerable older people), community development, family support, community child-care and community disability services.

What follow-on study opportunities are available?

Graduates may be eligible to progress to Year 4 of the BA (Honours) in Applied Social Studies - Professional Social Care (CW068).

What subjects will I study?

YEAR 1

Mandatory Subjects

- Introduction to Psychology
- Introduction to Sociology and Social Policy
- Introduction to Social Care
- Creative Skills
- Communications, Research and Study Skills
- Professional Development for Social Care Practice
- Health, wellbeing and Nutrition

YEAR 2

Mandatory Subjects

- Ageing Studies
- Cognitive and Social Psychology
- Disability Studies
- Legal Studies 1
- Protection of Children and Vulnerable Persons
- Sociology 2
- Supervised Professional Practice 1

YEAR 3

Mandatory Subjects

- Abnormal Psychology
- Alternatives to Homecare
- Children and Families
- Creative Skills 2
- Legal Studies 2
- Management for Social Care
- Social Research Studies
- Supervised Professional Practice 2

Special features of this course

- A variety of teaching, learning and assessment methodologies are used, such as discussions, group projects, placements, facilitations, poster displays, problem-based learning and case studies.
- Students go on two supervised professional practice placements in a wide variety of social care settings in Year 2 and 3 where they apply theory to practice and gain skills to prepare them for the workplace. A dedicated Professional Practice Coordinator guides and supports students through this process.
- Exit award –Higher Certificate in Applied Social Studies – Professional Social Care after Year 2.

Bachelor of Business (Honours)

Common Entry (CEY), **Business** (BUS)
or **Digital Marketing** (DMK)

CW018

NFQ LEVEL 8

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Dr Tomas Dwyer BBS (Hons), MBS, DEd **E**: tomas.dwyer@itcarlow.ie	**20**	**255**	**4 YEARS**	**YES**

CW018	**Business – When you apply for Business you must select ONE of the following options: CEY, BUS or DMK**		
	CEY Common Entry	**BUS** Business	**DMK** Digital Marketing
	Applicants who select a specific degree option (i.e. CW018 BUS or DMK) are guaranteed a place on that course subject to meeting the entry requirements and points. Applicants who are undecided on choices should choose CW018 CEY (Common Entry). All Applicants may change their selection up to the end of year 2 and must confirm their specialism at that point.		

What subjects will I study?

YEAR 1

Mandatory Subjects

Communications and Customer Service
Information Technology
Financial Accounting 1
Economics 1
Management
Business Mathematics

YEAR 2

Mandatory Subjects

IT and Digital Media
Management Accounting
Business Law
Marketing

Plus Two Electives

Tourism
Economics 2
Financial Accounting 2 (including Computerised Accounts)

Application procedure

CAO applicants who choose CW018 will be required to choose a course option when completing their CAO application. Course options include:

- Common Entry (CEY)
- Business (BUS)
- Digital Marketing (DMK).

Applicants should choose CEY (Common Entry) if they are undecided on their speciality and can decide on their degree option at the end of Year 2. Applicants that select a specific degree option at CAO stage are guaranteed a place on that course, subject to meeting the entry requirements and points. All applicants may change their selection up to the end of Year 2 and must confirm specialism at that time.

What is this course about?

Business touches on almost every aspect of modern human society and careers in business are diverse and often highly paid. This course equips students with a broad skill base ensuring graduates have a wide range of career options. The first two years of the course provide students with a foundation in business and subjects are common for all students. After two years, students separate in to their chosen specialist area. The following two pages detail the specialist areas of Business (BUS) and Digital Marketing (DMK).

CW018

NFQ LEVEL 8

Bachelor of Business (Honours)

Common Entry (CEY), **Business** (BUS)
or **Digital Marketing** (DMK)

Bachelor of Business (Honours)
Business (BUS)

PROGRAMME DIRECTOR

Dr Tomas Dwyer
BBS (Hons), MBS, DEd
E: tomas.dwyer@itcarlow.ie

What is Business?

Business touches on almost every aspect of modern human society and careers in business are diverse and often highly paid. This course equips students with a broad skill-base ensuring graduates will have a wide range of career options. The course provides graduates with a broad based Bachelor of Business (Honours) structured around management, finance and economics, business technology and marketing. There is a strong emphasis on the application of knowledge and skills through the course modules, the Professional Work Placement module and the Applied Research Project.

What will I be able to do when I finish the course?

Graduates are qualified to join a management team in a wide variety of business settings such as industry, banking, public service and financial services. Graduates will also have acquired the skills necessary to start up a business. Graduates may also progress to the Masters in Business at Institute of Technology Carlow or to a Research or Taught Masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 3 **(BUS)**

Mandatory Subjects

Marketing Management
eBusiness
Commercial Law
HRM
Business Research Methods
Professional Placement
Financial Management

Plus One Elective

Entrepreneurship
Fund Accounting
Global Economics

YEAR 4 **(BUS)**

Mandatory Subjects

Strategic Management
iBusiness
Services Marketing
Operations Management
Interdisciplinary Project
Corporate Finance

Plus One Elective

International Business
Advanced Fund Accounting
European Economics

Special features of this course

- Students of either option undertake a 12 – 20 week work placement in Year 3. This placement gives students valuable experience in best practice approaches, improving their employability.
- Exit award: Higher Certificate in Business (NFQ Level 6) after Year 2; Bachelor of Business, Business (NFQ Level 7) after Year 3.
- The course aids students in making the transition to higher education via an induction programme and modules in study skills, library resources and academic writing.

CW018

NFQ LEVEL 8

PROGRAMME DIRECTOR

Dr Tomas Dwyer
BBS (Hons), MBS, DEd
E: tomas.dwyer@itcarlow.ie

Bachelor of Business (Honours) **Digital Marketing** (DMK)

What subjects will I study?

YEAR 3 (DMK)

Mandatory Subjects

Marketing Management
eBusiness
Commercial Law
HRM
Business Research Methods
Professional Digital Marketing - Work Placement
Entrepreneurship
Digital Media Design

YEAR 4 (DMK)

Mandatory Subjects

Strategic Management
iBusiness
Services Marketing
Operations Management
Web Design Methods
Digital Marketing Project

Plus Two Electives

International Business
Financial Management

What is Digital Marketing?

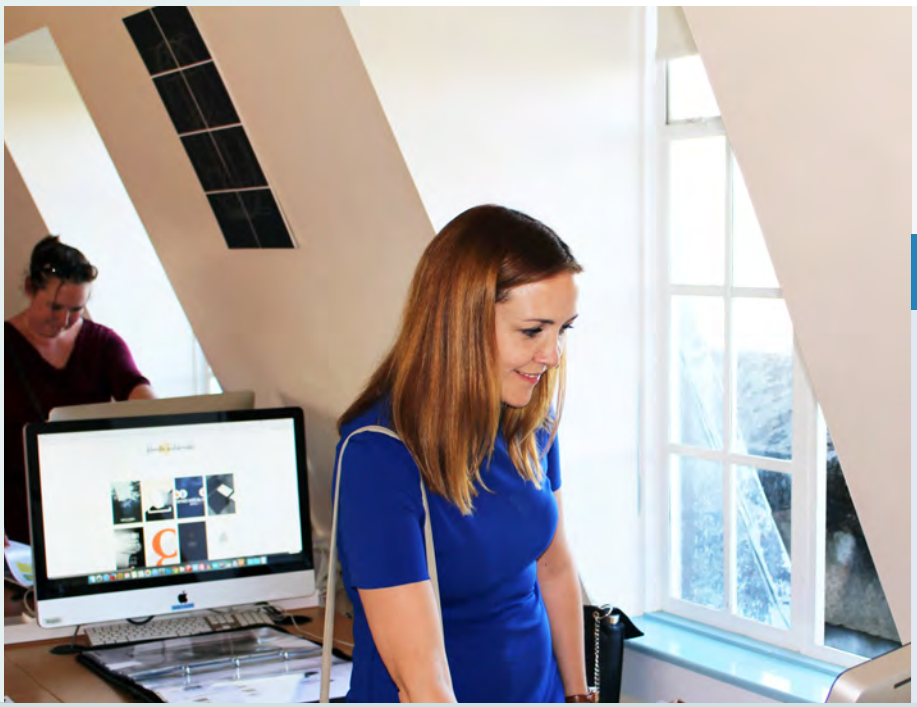
Digital marketing is an increasingly important specialism effecting most areas of business including sales, marketing, PR, publishing and customer engagement. The first two years of this course provide students with a foundation in business. After two years, students enter the Digital Marketing stream.

This digital stream is for graduates who are interested in a career in business with specialist skills in digital marketing. The course provides graduates with a business degree as well as specialist technical skills and knowledge including e-business, digital media design and marketing management.

What will I be able to do when I finish the course?

Graduates are qualified to join a management team in a wide variety of business settings such as: industry, banking, public service and financial services. Furthermore, graduates will have acquired the necessary skills in digital business and online marketing techniques to offer value to employers immediately.

Graduates of the may also progress to the Masters in Business at Institute of Technology Carlow or to a Research or Taught Masters at Institute of Technology Carlow or other institutions.



Special features of this course

- Students of either option undertake a 12 – 20 week work placement in Year 3. This placement gives students valuable experience in best practice approaches, improving their employability.
- Exit award: Higher Certificate in Business (NFQ Level 6) after Year 2; Bachelor of Business, Digital Marketing (NFQ Level 7) after Year 3.
- The course aids students in making the transition to higher education via an induction programme and modules in study skills, library resources and academic writing.

CW037

NFQ LEVEL 7

Bachelor of Business

Business OR Digital Marketing

PLACES	POINTS	DURATION	EXIT AWARD
15	180	3 YEARS	YES

PROGRAMME DIRECTOR
Dr Tomas Dwyer
BBS (Hons), MBS, DEd
E: tomas.dwyer@itcarlow.ie

What is Business and Digital Marketing?

This course provides an academic qualification for anyone interested in a career in business or digital marketing.

The first two years cover foundational business subjects including: Business Mathematics, Marketing, IT and Digital Media, Communications and Customer Service, Financial Accounting, Information Technology, Management and Economics.

In Year 3, students opt to specialise in a business or a digital marketing stream. The Business stream provides a broad business focus in the areas of management, finance, economics, business technology and marketing. The Digital Marketing stream develops specialist technical skills and knowledge including e-business, digital media design and marketing management. A key feature of this Bachelor of Business degree is a 12-week work placement which takes place in Year 3.

What will I be able to do when I finish the course?

Graduates of the business stream are qualified for a wide range of roles including management, marketing and financial services, administration, retail management and business computing. Graduates of the digital marketing stream will have the necessary knowledge and skills to work in businesses with the added value of specialised digital marketing skills and knowledge.

Graduates are eligible to enter Year 4 of the Bachelor of Business (Honours) with options in Business or Digital Marketing.

What subjects will I study?

YEAR 1

Mandatory Subjects

Business Mathematics
Communications and Customer Service
Financial Accounting 1
Information Technology
Management
Economics 1

YEAR 2

Mandatory Subjects

Management Accounting
IT and Digital Media
Business Law
Marketing

Plus Two Electives

- Tourism
- Economics 2
- Financial Accounting 2 (including Computerised Accounts)

YEAR 3

Common Core Subjects

Marketing Management
eBusiness
Commercial Law
HRM
Business Research Methods
Professional Placement

Business Stream

Financial Management

Plus One Elective

- Entrepreneurship
- Fund Accounting
- Global Economics

Digital Marketing Stream

Digital Media Design
Entrepreneurship

Special features of this course

- 12-week work placement in Year 3, enabling students to apply the skills learned in a way that is industry relevant.
- Exit award – Higher Certificate in Business (NFQ Level 6) after Year 2.
- Flexibility enabling students to choose a speciality after Year 2.
- Continuous assessment is a feature of this course.
- The course aids students in making the transition to higher education via an induction programme and modules in study skills, library resources and academic writing. This is further supported through Blackboard, an online learning environment, where students are offered modules which they can undertake at their own pace e.g. Learning in Higher Education.

Higher Certificate

Business

CW006

NFQ LEVEL 6

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Ailish O'Brien BComm (Hons), HDE, MBA **E**: ailish.obrien@itcarlow.ie	**10**	**120**	**2 YEARS**	**N/A**

What subjects will I study?

YEAR 1

Mandatory Subjects

Financial Accounting
Business Mathematics
Information Technology
Management
Economics 1
Communications and Customer Service

YEAR 2

Mandatory Subjects

Management Accounting
Marketing
IT and Digital Media
Business Law

Plus Two Electives

Tourism
Economics 2
Financial Accounting 2 (including Computerised Accounting)

What is Business?

This course provides an academic qualification for anyone interested in a career in business and management. The Higher Certificate in Business equips students with a broad skill-base, ensuring graduates will have a wide range of career options. The course provides students with a basic business foundation covering core subjects such as: Financial Accounting, Economics, Management, Marketing and Law.

What will I be able to do when I finish the course?

At certificate level, graduates are qualified to work as: trainee managers, personal assistants, accounts assistants, customer services assistants, bank officials, sales representatives and other similar roles.

Graduates of the certificate course are eligible to progress to Year 3 of the Bachelor of Business (Level 7 or Level 8) courses (CW018/CW037) and can choose a speciality in Business or Digital Marketing at Institute of Technology Carlow Wexford campus. Graduates will be eligible to progress to Year 3 of the Bachelor of Business (Honours) course (CW908) at the Carlow campus and can choose a speciality from one of the following: Marketing (MKT), International Business (INT), Supply Chain Management (SCM), Accounting and Finance (FAC), Management (BMT) or Human Resource Management (HRM). Graduates can also progress to Year 2 of the Bachelor of Arts (Honours) in Accounting (CW948).

Special features of this course

- Graduates of this course have a wide selection of business related Level 7 and Level 8 courses to choose from at either the Wexford or Carlow campus.
- Strong emphasis on Information Technology and Digital Media.

CW088

NFQ LEVEL 8

Bachelor of Arts (Honours)

Visual Communications and Design

PLACES	POINTS	DURATION	EXIT AWARD
20	265	4 YEARS	YES

PROGRAMME DIRECTORS

Patrick Morgan
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David O'Callaghan
BDes (Hons), MA
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What is Visual Communications and Design?

Visual communications and design is a problem-solving practice that uses image, text, print and screen to communicate messages. This discipline originates from graphic design and now incorporates the traditional skills of drawing, printing, photography, typography and other graphic processes with the new digital realms of video, sound and animation.

The four-year course is designed to facilitate a transition from novice student to creative practitioner. Students are taught a variety of design and practical skills to achieve this. This highly practical course features a studio environment where students complete projects in a variety of 2D design disciplines, such as: branding, illustration, packaging, typography, advertising, layout, signage, websites, mobile devices, games, moving image video and animation.

What will I be able to do when I finish the course?

Career opportunities for graduates of Visual Communications and Design are varied and they are in constant demand, both in Ireland and internationally. Design careers exist across a wide range of industries including: graphic, web, motion pictures, computer games, interactive and multimedia industries and many more. Graduates also find careers in the broader marketing arena such as advertising, e-business and marketing.

Graduates may apply for entry for the MA in Interaction Design at Institute of Technology Carlow and other postgraduate courses.

What subjects will I study?

YEAR 1

Mandatory Subjects

Visual Studies
Digital Media Design
Photography and Video
Art and Design History
Cultural and Critical Studies

YEAR 2

Mandatory Subjects

Creative Studio
Design Print Production
Art and Design History
Web Design Methods
Marketing
Film Studies

YEAR 3

Common Core Subjects

Creative Studio
Community Based Practice
Media Systems
Marketing Management
Communications and Semiotics
Professional Design Practice

YEAR 4

Mandatory Subjects

Creative Studio
Web Design
Entrepreneurship
eBusiness

Special features of this course

- Studio-based course with skills training across all media. Students of the course will graduate with a portfolio of work in graphic design, digital media and video.
- Annual industry showcase event for final year students to exhibit work to potential employers.
- Students are encouraged to compete in a variety of national student competitions and have performed well in recent years. Students of this course have won first place at the Samsung Digital Media Awards in 2014 and 2015 and an Erasmus student also won 'Best Slogan' at the National Campus Engage competition for National Student Volunteer Awards.
- Exit awards: Higher Certificate in Visual Communications and Design (NFQ Level 6) after Year 2; Bachelor of Arts in Visual Communications and Design (NFQ Level 7) after Year 3.

Bachelor of Arts

Visual Communications and Design

CW047

NFQ LEVEL 7

PROGRAMME DIRECTORS

Patrick Morgan
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David O'Callaghan
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PLACES	POINTS	DURATION	EXIT AWARD
20	205	3 YEARS	YES

What subjects will I study?

YEAR 1

Mandatory Subjects

Visual Studies
Digital Media Design
Photography and Video
Art and Design History
Cultural and Critical Studies

YEAR 2

Mandatory Subjects

Creative Studio
Design Print Production
Art and Design History
Web Design Methods
Marketing
Film Studies

YEAR 3

Common Core Subjects

Creative Studio
Community Based Practice
Media Systems
Marketing Management
Communications and Semiotics
Professional Design Practice

What is Visual Communications and Design?

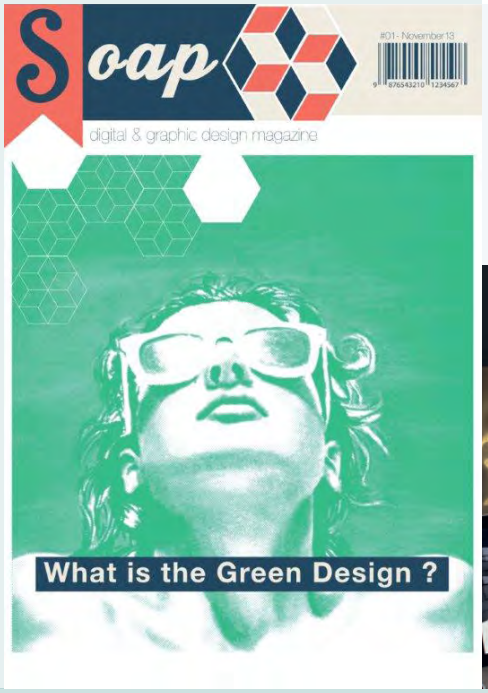
The three-year course is designed to facilitate a transition from novice student to creative practitioner. Students are taught a variety of design and practical skills to achieve this. This highly practical course features a studio environment where student's complete projects in a variety of 2D design disciplines, such as: branding, illustration, packaging, typography, advertising, layout, signage, websites, mobile devices, games, moving image video and animation.

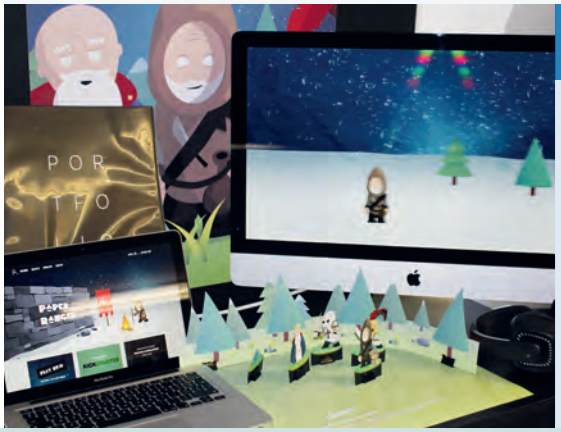
Visual communication and design is a problem-solving practice that uses image, text, print and screen to communicate messages. This discipline originates from graphic design and now incorporates the traditional skills of drawing, printing, photography, typography and other graphic processes with the new digital realms of video, web and animation.

What will I be able to do when I finish the course?

Career opportunities for graduates of Visual Communications and Design are varied and they are in constant demand both in Ireland and internationally. Design careers exist across a wide range of industries including: graphic, web, motion pictures, computer games, interactive and multimedia industries and many more. Graduates also find careers in the broader marketing arena such as advertising, e-business and marketing.

Graduates may apply for entry to Year 4 of the Bachelor of Arts (Honours) Visual Communications and Design.





Special features of this course

- Studio-based course with skills training across all media.
- Students will be equipped with an industry level portfolio, covering a range of visual design avenues, opening a wide range of job opportunities.
- Annual industry showcase event for final year students to exhibit work to potential employers.
- Exit awards: Higher Certificate in Visual Communications and Design (NFQ Level 6) after Year 2.

CW038

NFQ LEVEL 8

Bachelor of Arts (Honours)
Art

PLACES	POINTS	DURATION	EXIT AWARD	PROGRAMME DIRECTOR
10	* see page 181	4 YEARS	YES	**Oliver Comerford** BA (Hons), MA **E**: oliver.comerford@itcarlow.ie

What is Art?

Students on this dynamic course learn creative skills and knowledge, aesthetic awareness and professional practices in contemporary visual art. Painting, sculpture, digital media, photography and video are covered as well as art history, film studies and cultural studies. Students learn by actively working on creative projects in a studio context, in IT labs and traditional lectures.

The practical skills gained include professional methods of art making, creative risk-taking and experimentation, seeking and staging exhibition opportunities, community arts, effective communication and presentation skills and a broad knowledge of the contemporary arts landscape in Ireland and Europe. The course is highly student-centred and provides a forum for exchanging diverse ideas and opinions through group crit, field trips, and a visiting artist programme.

What will I be able to do when I finish the course?

The course equips students with the confidence, experience and skills needed to operate as a professional in the art world, as an artist or in a career in the broader arts and creative industries. A core teaching objective is to enable students to become self-confident in the creative language of visual art through encouraging independent learning, self-assessment, self-reflection and academic writing and research skills. Graduates may pursue postgraduate studies at institutions in Ireland or abroad or related disciplines, such as film studies or digital media. Graduates can also apply to a Masters in Art and Design Education upon completion of the BA (Honours) in Art to become art teachers.

What subjects will I study?

YEAR 1

Mandatory Subjects

Visual Studies
Digital Media Design
Photography and Video
Art and Design History
Design
Cultural and Critical Studies

YEAR 2

Mandatory Subjects

Professional Practice
Web Design Methods
Art and Design History
Film Studies

Plus One Elective

Painting
Sculpture

YEAR 3

Mandatory Subjects

Professional Practice
Media Arts
Art History
Community Based Practice

Plus One Elective

Painting
Sculpture

YEAR 4

Mandatory Subjects

Thesis

Plus One Elective

Painting
Sculpture

Special features of this course

- A wide variety of studio disciplines including: painting; sculpture; digital media and photography.
- Students can choose to specialise in either painting or sculpture in Year 3 and 4.
- Final year course work is presented in the form of a degree show.
- Annual public exhibitions in the South East are held at recognised art galleries and site specific locations such as the Wexford Arts Centre.
- Students have the opportunity to take international field trips in Years 1 and 2.
- Guest lectures from Irish and international contemporary artists.
- Many of the art lecturers are well-known artists and students benefit greatly from working closely with artists who are active in research, art and design, writing, curating and exhibiting.
- Exit awards: Bachelor of Arts in Art (NFQ Level 7) after Year 3.

Bachelor of Arts
Art

CW057

NFQ LEVEL 7

PROGRAMME DIRECTOR
Oliver Comerford
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E: oliver.comerford@itcarlow.ie

PLACES
15

POINTS
*
see page 181

DURATION
3 YEARS

EXIT AWARD
N/A

What subjects will I study?

YEAR 1

Mandatory Subjects

Visual Studies
Digital Media Design
Photography and Video
Art and Design History
Cultural and Critical Studies

YEAR 2

Mandatory Subjects

Professional Practice
Web Design Methods
Art and Design History
Film Studies

Plus One Elective

Painting
Sculpture

YEAR 3

Common Core Subjects

Professional Practice
Media Arts
Art History
Community Based Practice

Plus One Elective

Painting
Sculpture

What is Art?

Art is a diverse range of activities usually involving imaginative or technical skill and includes the production of works of art, the criticism of art, the study of the history of art, and the aesthetic dissemination of art.

This dynamic course is unique to the Wexford Campus. Students are provided with the opportunity to gain creative skills, creative knowledge, aesthetic awareness and professional experiences in contemporary visual art. The first year is shared with the Bachelor of Arts in Visual Communications degree. The course focuses on learning by doing with students actively working on creative projects in a studio context, as well as in IT labs and traditional lectures. This Bachelor of Arts Degree is highly student-centred and provides a forum for exchanging diverse ideas and opinions through group critique, field trips and a visiting artist programme.

What will I be able to do when I finish the course?

Graduates are able to embark on a career as a professional artist, as an artist's assistant or as a studio manager. Graduates will also be qualified to work in a number of related fields, such as: film, photography, theatre, information technology, art handling, exhibition installation, community arts and arts administration. Other career options such as art critic or art writer may also be pursued. Graduates may progress to Year 4 of the Bachelor of Arts (Honours) in Art (CW038). Other postgraduate study opportunities are also open to graduates in related disciplines such as film studies or digital media.

Special features of this course

- The course features a wide variety of studio disciplines including: painting; sculpture; digital media and photography.
- Students can choose to specialise in either painting or sculpture in Year 3.
- Final year course work is presented in the form of a degree show.
- Annual public exhibitions in the South East are held at recognised art galleries and site specific locations such as the Wexford Arts Centre.
- Students have the opportunity to take international field trips in Years 1 and 2.
- Guest lectures from Irish and international contemporary artists.
- Many of the art lecturers are well-known artists and students benefit greatly from working closely with artists who are active in research, art and design, writing, curating and exhibiting.

CW078

NFQ LEVEL 8

Bachelor of Science (Honours)

Sustainable Farm Management and Agribusiness

PLACES	POINTS	DURATION	EXIT AWARD
20	320	3 YEARS	YES

PROGRAMME DIRECTOR
Dr Stephen Whelan
BAgrSc (Hons), PhD
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What is Sustainable Farm Management?

Agribusiness is one of Ireland's most important indigenous industries and plays a vital role in Ireland's economy. As the sector continues to evolve, the sustainability of farm business will require a dynamic workforce to be at the heart of the management of the business. This workforce will deploy a broad range of skills that can balance the biological forces of nature with the economic forces of the international market place to ensure the sustainable supply of food and fuel for a growing population.

This honours degree course will equip students with both the practical and academic skills required to own or manage modern day farms of all sizes. Modules include: Farm Buildings and Regulations, Farm Mechanisation and Regulations, Animal and Plant Biology, Agricultural Sustainability, Soil/Plant Interactions, Nutrition, Breeding, Crop Protection, Farm Business Management and IT and Research Skills.

The course includes multiple site visits to farms and organic food producers to demonstrate best practice techniques and enhance practical skill development.

What will I be able to do when I finish the course?

The course equips students with both practical and academic skills which they can apply in the agricultural industry, from managing a farm to managing customers and clients in the agribusiness.

The modules offered give students an understanding of the science that underpins agricultural systems, the legislative environment in which agriculture operates and skills needed to capitalise on both to run a successful business.

Potential employment areas include:

- Private or State Farm Advisory services
- Agribusiness Graduate Programmes
- Farm Management.

There is also the opportunity of further studies in a range of taught or research post graduate degrees.

What subjects will I study?

YEAR 1

Mandatory Subjects

Animal and Plant Biology
Physical and Chemical Sciences for Agriculture
Crop Production, Protection and Weed Science
Basic Mathematics
Farm Business Management
Academic and Personal Skills Development
ICT in Agriculture 1

YEAR 2

Mandatory Subjects

Soil/Plant Interactions
Agricultural Sustainability
Animal Nutrition
Genetics and Breeding
ICT in Agriculture 2
Agricultural Marketing 1
Agricultural Economics 1
Farm Financial Accounting

YEAR 3

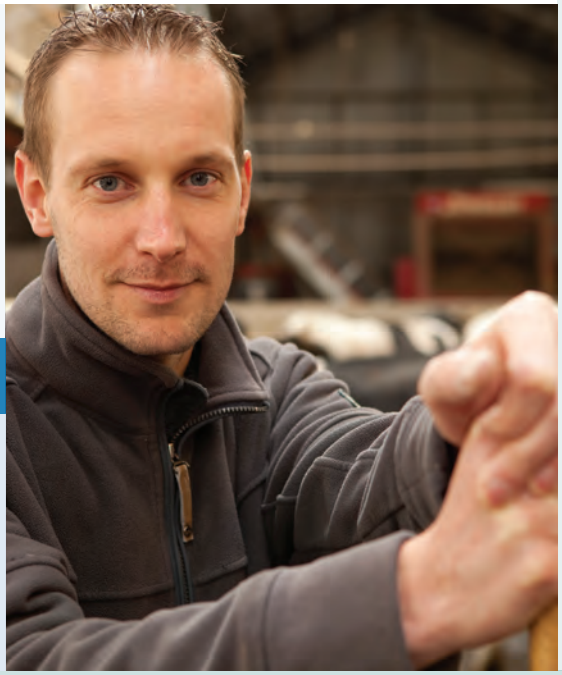
Mandatory Subjects

Professional Work Experience
Farm Buildings and Regulations
Farm Mechanisation and Regulations
Animal Production and Product Quality
Research Skills
Agricultural Marketing 2
Agricultural Economics 2
Farm Business Law

YEAR 4

Mandatory Subjects

Environmentally Sustainable Farm Management
Advanced Crops
Farm Systems
Rural Entrepreneurship
Agribusiness Strategy
Dissertation



Special features of this course

- Multiple site visits to farms and agribusiness in the South East.
- Unique blend of applied business and science based modules.
- Graduates qualify for Revenue Stamp Duty exemption.
- 24-weeks Professional Work Experience in Year 3.

Bachelor of Science

Sustainable Farm Management and Agribusiness

CW027

NFQ LEVEL 7

PROGRAMME DIRECTOR	PLACES	POINTS	DURATION	EXIT AWARD
Dr Stephen Whelan BAgrSc (Hons), PhD **E**: stephen.whelan@itcarlow.ie	**20**	**285**	**3 YEARS**	**YES**

What subjects will I study?

YEAR 1

Mandatory Subjects

- Animal and Plant Biology
- Physical and Chemical Sciences for Agriculture
- Crop Production, Protection and Weed Science
- Basic Mathematics
- Farm Business Management
- Academic and Personal Skills Development
- ICT in Agriculture 1

YEAR 2

Mandatory Subjects

- Soil/Plant Interactions
- Agricultural Sustainability
- Animal Nutrition
- Genetics and Breeding
- ICT in Agriculture 2
- Agricultural Marketing 1
- Agricultural Economics 1
- Farm Financial Accounting

YEAR 3

Mandatory Subjects

- Professional Work Experience
- Farm Buildings and Regulations
- Farm Mechanisation and Regulations
- Animal Production and Product Quality
- Research Skills
- Agricultural Marketing 2
- Agricultural Economics 2
- Farm Business Law

What is Sustainable Farm Management?

This degree course will equip students with both the practical and academic skills required to own or manage modern day farms of all sizes.

Agribusiness is one of Ireland's most important indigenous industries and plays a vital role in Ireland's economy. This sector has evolved hugely in recent years and farm owners and managers need a diverse range of both old and new skills to survive and thrive in this dynamic sector. Skill sets required include: management, entrepreneurship, agricultural sustainability, soil science, business law, regulations, marketing and many more.

Modules include: Farm Buildings and Regulations, Farm Mechanisation and Regulations, Animal and Plant Biology, Agricultural Sustainability, Soil/Plant Interactions, Nutrition, Breeding, Crop Protection, Farm Business Management and IT and Research Skills.

The course includes multiple site visits to farms and organic food producers to demonstrate best practice techniques and enhance practical skill development. The 24-week work placement in Year 3 enables practical application of knowledge secured on the course.

What will I be able to do when I finish the course?

This course will enhance graduates' practical skill sets in all aspects of farm management and agribusiness. Graduates will acquire the management and entrepreneurial skills required to pursue careers in farm management, agribusiness or government and state agencies in the agricultural sector.

Graduates are eligible to apply for entry to Year 4 of the Bachelor of Science (Honours) (NFQ Level 8) in Sustainable Farm Management and Agribusiness (CW078).

Special features of this course

- 24-week work placement in relevant farm or agricultural business.
- Multiple site visits to farms and organic food producers for best practice demonstration and practical skill development.
- Exit Award: Higher Certificate in Sustainable Farm Management and Agribusiness (NFQ Level 6) after Year 2.

CW046

NFQ LEVEL 6

Higher Certificate

Computing

PLACES	POINTS	DURATION	EXIT AWARD
20	165	2 YEARS	N/A

PROGRAMME DIRECTORS

Lorraine Galvin
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Micheal Gleeson
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What is Computing?

Computing is the study of how computers and computer systems work. As computing now impacts on every aspect of our lives, it is also becoming an increasingly evolved and dynamic career choice. This course has been designed to give learners a broad introduction to a range of fundamental computing subject areas. The course provides a general overview of computing in Year 1 and includes modules such as: Programming, Hardware, Operating Systems, Networking I and Mathematics. In Year 2 learners specialise in an 'Applications' option with modules in Web Programming and Databases, Secure Systems Administration and Networking II. Over the duration of the course learners also have modules in Applications and Interpersonal Skills, Business Management and a Group Project.

What will I be able to do when I finish the course?

Graduates can apply to proceed to Year 3 of the Level 7 BSc in IT Management (CW217) at Institute of Technology Carlow. Once graduates have successfully completed this, they can also apply for Year 4 of the Level 8 BSc (Honours) in IT Management (CW248). Information and Communication Technology (ICT) is a key growth sector for Ireland and the availability of highly skilled IT professionals has attracted many high profile organisations to invest in Ireland. This course provides graduates with a range of immediate employment opportunities in the IT sector. Graduates have proceed to a range of intermediate employment positions including systems administration, web development, technical support, network engineer, technical sales management roles.

What subjects will I study?

YEAR 1

Mandatory Subjects

Programming
Computer Hardware
Operating Systems
Mathematics
Networking I
Applications and Interpersonal Communications

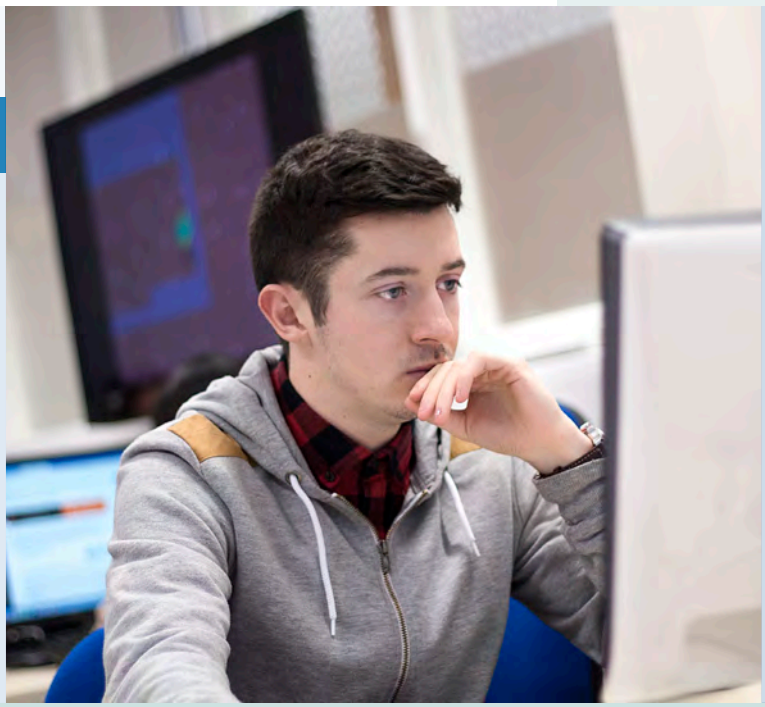
YEAR 2

Mandatory Subjects

Web Programming and Databases
Business Management
Networking II
Project Systems Management
Secure System Administration
Mathematics

Special features of this course

- A practical focus across all modules, where students will follow a 'learning by doing' approach.
- Year 1 is examined on a continuous assessment basis, with no end-of-year exams.
- Students will have access to a range of equipment including lab workstations, printers, servers, networking equipment, Arduino boards, Raspberry Pi's and tablets.
- Students will gain valuable experience of working as part of a team developing web-based business applications.
- Computing is a dynamic and evolving discipline with exciting possibilities in areas such as cloud computing, social media, sports analytics, robotics and healthcare.



Wexford Campus

Graduate Profiles

Padraig Holmes

Visual Communications and Design

What did you like about the course?

I really liked the scope of the subject – students were free to explore their favourite areas and work in the medium they enjoyed the most, branching out into web design, animation, identity design, illustration and beyond.

What are you doing now?

I now work in the Institute's Dargan Research Centre at the Carlow campus. As part of an innovative team, I work mainly in designing interfaces for apps and software, in tandem with group projects where we work diversely across product design, community projects, exhibition design and more.

How did the course prepare you for the job you are doing now?

As the course had been so diverse, I was used to working across a broad range of media and software packages. In my job, I'm the only graphics person, so I have to be able to work on multiple projects in tandem, using all the skills learned in my course at once.

Marie O'Connor

Early Childhood Education and Care

What did you like about the course?

For me it was that we were constantly being challenged, not just to learn but to really consider what it meant in terms of practice. The enthusiasm the lecturers have for their modules is contagious - helping us to think creatively about what we were doing and how both we and the sector could move forward.

What are you doing now?

I am currently working as an Early Childhood Educator and I am studying part-time with a Forest School Leadership course to continue to build on my knowledge.

How did the course prepare you for the job you are doing now?

This course has played a pivotal role in my development as an Early Childhood Educator, developing my skill set not just academically, but also practically relevant to working with children. I graduated with a passion for both early childhood and education.

Wexford Campus

Graduate Profiles

Ultan Quirke

Business

What did you like about the course?

I really liked the relatively small class sizes and the excellent teaching staff. The variety of subjects that were included in the course gave me a really wide range of skills and technical knowledge relevant to many different areas of business. When deciding the first steps of my graduate career, I had a variety of possible directions open to me.

What are you doing now?

I am a Senior Associate at PricewaterhouseCoopers (PwC). PwC are the largest professional services firm in Ireland, and are part of an international network of firms with more than 180,000 employees across 158 countries. I work in the assurance practice in our Wexford office. My work mainly consists of financial statement audits for a range of clients, both large and small, but also contains elements including financial statement preparation and providing assurance over grant applications for clients. The contract allows me to gain experience working with a range of clients and the opportunity to qualify as a chartered accountant with the Institute of Chartered Accountants in Ireland. Qualification as a Chartered Accountant, along with the experience gained with PwC has the potential to open up a range of opportunities for me to develop my career.

How did the course prepare you for the job you are doing now?

The course prepared me for my current job in a range of ways. Many of the subjects I studied provided me with technical knowledge and skills that are relevant for my job on a daily basis and for the exams that I'm sitting as I work towards qualifying as a Chartered Accountant. The IT skills that I developed during the course, especially my proficiency in Microsoft Excel, are key to my performance. The vast majority of my work is Excel-based, and this is a common requirement throughout the world of accounting and finance. The communication and inter-personal skills I acquired during my time at the Institute are hugely beneficial, as my job involves communicating with clients on a daily basis.

My time at the Wexford Campus was very special. The people I've met and the experiences I've had made it an unforgettable experience.

Caroline Dunne

Applied Social Studies – Professional Social Care

What did you like about the course?

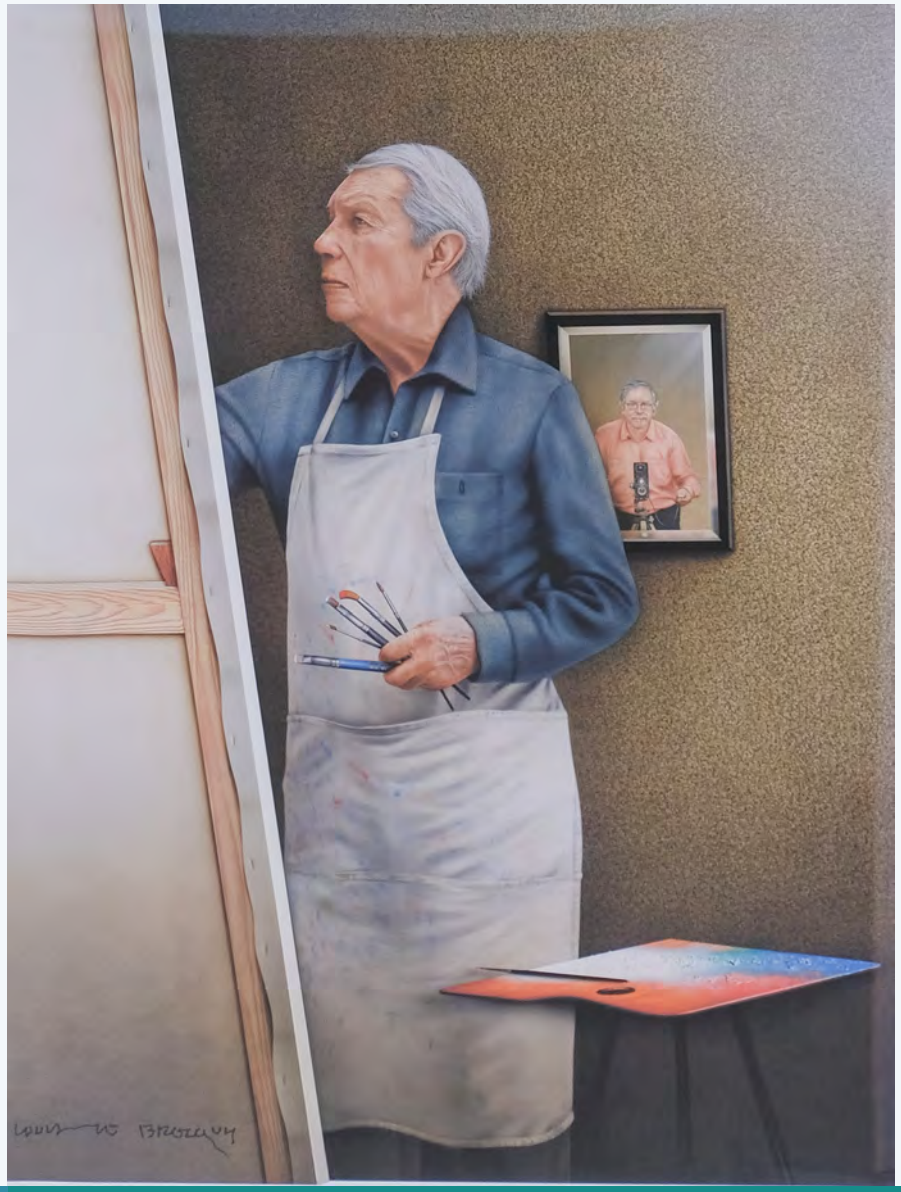
I returned to study as a mature student in 2007 and chose the Lifelong Learning (part-time) option at Wexford Campus. I was employed within the disability sector hence the BA (Honours) Applied Social Studies course provided the relevant knowledge and approaches required to progress my career. This route afforded me the opportunity to study while remaining employed within the social care area. My studies were strengthened by the skills obtained in my work while my work was underpinned by the knowledge gained from my studies. I believe that this approach provided an excellent outcome for me. I graduated in 2011 with a first class honours degree.

What are you doing now?

Having completed undergraduate studies, I felt there was more to learn and anticipated progressing my knowledge further. In 2013 I applied for, and was accepted onto the Institute of Technology Carlow's President's Fellowship Scholarship Programme. I undertook MA (Research) studies on the 'Perceptions of Formal Supervision in Social Care Services'. This study was one of the first to focus on supervision in the field of social care in the South East of Ireland and to look at the perceptions from the perspectives of managers, supervisors and supervisees. My MA (Research) was conducted at Wexford Campus with the support of supervisors Sheelagh Collier and John McGarrigle. I submitted an abstract of my study for inclusion in Social Care Ireland's 2017 conference and was delighted to be chosen to present findings of the purpose and effectiveness of supervision within a changing social care environment. I received second place in the Social Care Ireland Postgraduate Awards for my presentation which both validated the timely nature of my study and its relevance to current social care practice and endorsed my work as a researcher.

Robert Ballagh (b.1943), ***Portrait of Louis at His Easel*** (Lithograph on paper, 2006)

From the Frank X. Buckley and Michael P. Burns Collection
at the Institute of Technology Carlow.



POSTGRADUATE

HEAD OF POSTGRADUATE STUDIES

Dr Brian Jackson
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Development Office
T: 059 9175000

POSTGRADUATE OPPORTUNITIES
INSTITUTE OF TECHNOLOGY CARLOW

Institute of Technology Carlow has a range of high-quality courses that offer suitably qualified primary degree holders (NFQ Level 8) exciting opportunities to progress to higher awards (Masters and Doctoral degrees). These opportunities are by research and thesis or taught courses, with many available on a full-time or part-time basis across our three campuses in Carlow, Wicklow and Wexford.

Higher Degrees by research are normally obtained by undertaking a research project, guided by an experienced supervisor. The average duration of a research Masters degree (NFQ Level 9) is 2 years full-time study. A PhD (NFQ Level 10) should take from 3 to 4 years (full-time) to complete.

Taught courses are available at three levels: Higher Diploma (NFQ Level 8); Postgraduate Diploma - NFQ Level 9 (60 credits); and Masters - NFQ Level 9 (90 credits). Individual full-time postgraduate courses are described in the forthcoming sections. Details of part-time taught courses are available in the Lifelong Learning prospectus.

Research Masters and Doctoral Degrees

Institute of Technology Carlow offers postgraduate research supervision for both Research Masters and Doctoral Degree candidates (NFQ Levels 9 and 10). Research supervision is closely tied to the priorities and expertise of staff attached to specialist research centres at Institute of Technology Carlow. Research, Development and Innovation (RDI) is an integral part of Institute of Technology Carlow's activities and a vital aspect of its interaction with industry and other research centres, both nationally and internationally.

Postgraduate application procedure

Postgraduate applicants should refer to the *Study/Postgraduate* section of the website for more information: **www.itcarlow.ie/study/postgraduate-rd**.

Facilities

The Dargan Centre for Research and Innovation provides an integrated, high quality, physical research environment for academic staff researchers, postgraduate research students, postdoctoral researchers and the administrative and management staff associated with the development and delivery of high priority projects for research companies. The Dargan Centre represents Institute of Technology Carlow's commitment to research, development and innovation in the region through the development of collaborations with industry, other research institutions and funding organisations.

President's Research Fellowship Programme

Institute of Technology Carlow encourages academic excellence with a range of Postgraduate Research Fellowships which are offered annually to recent, appropriately qualified graduates. The Fellowship Programme attracts new researchers to a range of exciting and challenging research projects in dynamic environments under the supervision of successful and established principal investigators. All of the Research COREs (Centres of Research and Enterprise) and Research Centres that offer opportunities under the programme have demonstrated the real potential of these fellowships to contribute to research excellence through challenging and original Masters research projects supported by excellent supervision.

Institute of Technology Carlow Research Centres

Institute of Technology Carlow's strategic Centres of Research and Enterprise (COREs) are housed in the Dargan Centre. These are:

- **Business and Humanities Research Centre**
- **designCORE** – Research, design and innovation
- **engCORE**– Engineering, circuit and systems, the Intelligent Built Environment, and smart materials and mechanics
- **enviroCORE** – Innovative bio-environmental technology
- **gameCORE**– Advanced software and networks; gamification, ambient assisted living, big data and cyber security
- **healthCORE** – Connecting for wellbeing in health sciences.

INSTITUTE OF TECHNOLOGY CARLOW
CENTRES OF RESEARCH AND ENTERPRISE (CORES)

Business and Humanities Research Centre

designcore
humanising innovation

The **Business and Humanities Research Centre** is primarily focused on SME applied research and applied social studies. Research activity in the Faculty of Business and Humanities has developed considerably over the past five years. The School has developed applied research in the areas of:

- Business (with a particular focus on SMEs)
- Childhood, youth and social care, (focusing on policy and public practice)
- Teaching and learning (focusing on professional development and practice)
- Sports marketing and sports performance analysis.

Some examples of recent research undertaken include:

- Physical activity provision and support within pre-school settings in the South East of Ireland
- Evaluating the potential for collaborative approaches to working capital management to strengthen supply chain performance
- The impact of the role of the supervisor in averting and/or managing the effects of vicarious trauma among social care staff
- Representations of youth and young people in the media in Ireland.

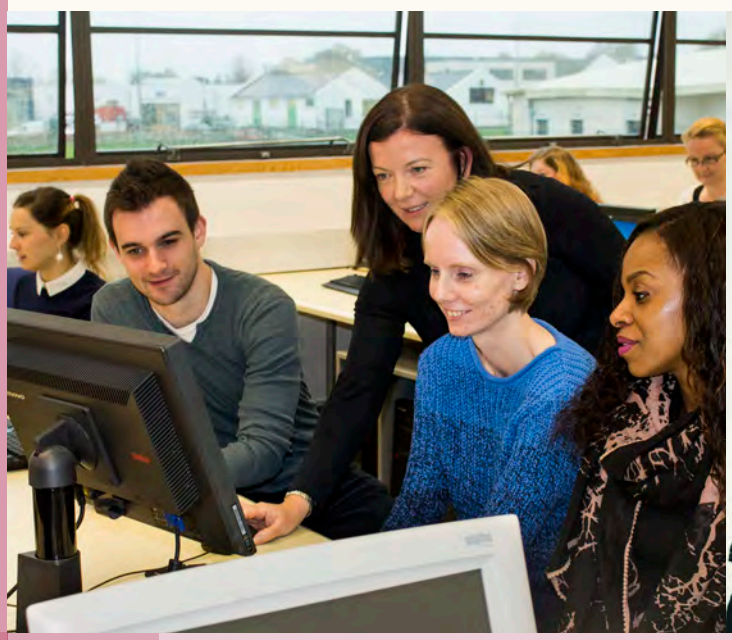
designCORE supports design innovation within the SME sector in the region. The centre has also taken a lead role in building research and collaborative capacity between design educational providers nationally.

The **designCORE** research group is attached to the Department of Humanities. The centre is at the forefront of academic design-led thinking nationally. **designCORE** initiated the Product Design Research Ireland (PDRI) network and hosted a national symposium of leading researchers from across the university and IoT sector. This set out to scope national research capacity and activity within the discipline and to build a national enabling framework for design research collaboration. Proceeding from this initiative, Institute of Technology Carlow hosted a national Irish design research conference, co-funded by ID2015-Year of Irish Design in June 2015. The next biennial event will be late 2017.

designCORE is working to broaden its research, industry and agency collaborations to achieve the highest level of critical, creative, innovative academic and commercial impact.

Current research includes:

- Culture driven user/consumer behavior
- ATM security and user behavior
- Practice oriented learning in design
- Design Methodologies and Design Management
- Design solutions and responses to climate change.



engcore
advancing technology

engCORE is the focal point for the research interests of staff attached to Institute of Technology Carlow's Faculty of Engineering. **engCORE** brings together researchers from a range of knowledge domains to create, advance, and disseminate new technologies through industry focused research. Key research themes are closely aligned to identified areas of national priority including:

- **Smart Materials and Mechanics** encompassing mechanical design, finite element analysis, 3D printing and material analysis
- **Circuits and Systems** encompassing ASIC design, embedded systems and internet of things (IoT), electric machines and instrumentation
- **The Intelligent Built Environment** encompassing soil mechanics, sustainable energy for the built environment, civil engineering and architectural design.

Current Research Projects include:

- AVOID, a collision avoidance system for ground support equipment
- Agitation and aeration of slurry waste systems
- Low cost, low power digital to analogue converters
- Additive Manufacturing technology to produce components with embedded sensing capability
- Acoustic source localisation of autonomous robotic agents
- Assistive living using brain computer interfaces
- A low-cost wireless energy performance monitoring system for small buildings
- Comparative study of the relative economics of energy production from lignocellulosic and grass biomass fuel in Ireland.

envirocore
innovative bio-environmental technology

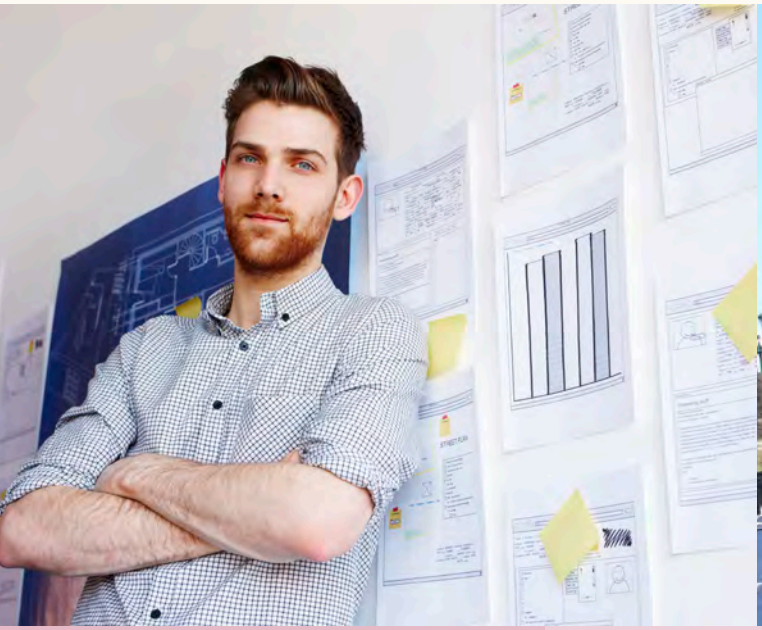
enviroCORE is host to researchers from the Department of Science and Health. The research centre is focused on the development of biological and chemical environmental technologies that offer innovative solutions to environmental problems and that support sustainable economic and social development.

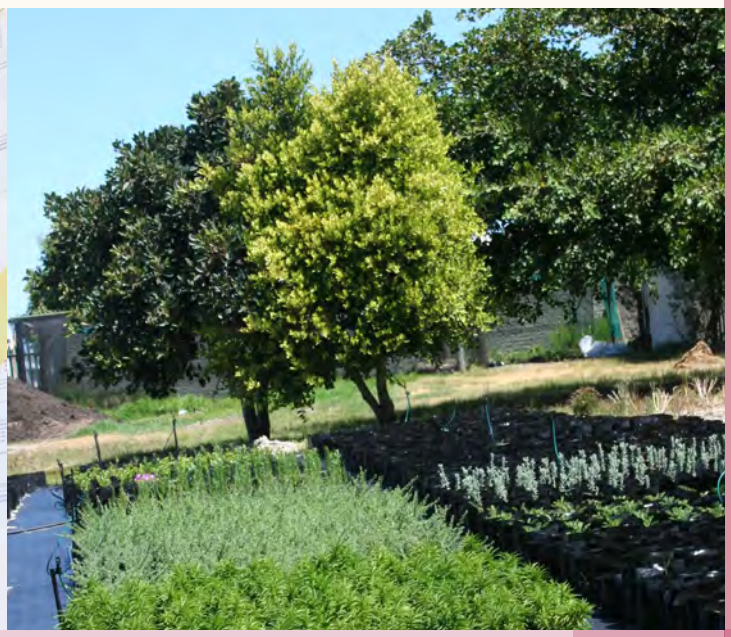
Research themes include:

- Phyto, vermi, and microbial technologies for waste treatment
- Biomass production and biotransformations
- Environmental bioindicators, biosensors and biomarkers
- Environmental modelling and risk assessment.

Some current research projects include:

- Bioremediation of Tributyltin (TBT) in Irish marine sediments: Microbial screening and process optimization
- Investigating the novel bacterium Ensifer adhaerans OV14 on the putative replacement for Agrobacterium mediated gene transfer in commercially viable crops
- Microbial bioremediation and physiochemical treatment of landfill leachate
- Influence of enzyme supplementation technologies in biogas production
- Development of endophyte and rhizosphere enhanced Plant Growth Promotion (PGPR) and phytoremediation systems - colonisation dynamics, mechanisms and impacts
- Use of serum amyloid A as a biomarker in Environmental Science
- Investigation into integrated constructed wetlands: pathogen removal, pathogen fate and bioremediation enhancement
- Co-ordinated development of leading biomass pre-treatment technologies for the generation of bio-products from Irish crops
- Investigating the application, plant growth promotion and genetic potential of three endophytic pseudomonads for use in sustainable agriculture.





INSTITUTE OF TECHNOLOGY CARLOW
CENTRES OF RESEARCH AND ENTERPRISE (COREs)

gamecore
advanced software & networks

gameCORE conducts both pure and applied research with a focus on the areas of game based learning and gamification. The research centre also has research interests in Ambient Assisted Living (AAL), Big Data, and Cybersecurity. Members of the research group are attached to the Department of Computing and Networking in the Faculty of Science.

gameCORE has strong links with industry, and has been involved with numerous collaborations, primarily funded by Enterprise Ireland and the Irish Research Council. Current industry collaborations include projects with UNUM, Galvanic and Intuition.

Current research includes:

- The effect of gamification of education on student engagement
- Building habits with Gamification
- Gaming in Corporate Learning Environments
- Enhancing engagement in stress reduction Apps using game elements
- Assistive living using brain computer interface
- A study of ICT mediated communication in the training/ work environment with intellectually disabled persons
- The utilisation of Big Data for the assessment of learning outcomes in a Serious Computer Games context.

healthcore
connecting for wellbeing

The focus of **healthCORE** research group is on three specific areas within the broad domain of health science and wellbeing:

- Men's Health
- Rehabilitation and Health
- Exercise, Sport and Health.

In each of these three areas, the CORE seeks to inform health policy and practice and provide a focus on optimising health and wellbeing. The CORE has identified a number of key objectives:

(i) Dissemination targets (peer-reviewed publications/ conference presentations)

(ii) External Funding targets (SFI, HRB, Inspire, HSE and Governing Bodies (NGBs) of Sport

(iii) Developing crossover research and research supervision in areas of interest between the three CORE streams, e.g.
- Obesity
- Primary prevention of chronic disease;
- Health and safety

(iv) Leverage existing collaborations with:
- HSE
- Sport Ireland
- National Sports Partnerships

(v) Develop research and course collaborations across the Regional Cluster.

Members of the CORE are drawn from the Department of Science and Health.

Taught Masters Courses

POSTGRADUATE - TAUGHT MASTERS

Institute of Technology Carlow has an exciting range of postgraduate taught courses, offered at three levels: Higher Diploma (NFQ Level 8); Postgraduate Diploma (NFQ Level 9); and Masters (NFQ Level 9). Details of part-time taught courses are available in the Lifelong Learning prospectus. Our range of postgraduate courses are constantly being reviewed. For further information, visit the Institute of Technology Carlow website at www.itcarlow.ie.

MASTERS DEGREE ENTRY REQUIREMENTS

All candidates applying for a Taught Masters degree course must achieve a minimum of a 2nd class Honours in a Level 8 Honours Degree course in an appropriate cognate discipline.

Applicants applying for entry via routes other than those listed above will be considered on a case-by-case basis through Institute of Technology Carlow's Recognition of Prior Learning (RPL) system.

For non-native English speakers: IELTS (6.0) or equivalent is required. All Non-EU applicants may refer to the International section of the website for further details on application requirements.

CWB01

NFQ LEVEL 9

Master of Business

Business

PLACES	DURATION	EXIT AWARD	FEES
20	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	YES	**This course is not eligible for Free Fees.** **Programme Fees 2017/18 €5,500.** **Fees under review for 2018/19.**

This postgraduate course brings theory to life through its exciting work placement element and applied learning focus, enabling participants to apply acquired knowledge and competencies in a real-world workplace environment.

The industrial placement is of four months duration, from May to August, and affords the student a unique opportunity to implement and reflect on the theories learned on the course. It will complement the student's education and broaden his/her skill set. A number of progressive local enterprises partner with the Institute in this initiative.

The Master of Business course is designed to produce creative, flexible and dynamic individuals, equipped with the skills to take up or enhance roles as business practitioners. A Master of Business is an internationally recognised qualification and opens the door to many careers.

What subjects will I study?

- Leadership and Strategy
- Corporate Governance, Ethics and Social Responsibility
- Research Methods
- Financial Analysis and Investment Appraisal
- Dissertation
- Strategic Marketing Management
- Strategic Human Resource Management
- Entrepreneurship and Innovation Management
- Communications for Professional Life
- Work Placement

CWB11

NFQ LEVEL 9

Master of Science

Supply Chain Management

PLACES	DURATION	EXIT AWARD	FEES
20	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	YES	**This course is not eligible for Free Fees.** **Course Fees 2017/18 €5,500.** **Fees under review for 2018/19.**

This Masters course offers a robust understanding of the concepts and best practices in supply chain management for application in today's global economy. Supply chain management and sourcing have become a central focus for companies due to the rapid changes in demand for products and services, globalisation and technology. With operations becoming more complex, companies in the manufacturing, retail and technological sectors are searching for individuals with supply chain expertise. This course has been designed in collaboration with industry to address those needs.

This specialist MSc course is relevant to individuals who wish to pursue careers in management consulting, managing information systems, product management and supply chain management. Graduates of this course will be well prepared to work as supply chain analysts, project managers, logistics managers, operations consultants, manufacturing or service operations managers.

What subjects will I study?

- Lean Manufacturing and Six Sigma
- Communications for Supply Chain Professionals
- Research Project SCM
- Performance Management
- Supply Chain Financial Management
- Sustainable Supply Chains
- Research Methods
- Strategic Supply Management
- Global Logistics and Technology

Master of Science

Digital Marketing

CWB07

NFQ LEVEL 9

FEES	PLACES	DURATION	EXIT AWARD
This course is not eligible for Free Fees. Programme Fees 2017/18 €5,500. Fees under review for 2018/19.	**20**	**1 YEAR** – FULL-TIME	**YES**

What subjects will I study?

- Strategic Marketing Management
- Digital Marketing Technologies
- Digital Marketing Landscape and Strategy
- Marketing Communications in a Digital Era
- Design, User Experience and Content Writing
- Data Analytics and Consumer Insights
- Digital Marketing Research Project

The digital era has dramatically changed the marketing landscape and the way that businesses identify, communicate and engage with consumers. Marketing professionals must navigate and embrace this new and dynamic landscape. The MSc course in Digital Marketing at Institute of Technology Carlow is aimed at graduates and professionals seeking to explore the strategic implications of the digital era and to develop their career path in digital marketing.

The course combines academic study and industry exposure to deliver a course that has a strong focus on current and emerging research and practice and will enable learners to create and implement successful digital marketing strategies.

Master of Arts

Interaction Design

CWB12

NFQ LEVEL 9

FEES	PLACES	DURATION	EXIT AWARD
This course is not eligible for Free Fees. Programme Fees 2017/18 €5,500. Fees under review for 2018/19.	**20**	**1 YEAR** – FULL-TIME	**YES**

What subjects will I study?

- Framing User Experience
- Principles of Interaction Design
- Prototyping Interactions
- Design Entrepreneurship
- Human Interface Design
- Communication Design
- Design Research Methods
- Design Project Dissertation

Interaction design focuses on shaping things for people's use and behaviour and includes designing interactive digital products, environments, visual communication systems and services. Interaction design is the synthesis and imagining of things as they might be, rather than focusing on how things actually are, with a focus on satisfying the needs and desires of the end-user.

This MA course is specifically designed for honours graduates in product and industrial design, multimedia and game design, visual communications design, architecture, engineering and other design related fields.

The course includes delivery of a major project which may be practice or theory based. Potential areas of employment for graduates include: interaction design, user experience design, consultant or engineer, user interface design, mobile app design, web design, digital media design, industrial design and many more.

CWB03

NFQ LEVEL 9

Master of Arts

Child, Youth and Family Studies

PLACES	DURATION	EXIT AWARD	FEES
20	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	**YES**	**This course is not eligible for Free Fees.** **Programme Fees 2017/18 €5,500.** **Fees under review for 2018/19.**

This MA course in Child, Youth and Family Studies provides learners with a range of critical and analytical tools to enable them to manage and lead services that develop the potential of children, youth and families and envision new possibilities for better service provision in the sector.

The course aims to educate learners to high levels of contemporary and comparative theoretical awareness in fields central to services provision (transitions across the life span, cultural diversity, youth and families) and to create an atmosphere of rigorous academic enquiry and writing.

Potential employers include: community-based voluntary and statutory organisations, human rights focused organisations and advisory groups, family support services, advisory and research bodies.

What subjects will I study?

- Contemporary issues in Childhood and Youth Studies
- Applied Psychology
- Perspectives on Family and Society
- Leadership, Strategy and Governance
- Research Methods and Dissertation

Elective Subjects

- Addiction Studies
- Adult and Community Education
- Youth Justice
- Child and Family Rights

CWB09

NFQ LEVEL 9

Master of Arts

Leadership in Early Years Education and Care

PLACES	DURATION	EXIT AWARD	FEES
20	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	**YES**	**This course is not eligible for Free Fees.** **Programme Fees 2017/18 €7,400.** **Fees under review for 2018/19.**

Early Years Education and Care is a rapidly growing area in Ireland. This course is designed to facilitate and prepare students and current practitioners or those with an interest in early childhood education for leadership and management roles in the operation of early childhood education services and related public policy. It is also suitable for those interested in advisory, mentoring and inspection roles within the sector.

This MA course will develop the learner's ability to analyse, manage and creatively respond to critical issues and changes in early childhood care policy and service implementation, all the time being cognisant of the best interests of the child.

What subjects will I study?

- Contemporary Issues in Early Years Policy, Theory and Practice
- Leading Quality in Early Years Education and Care
- Leadership, Strategy and Governance
- Research Methods and Dissertation
- Transformative Children's Rights Education
- Educational Psychology
- Early Years Entrepreneurship and Innovation

Master of Science

Data Science

CWS07

NFQ LEVEL 9

FEES	PLACES	DURATION	EXIT AWARD
This course is not eligible for Free Fees. Programme Fees 2017/18 €7,000. Fees under review for 2018/19.	**20**	**1 YEAR** – FULL-TIME	**YES**

What subjects will I study?

- Programming for Data Scientists
- Data and Data Storage Technology
- Statistics for Data Science
- Research Methods
- Infrastructure for Big Data
- Data Analytics and Algorithms
- Data Visualisation and Insight
- Project/Dissertation

This MSc course provides students with a comprehensive knowledge base and skillset to fulfil and succeed in a variety of roles within data science driven organisations.

The course is designed to meet current industry needs and provides students with a thorough theoretical and practical grounding in the analysis and utilisation of large data sets, together with experience in conducting data science development projects, thereby preparing students for positions of responsibility in the Big Data and IT industries.

As well as studying a range of core taught modules, learners will undertake a significant research and/or programming project to further enhance their skillset from the creation of a project proposal to the delivery and deployment of a significant data science project.

Data scientists who have successfully completed this course are equipped to work in ICT, finance, business, insurance, marketing and retail, pharmaceutical, biotechnology, telecommunication, media, sports and other sectors.

Master of Science

Information Technology Management

CWS01

NFQ LEVEL 9

FEES	PLACES	DURATION	EXIT AWARD
This course is not eligible for Free Fees. Programme Fees 2017/18 €7,000. Fees under review for 2018/19.	**20**	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	**YES**

What subjects will I study?

- Leadership and Strategy
- Innovation Management
- Technology Integration and Project Management
- Information Security Management
- Data and Information Systems Management
- Vendor and Service Management
- Dissertation
- Research Methods

This Masters course in Information Technology Management will provide students with a comprehensive skillset to fulfil and succeed in a variety of roles in the field of IT Management. Drawing on best practise from Ireland and abroad, the course is designed to meet current industry needs and is aimed at developing academic knowledge and practical skills in areas such as:

- IT management
- Leadership strategies and techniques
- IT related project management and tools
- Operational and resource management of data and information systems
- Data security.

Students on the course will have exclusive access to our UNUM Software Development Centre. This is a new state-of-the-art centre that provides the students with a real-world working environment using the latest technology.

CWB05

NFQ LEVEL 9

Master of Science

Sports Performance Analysis

PLACES	DURATION	EXIT AWARD	FEES
18	1 YEAR – FULL-TIME 2 YEARS – PART-TIME DAY	YES	This course is not eligible for Free Fees. Programme Fees 2017/18 €7,000. Fees under review for 2018/19.

Performance analysis is the newest of the sports science disciplines and investigates actual sports performance or performance in training. Analysis can include technical, tactical, KPIs, coaching behaviour and movement analysis within a game. It can also cover pre-match, live, post-match analysis, scouting, talent identification and trend analysis.

This course has been developed in response to the marked growth in demand for people with performance analysis knowledge, competencies and skills across a range of sporting clubs and organisations and it will be an area of expansion in the future.

The course is aligned with a number of national governing bodies of sport to facilitate experiential learning. Graduates will be well equipped to work with sport organisations and teams (national and international), and feed into and drive the sports performance analysis research agenda in Ireland and internationally.

What subjects will I study?

- Sports Analytics and Insights
- Experiential Learning
- Performance Analysis 1
- Performance Analysis 2
- Performance Analysis and the Coaching Environment
- Biomechanics and Movement Analysis of Sport
- Research Methods
- Dissertation

CWS05

NFQ LEVEL 9

Master of Science

Strength and Conditioning

PLACES	DURATION	EXIT AWARD	FEES
18	1 YEAR – FULL-TIME 2 YEARS – PART-TIME DAY	YES	This course is not eligible for Free Fees. Programme Fees 2017/18 €7,800. Fees under review for 2018/19.

There is a growing demand for strength and conditioning practitioners both within professional sport structures and in related services for the prevention of injury and rehabilitation of athletes; physiotherapy, sports rehabilitation and athletic therapy.

The course is designed to develop the knowledge, skills and analytical techniques in areas such as: advanced resistance training, explosive conditioning, metabolic conditioning, sports nutrition and periodisation.

Graduates of the course will be eligible to apply for membership to the Irish Institute of Sport (IIS), the United Kingdom Strength and Conditioning Association (UKSCA) and the National Strength and Conditioning Association (NSCA) based in the United States of America.

What subjects will I study?

- Strength and Conditioning Research Dissertation
- Advanced Resistance Training
- Explosive Conditioning
- Metabolic Conditioning
- Periodisation for Strength and Conditioning
- Sports Nutrition
- Higher Performance Sports Testing
- Research Methods

Elective Subjects

- Strength and Conditioning for the Older Adult
- Injury Rehab and Reconditioning
- Paediatric Strength and Conditioning

Master of Science

Pharmaceutical Regulatory Affairs

CWS03

NFQ LEVEL 9

FEES	PLACES	DURATION	EXIT AWARD
This course is not eligible for Free Fees. Programme Fees 2017/18 €7,400. Fees under review for 2018/19.	**20**	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	**YES**

What subjects will I study?

- Lifecycle Management, Vigilance, Surveillance and Risk management
- Pharmaceutical Technology Regulatory Affairs
- Non Clinical and Clinical Evaluation of Pharmaceutical Technologies
- Principles of Discovery of Medicines and Development Planning
- Research methods and Technical Report Writing
- Special Populations and Biologicals and Advanced Therapies
- Dissertation

This Masters course presents the regulatory affairs role and specifically targets the pharmaceutical regulatory industry. It also provides a detailed insight into EU legislation and regulation as well as an overview of US regulation. This course meets the needs of the Irish pharmaceutical industry, with course modules chosen and designed on the basis of leading industry advice and consultation. It also meets the requirements of regulatory companies in sourcing regulatory and quality assurance personnel.

The course enables existing regulatory affairs personnel in the pharmaceutical regulatory industry to understand all current diagnostic and medical device regulations and develop the necessary skills to work successfully in the dynamic world of regulatory affairs.

The course will also enable the graduate to develop a set of transferable skills to directly meet the requirements of a broad range of future employers including information technology, written and verbal communication skills, team working, independent research skills, data analysis and critical thinking.

Master of Science

Medical Device Regulatory Affairs

CWL34

NFQ LEVEL 9

FEES	PLACES	DURATION	EXIT AWARD
This course is not eligible for Free Fees. Programme Fees 2017/18 €7,400. Fees under review for 2018/19.	**20**	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	**YES**

What subjects will I study?

- Regulatory Affairs Quality Management and Strategy
- Research Methods and Technical Report Writing
- Medical Device Technologies: Design, Development and Testing
- Medical Technology Regulatory Affairs
- Product Course Management, Vigilance Surveillance and Risk Management
- Clinical Evaluation of Medical Device Technologies

This Master of Science course in Medical Device Regulatory Affairs presents students with the opportunity to obtain a formal qualification in the medical device regulatory industry.

This course will provide learners with increased skills and competencies for career progression within a rapidly growing global industry sector in which Ireland is a key location for many of the global medtech industry leaders.

The course presents a broad view of the regulatory affairs role and a detailed insight into current and proposed EU legislation. It provides students with an advanced theoretical understanding of the processes and practices central to medical device regulatory affairs.

CWE01

NFQ LEVEL 9

Master of Science

Management in the Built Environment

PLACES	DURATION	EXIT AWARD	FEES
18	**1 YEAR** – FULL-TIME **2 YEARS** – PART-TIME	**YES**	**This course is not eligible for Free Fees.** **Programme Fees 2017/18 €7,400.** **Fees under review for 2018/19.**

The built environment consists of buildings and all other things that have been constructed by human beings. The course, therefore examines the key contemporary issues in the built environment sector. It blends theory and practice to ensure that the learner will be equipped with practical skills underpinned by theoretical foundations. In addition, learners will be able to feed into and drive built environment developments, professional practice and future research.

Graduates will be able to analyse the complex contemporary challenges and issues in the management of the built environment and integrate and apply this knowledge to formulate creative and innovative solutions. They will develop a capacity for critical thinking within their discipline and demonstrate an ability to bring their expertise to bear on real world problems and challenges in the built environment. They will be equipped to lead, develop, and manage within a range of built environment organisations.

What subjects will I study?

- Leadership Strategy and Self-Management
- Construction Project Management
- BIM Management
- Building Economics and Life Cycle Cost Analysis
- Research Methods
- Dissertation

Elective Subjects

- Legal Aspects of Management in Built Environment
- Public Procurement of Construction
- Retrofitting and Building Fabric
- Energy and Buildings
- Facilities Management

ADDITIONAL **MASTERS** AND **HIGHER DIPLOMA** COURSES

Institute of Technology Carlow also offers a broad range of Masters and Higher Diploma courses. Many are offered on a part-time basis through our Faculty of Lifelong Learning. Additional Courses include:

MASTERS COURSES

- Master of Business Administration (MBA)
- Master of Business Administration – Professional Arts Management
- Master of Science Applied Research and Innovation
- Master of Arts Teaching and Learning

HIGHER DIPLOMA COURSES

- Higher Diploma in Business in Supply Chain Management
- Higher Diploma in Business Marketing
- Higher Diploma in Business (Management)
- Higher Diploma in Business in International Business
- Higher Diploma in Digital Media Design
- Higher Diploma in Science in Computing
- Higher Diploma in Business in International Financial Services
- Higher Diploma in Business in Tourism Marketing
- Higher Diploma in Arts in Early Childhood Education and Care
- Higher Diploma in Arts in Applied Social Studies
- Higher Diploma in Business in Aquabusiness

For further details of part-time postgraduate courses please contact our Faculty of Lifelong Learning at **059 9175280** or email at **LLL@itcarlow.ie**.

Details on all of our courses can be found online at:
www.itcarlow.ie/study/postgraduate-rd

Postgraduate Profiles

Name: Alan Grincell

designcore
humanising innovation

Supervisors: Mr Hilary Dempsey and Dr PJ White

Project title: *Older Adults & Emotionally Supportive Product Interaction. A user centred study into automated teller machines for the development of increased security and usability.*

Deciding to do a research masters in industrial design broadened my view of how the design process could be used to approach applied research and address social problems. The facilities provided by the college and the guidance of my supervisory team supported me throughout this journey. In 2014 I graduated with my Bachelor of Arts (Honours) Degree in Product Design Innovation. Before graduating I never considered research as a career route, but upon completion of my final year project, I realised that I could make a significant contribution to research and address social problems by implementing a design approach. The postgraduate research fellowship allowed me to pursue this.

My research project explored how financial institutions could better develop their technologies to facilitate Older Adults. The supportive and dynamic environment in designCORE allowed me to approach the research project using my personal style and skill sets which I developed during the undergraduate degree. Studying at Institute of Technology Carlow has allowed me to engage and contribute to the industry. During the research, I interacted with AIB, Age Action Ireland and The Garda Bureau of Fraud Investigation. Each of these demonstrated significant interest in the research area and design approach.

Name: Emma Smullen

envirocore
innovative bio-environmental technology

Supervisors: Dr Patricia Mulcahy, Dr David Dowling and Dr John Finan (Teagasc)

Project title: *Coordinated development of leading biomass pre-treatment technologies for the generation of bio-products from Irish crops.*

When I completed my fourth year research project, I realised that environmental research was an area I could see myself working in and one to which I might make a significant contribution.

When I completed my degree in Environmental Science, an opportunity arose to work as a postgraduate researcher under the Teagasc Walsh Fellowship programme. Furthering my education to PhD level was always something I had considered. Having enjoyed four years of study at the Institute as an undergraduate, the decision to continue my education at the institute as a postgraduate research student was an easy one to make.

enviroCORE has the facilities, resources and support needed to study at MSc or PhD level as well as a wealth of knowledge in the areas of biotechnology, microbiology, biochemistry, analytical science and many more. The supportive environment provided by fellow researchers and supervisors were also key factors influencing my decision to study at the Institute of Technology Carlow and to join the team at enviroCORE.

Name: Shane O'Donnell

healthcore
connecting for wellbeing

Supervisors: Dr Noel Richardson

Project title: *Supporting Community Capacity Building Measures to Improve the Mental Health of Middle-Age Men at Risk of Marginalization in the Republic of Ireland.*

In my initial year as a postgraduate student at Institute of Technology Carlow, I have been continually impressed by the rigorous academic standards and procedures that are in place for all postgraduate students and struck by the progressive and ambitious focus within the institute. I have been granted numerous opportunities to further my skills as a researcher in my first year and multiple funding opportunities has allowed me to attend and present my research at national and international conferences. I thoroughly enjoy the collegiate spirit that exists between researchers, who are always willing to help out with one another's research when possible. The on-going commitment to the development of postgraduate research, including dedicated infrastructure and support for postgraduate students and regular contact with an academic supervisor, has created the perfect environment for me to excel in my field.

Name: Mary Jo Hurley

enviroCORE
innovative bio-environmental technology

Supervisors: Dr Dina Brazil and Dr Thomaé Kakouli-Duarte

Project title: *Interactions between entomopathogenic nematodes (EPN) and bacterial endophytes isolated from bioenergy crops.*

I graduated with a Bachelor of Science (Honours) Degree in Biosciences with Biopharmaceuticals and subsequently completed a three-month work placement with Teagasc at Oak Park, working as a research assistant. This provided a good foundation for future research. Furthering my education to MSc or PhD level was always an option I had considered and the Institute of Technology Carlow Postgraduate Research Scholarship Programme provided an additional support.

My research project is part of a collaboration between Dr Dina Brazil, from the Biotechnology and Molecular Environmental Science Group, and Dr Thomaé Kakouli-Duarte, from the Molecular Ecology and Nematode Research Group, both members of enviroCORE. At present, there is no other research group in Ireland involved in this important specialist area, combining environmental science, endophytic bacteria and nematode research and it is a privilege to work and learn within such a progressive and dynamic team. My research at the Institute has allowed me to pursue this technology professionally and to contribute to the development of sustainable agriculture practices within the economy in Ireland.

ADDITIONAL INFORMATION

Application Guide

CONTENTS PAGE

How to Apply

General Admission Requirements

Applicants seeking admission to the first year of courses listed in this prospectus should apply to the Central Applications Office. Online applications made by the 20th January 2018 avail of the discounted application rate. The CAO closing date is 1st February 2018.

Change of Mind Late Applicants

The closing date for Change of Mind late applications is 1st May 2018.

New Common Points Scale for Entry to Higher Education from 2017

The Department of Education and Skills has introduced a new Leaving Certificate grading scale in 2017. The new scale has 8 grades at higher (H) level and 8 grades at ordinary (O) level. The highest grade is H1 and the lowest Grade is O8. The highest seven grades at higher level (H1-H7) divide the marks range from 100% to 30% into seven bands of 10%, with a H8 grade being awarded for marks less than 30%. The highest seven grades at ordinary level (O1-O7) also divide the marks range from 100% to 30% into seven bands of 10%, with a O8 grade being awarded for marks less than 30%. The points given for all higher and ordinary grades are summarised in the table.

New Common Points Scale for Leaving Certificate from 2017			
HIGHER		ORDINARY	
Grade (%)	Points	Grade (%)	Points
H1 (90-100)	100		
H2 (80<90)	88		
H3 (70<80)	77		
H4 (60<70)	66		
H5 (50<60)	56	O1 (90-100)	56
H6 (40<50)	46	O2 (80<90)	46
H7 (30<40)	37	O3 (70<80)	37
H8 (0<30)	0	O4 (60<70)	28
		O5 (50<60)	20
		O6 (40<50)	12
		O7 (30<40)	0
		O8 (0<30)	0

Further information on the New Leaving Certificate Grading Scale and new Common Points Scale can be found at www.transition.ie or the CAO website, www.cao.ie

Bonus Points for Higher Level Mathematics

A bonus of 25 points continues to be allocated to applicants who achieve a Grade H6 or better in higher level (HL) 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

Institute of Technology Carlow recognises Foundation Level grades for the purposes of admission to Higher education under the following criteria:

- Foundation level Mathematics is accepted as one of the five subjects required for entry to those courses where Mathematics is not a requirement.
- Foundation level Irish at F3 level will meet the minimum language requirement. No points are awarded.

Foundation Level grades and Points (from 2017)	
F1	20
F2	12
F3	0

Leaving Certificate Vocational Programme

Entry requirements – Honours Bachelor Degrees – Level 8

Institute of Technology Carlow awards points for results in the Leaving Certificate Vocational Programme Link Modules. This link module can be used in place of a sixth Leaving Certificate subject and will be accepted as meeting the six subject eligibility requirement for entry to Honours Degree courses.

Entry requirements – Ordinary Bachelor Degree (Level 7) and Higher Certificate (Level 6)

The LCVP link module can also be used in place of a fifth Leaving Certificate subject and will be accepted as meeting the five subject eligibility requirement for entry to Ordinary Bachelor Degree and Higher Certificate Programmes.

LCVP Link Modules Grade	Current Points	Revised Points
Distinction	70	66
Merit	50	46
Pass	30	28

Changes to basic matriculation requirements from 2017
Where the requirements were previously 2 Higher Level C3 grades and 4 Ordinary Level D3 grades, this is now the equivalent of 2 H5 and 4 O6/H7 grades.

Where the requirements were previously 5 Ordinary Level D3 grades, this is now the equivalent of 5 O6/H7 grades.

Please note that there will be variations on these entry requirements for certain courses. Please see couse listings on pages 180-181.

It should be noted that due to the large number of applicants for a limited number of places, the points required for particular courses will vary, and will most certainly be above the basic minimum.

For eligibility purposes only, the papers need not be necessarily taken in the same year.

Revised Scoring for QQI-FET Awards
The points awarded for QQI-FET (formerly) FETAC) awards were revised in 2017. Now the maximum possible total score of 360 will be multiplied by 13 and divided by 12, to give a revised maximum overall points score of 390 for applicants from further education and training.

Institute of Technology Carlow will continue to reserve places for Applicants presenting one of the QQI-FET (FETAC) Awards as listed below:

Reserve Places for Applicants presenting QQI-FET (FETAC) Level 5 or 6 Awards		
Programme Code	Programme Title	Number of Reserved Places
CW106	Higher Certificate in Physiology and Health Science	6
CW178	Bachelor of Science (Honours) Sport Science	2
CW188	Bachelor of Science (Honours) Sports Rehabilitation and Athletic Therapy	2
CW198	Bachelor of Science (Honours) Strength and Conditioning	2

QQI-FET Link Scheme
Institute of Technology Carlow has signed formal agreements with a number of Education and Training Boards (ETB) and over 40 Further Education Colleges to ensure greater access to Higher Education. These agreements allow students in the linked Further Education Colleges "enhanced progression" into Higher Education Programmes at the Institute via a defined Institute of Technology Carlow transition to Higher Education initiative.

Applicants from Further Education Colleges are advised to contact their Guidance Counsellor to see if their course and college are part of this Institute of Technology Carlow scheme.

Applicants presenting Leaving Certificate results 1992 to 2016		
1992 to 2016 LC Grade	New Points Awarded Higher Level	New Points Awarded Ordinary Level
A1	100	56
A2	88	46
B1	88	46
B2	77	37
B3	77	37
C1	66	28
C2	66	28
C3	56	20
D1	56	20
D2	46	12
D3	46	12
E	33	0
F	0	0
NG	0	0

Applicants presenting Leaving Certificate results 1985 to 1991		
1985 to 1991 LC Grade	New Points Awarded Higher Level	New Points Awarded Ordinary Level
A	100	56
B	77	37
C	66	28
D	46	12
E	33	0
F	0	0
NG	0	0

How to Apply

Mature Student Applicants

Mature student applicants must be 23 years of age, or over, on 1st January of the year of entry to a course. Mature student applicants will be assessed on an individual basis and may be interviewed. Interviews will only be offered to mature student applicants who have submitted their CAO application by 1st February 2018. Institute of Technology Carlow will accept late mature student applications, however they will be assessed, without interview and only by review of documentation submitted to CAO. Mature student applicants are not required to meet the normal minimum entry requirements but a place will only be offered to those applicants who have a reasonable prospect of completing their chosen course. Mature student applicants are advised to provide as much information as possible on previous qualifications and experience.

A description of each course available at Institute of Technology Carlow, is outlined in this prospectus together with all of the course information including: entry requirements; career options; exit awards and further study opportunities available. A course progression chart is also featured at the beginning of each section of the prospectus, providing students with a guide on how to advance qualification levels at Institute of Technology Carlow.

Cut off points for 2016 are listed on the CAO course chart at the back of the prospectus, page 180.

The 2016 points are based on the old LC points scoring system and are included only as a guide.

Non-Standard Applications

Applications will also be considered from applicants holding qualifications other than Leaving Certificate. Such applicants should also apply via the CAO. Applicants should tick the relevant box/ boxes for special categories on the non-standard CAO application.

All non-standard applications are processed on an individual basis by Institute of Technology Carlow.

For further information about applications and admissions, please contact the Institute of Technology Carlow Admissions Office at admissions@itcarlow.ie.

Any enquiries relating to an application that has already been submitted should include the CAO application number.

Repeat Students

Repeat students, where readmitted, are liable for full course and student contribution fees. Contact the Admissions Office at Institute of Technology Carlow for further information at admissions@itcarlow.ie

Garda Vetting of Students

Certain courses at Institute of Technology Carlow include work placements which may involve close contact with young children or vulnerable adults. Students undertaking these courses must undergo the Garda vetting procedure. Registration for these courses, will be conditional and places may be subsequently withdrawn, if students do not successfully complete the Garda Vetting process. For more information on the courses requiring Garda vetting and an outline of the Garda vetting procedure please visit our website at www.itcarlow.ie.

High Performance Entry Scheme

The Institute of Technology Carlow recognises achievement and has developed the High Performance Entry (HPE) Scheme to enable athletes and other high achievers who are committed to their activity to achieve their dual ambition of a high quality education and performance at the highest level within their field. The HPE Entry Scheme applies to the following areas:

- Sport
- Active Citizenship
- Innovation/Entrepreneurship.

Under the HPE Scheme, Institute of Technology Carlow offers up to 50 extra performance points for students who have achieved a minimum of 250 CAO Points in their Leaving Certificate or QQI-FET Level 5 award and who meet minimum entry requirements of the course for which they have applied.

HIGH PERFORMANCE ENTRY SCHEME - SPORT

The High Performance Entry Scheme has been developed for applicants who are competing at the highest available level in their chosen sport and who have identifiable potential for further improvement. There are up to 4 places available based on minimum standards of entry in a chosen sport:

Athletics: Schools/Junior international representation.

Rugby: Schools/age grade international and/or provincial representation/provincial academy/Sub-Academy/Overseas or UK equivalent.

Soccer: Schools/age grade international and/or provincial representation/provincial academy/Sub-Academy/Overseas or UK equivalent.

GAA: Typically Minor/U21 County level and capable of competing at a higher age level.

Hockey: Schools/Junior International representation.

Rowing: Schools/Junior International representation [proven potential to progress to U23 and Senior representation]

Other Sports: As defined by the recognised sporting body and evidence of a strong competitive record at the highest level of their chosen sport.

HIGH PERFORMANCE ENTRY SCHEME – ACTIVE CITIZENSHIP

The High Performance Entry Scheme has been developed for applicants who display outstanding citizenship within their region. There are up to 4 places available based on one or more of the following standards of entry:

- A consistent record of Volunteering within the Community
- Member of a National Organisation at leader level – e.g. Irish Water Safety –Lifeguard, Member of the Red Cross, Special Olympics
- Participation in a recognised Volunteering Award, for example the Meitheal Award, John Paul II Award, Volunteer Ireland Award, Duke of Edinburgh Award.

HIGH PERFORMANCE ENTRY SCHEME – INNOVATION/ ENTREPRENEURSHIP

The High Performance Entry Scheme has been developed for applicants who display excellence in innovation/ entrepreneurship. There are up to 4 places available based on one or more of the following standards of entry:

- A Regional / National / International Award for outstanding innovation and innovation/entrepreneurship
- The student must provide evidence of continuous engagement, ownership and participation of innovative/ entrepreneurial activities that enhanced their region.

Academic Scholarships

Institute of Technology Carlow rewards high achieving students by offering academic scholarships for students entering their first year of college. This programme, which sees the Institute offer one scholarship per course to the student who achieves the highest points in the Leaving Certificate above defined points' levels, is one of the most generous in the country.

Find out more on our website:
www.itcarlow.ie/academicscholarships

Prizes and Awards

A number of prizes and awards are also presented annually to those students who achieve the highest academic standard and are normally presented by companies in the region. Details of such prizes and awards are available from the Examinations Office.

Applicants with Disabilities

The Institute welcomes and encourages applicants with disabilities and is a member of the DARE Programme for 2018 entry (see Page 175). CAO Applicants with disabilities are encouraged to tick the 'Medical Condition/Disability' Box on the form and contact the Institute's Access Office on commencement of their course to have their special requirements' accommodated.

How to Apply for a Deferral

The Institute will consider all applications for a deferral. Deferrals will be subject to the course being offered by the Institute in the following year. Please note scholarships offered in the current year might not be available in the following year.

Deferral Procedure for Incoming First Year Students

On receipt of an offer:

- Do not accept the offer from CAO
- Write or email immediately to the Admissions Office setting out the reason(s) for the request. Email: deferrals@itcarlow.ie
- The letter/email must arrive in the Admissions Office at least two days before the 'Reply Date' advised by CAO
- Part C of the offer notice must be attached to the letter
- Institute of Technology Carlow will communicate its decision to the applicant
- If the deferral is not granted, the offer may still be accepted for the current year
- In order to take up the deferred place, the applicant must re-apply through CAO by 1st February of the succeeding year, placing the deferred course as the first and **only** preference.

How to Apply

Advanced Entry – Add-on Honours Degree Programmes

International (Non-EU Citizens)

International applicants should NOT apply through CAO but instead apply directly to:

The International Office

Institute of Technology Carlow

T: 353 59 9175205

E: int.cord@itcarlow.ie

Applicants will be required to provide supporting documentation to prove that the level of educational qualifications acquired is sufficient for entry to third level education. Oral and written proficiency in the English language is essential.

Advanced entry for all course places, other than to first year, should be made directly to:

Admissions Office

Institute of Technology Carlow

T: 353 59 9175000

E: admissions@itcarlow.ie

Postgraduate Applicants

Postgraduate applicants should refer to the Institute website - Masters and Postgraduate courses. www.itcarlow.ie/study

Those seeking admission to an Add-on Honours Degree course should apply to the Institute Admissions Office by 31st May, 2018. To apply online log onto www.itcarlow.ie. First round offers will be issued in early July.

Advanced Entry and Transfers

Direct application can also be made for entry at a level other than 1st year for Higher Certificate, Ordinary Degree and Honours Degree courses. For the full course list, please refer to pages 180-181. The closing date for receipt of applications is 31st May 2018.

Transfer application forms can be requested from the Admissions office or can be downloaded from our website at www.itcarlow.ie. Completed application forms should be submitted directly to the Admissions Office at Institute of Technology Carlow.

Add-on Honours Degree Programmes

Code	Title
Faculty of Engineering	
CW428	BEng (Honours) in Civil Engineering
Faculty of Business and Humanities	
CW968	Bachelor of Business (Honours) in Accounting and Finance

Access Programmes

The Institute's Access Programme (CAP) is an admissions scheme offering reduced points places with scholarships to CAO applicants who have experienced socio-economic barriers as follows:

- long-term unemployment
- low family income
- no family tradition of education
- a member of a minority group
- a second chance learner.

What entry requirements are needed?

Leaving Cert students must have the minimum entry requirements for the course for which they have applied to and complete a CAP Application form (available to download at: www.itcarlow.ie/access).

The CAP Programme is also open to applications from FET Award holders, who must hold a full FET Award, and Mature Students, who will be assessed through their course interview. CAP applicants will be short listed on the basis of the barriers outlined on their application and may receive a reduced points' place offer if they are within a **10% range of the CAO Cut Off Points** and have been approved for a place by academic staff.

Further information on the Carlow Access Programme is available at: www.itcarlow.ie/access or contact the Institute's Access Office at: access@itcarlow.ie.

DARE Programme

Institute of Technology Carlow has joined the Disability Access Route to Education (DARE) for 2018 CAO entry and has reserved a number of reduced points course places for DARE applicants. DARE is a third level alternative admissions scheme for school-leavers whose disabilities have had a negative impact on their second level education. DARE offers reduced points places through the CAO to school leavers who, as a result of having a disability, have experienced additional educational challenges in second level education. For more information on applying to DARE visit: www.accesscollege.ie.

Access Officer – Carlow Campus
Aisling McHugh
Access Officer
Institute of Technology Carlow
Kilkenny Road, Carlow
Tel: 059 9175603 Fax: 059 9175005
Email: aisling.mchugh@itcarlow.ie

Access Officer – Wexford Campus
Janette Davies
Deputy Head of Campus (Programmes)
Summerhill Road, Wexford
Tel: 053 9185800 Fax: 053 9185801
Email: janette.davies@itcarlow.ie

Application Information

Schedule of Fees 2017/18 *

Undergraduates

Stage	Details	Tuition Fee	Student Contribution Fee	Total Due
Certificate Year 1	Maintenance Grant Holder	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000
Certificate Year 2	Maintenance Grant Holder	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000
Degree Year 1/2/3	Maintenance Grant Holder	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000
Honours Degree Year 1/2/3/4	Maintenance Grant Holder (Vocational Education Committee)	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000

* Fees may be subject to change in 2017/18.

Notes
Most undergraduate students attending publicly funded third-level courses do not have to pay Tuition Fees. Under the terms of the Free Fees Initiative, the Department of Education and Skills pay these fees to the colleges. In order to qualify for free fees you must satisfy three tests:

– The Nationality Test

– The Residency Test

– The Previous Studies Test.

Students who qualify for free course fees are those who are citizens of Member States of the European Union, who are undertaking full-time undergraduate courses at Higher Certificate, Ordinary Degree and Honours Degree Level for the first time.

Repeat students or students taking a second undergraduate course should contact the Admissions Office at Institute of Technology Carlow for fee information.

Non EU applicants should contact the International Office at Institute of Technology Carlow for fee information.

The Free Fees Scheme is under review by the Higher Education Authority/Department of Education and Skills for Third Level education in September 2017. Tuition fees are determined annually by the Higher Education Authority and are currently under review for 2017/18.

Detailed information about assistance with tuition fees is available on www.studentfinance.ie or from the Institute of Technology Carlow Admissions Office at 059 9175170.

Student contribution fess
The Free Fees Initiative covers the cost of the Tuition Fee payable and DOES NOT include the Student Contribution Fee.

All students are required to pay the Student Contribution Fee of €3,000 unless they have confirmation of an approved grant award. Student Contribution Fees are payable for each year of the course.

Tax relief
Families may be able to claim tax relief on tuition fees. Families that pay student contributions for more than one student in a year will also be able to claim tax relief on the second and subsequent student contribution fees. For further information see www.revenue.ie.

The Institute of Technology Carlow wishes to acknowledge the contribution made by the Department of Education and Skills and the European Union towards funding both undergraduate and postgraduate courses.

For further information about tuition or student contribution fees, visit www.studentfinance.ie or contact the Institute of Technology Carlow Admissions Office.

Institute of Technology Carlow Admissions Office
T: **059 9175170**
Email: **admissions@itcarlow.ie**

Ireland's EU Structural Funds Programmes 2007 - 2013
Co-funded by the Irish Government and the European Union

NDP National Development Plan
Transforming Ireland

EUROPEAN SOCIAL FUND

Grant Information

All students are required to pay the Student Contribution Fee of €3,000 for 2017/18. Students who do not have the means to afford this payment are entitled to apply for assistance in the form of a grant from the government. The Department of Education and Skills funds student support schemes including assistance towards student contribution fees and full maintenance support. Assistance is provided through a means-tested grant system operated by the Student Universal Support Ireland (SUSI). A guide to grant assistance available under these schemes is available at www.education.ie or www.studentfinance.ie

During the academic session, queries in relation to grant payments are dealt with on a daily basis by the grants office.

Where to Apply

All students entering a NEW course in 2017/18 should apply online at www.susi.ie. This includes students who are completing a Level 6/7 course and progressing with their studies to a Level 7/8.

Students who are awarded Maintenance Grants will have payments made directly by SUSI into the bank account designated by the student.

Payments are subject to the students continued registration and attendance on their course.

Continuing Students

Grants awarded under the student grant schemes are usually reviewed each year. Students holding a SUSI student grant in 2016/17, and are continuing their studies in the next academic year, should login to www.susi.ie with the username and password of the awarded grant application to check their grant status.

Grant Rates for the 2016/17 Academic Year	Greater than 45 km from IT Carlow	Less than 45 km from IT Carlow
Full 100% Maintenance	€3025	€ 1215
Part 75% Maintenance	€2270	€ 910
Part 50% Maintenance	€ 1515	€ 605
Part 25% Maintenance	€ 755	€ 305
Special Rate of Maintenance Grant	€5915	€2375
Fees only	€ 0	€ 0

For more information on grants:

Grants Helpline
Tel. 059 9175113
Fax. 059 9175005
Email: grants@itcarlow.ie

National Framework of Qualifications (NFQ)

A major change in Irish Higher Education was the establishment of the National Framework of Qualifications (NFQ). This learner-centred framework, which is transparent and readily understandable, includes all education and training awards (schools, institutes of technology, universities) made in Ireland and relates them to each other. In doing so, it brings coherence to the awards system.

QQI has granted the Institute Delegation of Awarding Authority to make awards up to and including Doctoral Degrees within the National Framework of Qualifications.

NFQ Awards Comparison Table

Old Awards - up to 2004	NFQ Level	New Awards	NFQ Level
Doctoral Degree	10	Doctoral Degree	10
Masters Degree	9	Masters Degree	9
Graduate Diploma (first stage of Masters Degree)	9	Postgraduate Diploma	9
Graduate Diploma (stand alone/conversion award)	8	Higher Diploma	8
Honours Bachelor Degree	8	Honours Bachelor Degree	8
National Diploma	7	Bachelors Degree	7
National Certificate	6	Higher Certificate	6

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Leaving Certificate Points Scoring System

Entry to the vast majority of courses in the CAO system in 2017 will be determined according to the following common points scale and accompanying conditions:

New Common Points Scale for Leaving Certificate from 2017

HIGHER		ORDINARY	
Grade (%)	Points	Grade (%)	Points
H1 (90-100)	100		
H2 (80<90)	88		
H3 (70<80)	77		
H4 (60<70)	66		
H5 (50<60)	56	O1 (90-100)	56
H6 (40<50)	46	O2 (80<90)	46
H7 (30<40)	37	O3 (70<80)	37
H8 (0<30)	0	O4 (60<70)	28
		O5 (50<60)	20
		O6 (40<50)	12
		O7 (30<40)	0
		O8 (0<30)	0

ACCOMPANYING CONDITIONS

1. The best six results in one Leaving Certificate examination will be counted for points computation.
2. One sitting only of the Leaving Certificate examination will be counted for points purposes.
3. The points given against each 1st year course in this publication refer to the 2016 points range.
4. Common Bonus Points for Higher Level Mathematics – refer to page 170 for full details.

Ireland's EU Structural Funds Programmes 2007 - 2013
Co-funded by the Irish Government and the European Union

EUROPEAN SOCIAL FUND

NDP National Development Plan
Transforming Ireland

All Institute of Technology Carlow courses are funded by the National Development Plan 2007-2014 and by the European Union.

Courses available through CAO Application System 2018

CARLOW	Honours Bachelor Degrees - Level 8 (HD)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW108	**Science – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Biopharmaceuticals: **BPH**; Brewing and Distilling: **BRD**; Environmental Science: **ENV** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	NEW COURSE	78
CW178	**Sport Science – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Sport and Exercise Science: **SES**; Strength and Conditioning: **SCO** - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7	O6/H7	NEW COURSE	72
CW188	Sport Rehabilitation and Athletic Therapy - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7	O6/H7	445	75
CW208	Computer Games Development - Four Year	2H5 & 4O6/H7		O6/H7	O3/H7	290	60
CW238	Software Development - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	290	61
CW248	Information Technology Management - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	300	64
CW258	Cybercrime and IT Security - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	315	58
CW438	**Construction – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Quantity Surveying: **QSY**; Facilities and Building Services Management: **FBS** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	260	41
CW468	Architectural Technology - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	270	39
CW478	Civil Engineering - Four Year	2H5 & 4O6/H7		O6/H7	H4	395	36
CW548	Mechanical Engineering - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	335	32
CW558	Electronic Systems - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	290	30
CW568	Aerospace Engineering - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	395	28
CW578	TV and Media Production - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	365	34
CW708	Law (LLB) - Three Year	2H5 & 4O6/H7		O3/H6		300	115
CW728	Product Design Innovation - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	300	112
CW748	Early Childhood Education and Care - Three Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		270	118
CW758	Applied Social Studies (Professional Social Care) - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		295	119
CW788	Youth and Community Work - Three Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		**	117
CW808	Media and Public Relations - Three Year	2H5 & 4O6/H7		O3/H6		270	111
CW858	Sport Management and Coaching (Options: GAA, Rugby, Soccer) - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		***	107
CW908	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business Management: **BMT**; Human Resource Management: **HRM**; International Business: **INT**; Supply Chain Management: **SCM**; Marketing: **MKT**; Finance and Accounting: **FAC** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	270	92
CW938	Business with Law - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	290	100
CW948	Accounting - Three Year	2H5 & 4O6/H7		O4/H6	O3/H6	317	101
CARLOW	**Ordinary Bachelor Degrees - Level 7 (DG)**						
CODE	TITLE	GENERAL LC REQUIREMENT		SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW107	Analytical Science	5O6/H7		O6/H7	O6/H7	205	83
CW117	Biosciences	5O6/H7		O6/H7	O6/H7	225	82
CW207	Software Development	5O6/H7		O6/H7	O6/H7	260	62
CW217	Information Technology Management	5O6/H7		O6/H7	O6/H7	240	65
CW227	Cybercrime and IT Security	5O6/H7		O6/H7	O6/H7	280	59
CW407	Architectural Technology	5O6/H7		O6/H7	O6/H7	170	40
CW417	Construction Management with Building Services	5O6/H7		O6/H7	O6/H7	210	44
CW427	Civil Engineering	5O6/H7		O6/H7	O6/H7	210	37
CW507	Aircraft Systems	5O6/H7		O6/H7	O6/H7	340	29
CW517	Mechanical Engineering	5O6/H7		O6/H7	O6/H7	270	33
CW527	Electronic Engineering	5O6/H7		O6/H7	O6/H7	220	31
CW547	TV and Media Production	5O6/H7		O6/H7	O6/H7	350	35
CW707	Industrial Design	5O6/H7		O6/H7	O6/H7	260	113
CW717	Applied Social Studies (Professional Social Care)	5O6/H7	Garda vetting required	O6/H7		245	120

See: *www.itcarlow.akarisoftware.com for all Institute of Technology Carlow course information.*

Note: *Cut-off points are under the old points scale.*

CARLOW	Ordinary Bachelor Degrees - Level 7 (DG)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW807	Sports Coaching and Business Management - GAA	5O6/H7	Garda vetting required	O6/H7		***	108
CW817	Sports Coaching and Business Management - Rugby	5O6/H7	Garda vetting required	O6/H7		***	110
CW827	Sports Coaching and Business Management - Soccer	5O6/H7	Garda vetting required	O6/H7		***	109
CW917	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business Management: **BMT**; Human Resource Management: **HRM**; International Business: **INT**; Supply Chain Management: **SCM**; Marketing: **MKT**	5O6/H7		O6/H7	O6/H7	200	102
CW927	Business Administration	5O6/H7		O6/H7	O6/H7	205	104
CARLOW	**Higher Certificates - Level 6 (HC)**						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW106	Physiology and Health Science	5O6/H7	Garda vetting required	O6/H7	O6/H7	440	76
CW116	Pharmacy Technician Studies	5O6/H7	Garda vetting required	O6/H7	O6/H7	325	77
CW126	Science - Applied Biology OR Applied Chemistry	5O6/H7		O6/H7	O6/H7	215	84
CW206	Computing (Applications or Programming)	5O6/H7		O6/H7	O6/H7	230	63
CW416	Construction Technology	5O6/H7		O6/H7	O6/H7	175	45
CW706	Legal Studies	5O6/H7		O6/H7	O6/H7	211	116
CW906	Business	5O6/H7		O6/H7	O6/H7	170	105
CW926	Business with Law	5O6/H7		O6/H7	O6/H7	165	114
CW936	Accounting	5O6/H7		O6/H7	O6/H7	220	106

WEXFORD	Honours Bachelor Degrees - Level 8 (HD)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW018	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business: **BUS**; Digital Marketing: **DMK** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	255	135
CW028	Early Childhood Education and Care - Three Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		265	132
CW038	Art - Four Year	2H5 & 4O6/H7		O6/H7		*	142
CW068	Applied Social Studies (Professional Social Care) - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		270	133
CW078	Sustainable Farm Management and Agribusiness - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	320	144
CW088	Visual Communications and Design - Four Year	2H5 & 4O6/H7		O6/H7		265	140
WEXFORD	**Ordinary Bachelor Degrees - Level 7 (DG)**						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW017	Applied Social Studies (Professional Social Care)	5O6/H7	Garda vetting required	O6/H7		160	134
CW027	Sustainable Farm Management and Agribusiness	5O6/H7		O6/H7	O6/H7	285	145
CW037	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business: **BUS**; Digital Marketing: **DMK** - Three Year	5O6/H7		O6/H7	O6/H7	180	138
CW047	Visual Communications and Design	5O6/H7		O6/H7		205	141
CW057	Art	5O6/H7		O6/H7		*	143
WEXFORD	**Higher Certificates - Level 6 (HC)**						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2016 FINAL CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW006	Business	5O6/H7		O6/H7	O6/H7	120	139
CW046	Computing	5O6/H7		O6/H7	O6/H7	165	146

** CW038 and CW057: Combination of Leaving Cert points and portfolio.*

*** CW788: Combination of Leaving Cert points and interview.*

**** CW858, CW807, CW817 and CW827: Combination of Leaving Cert points, interview and portfolio.*

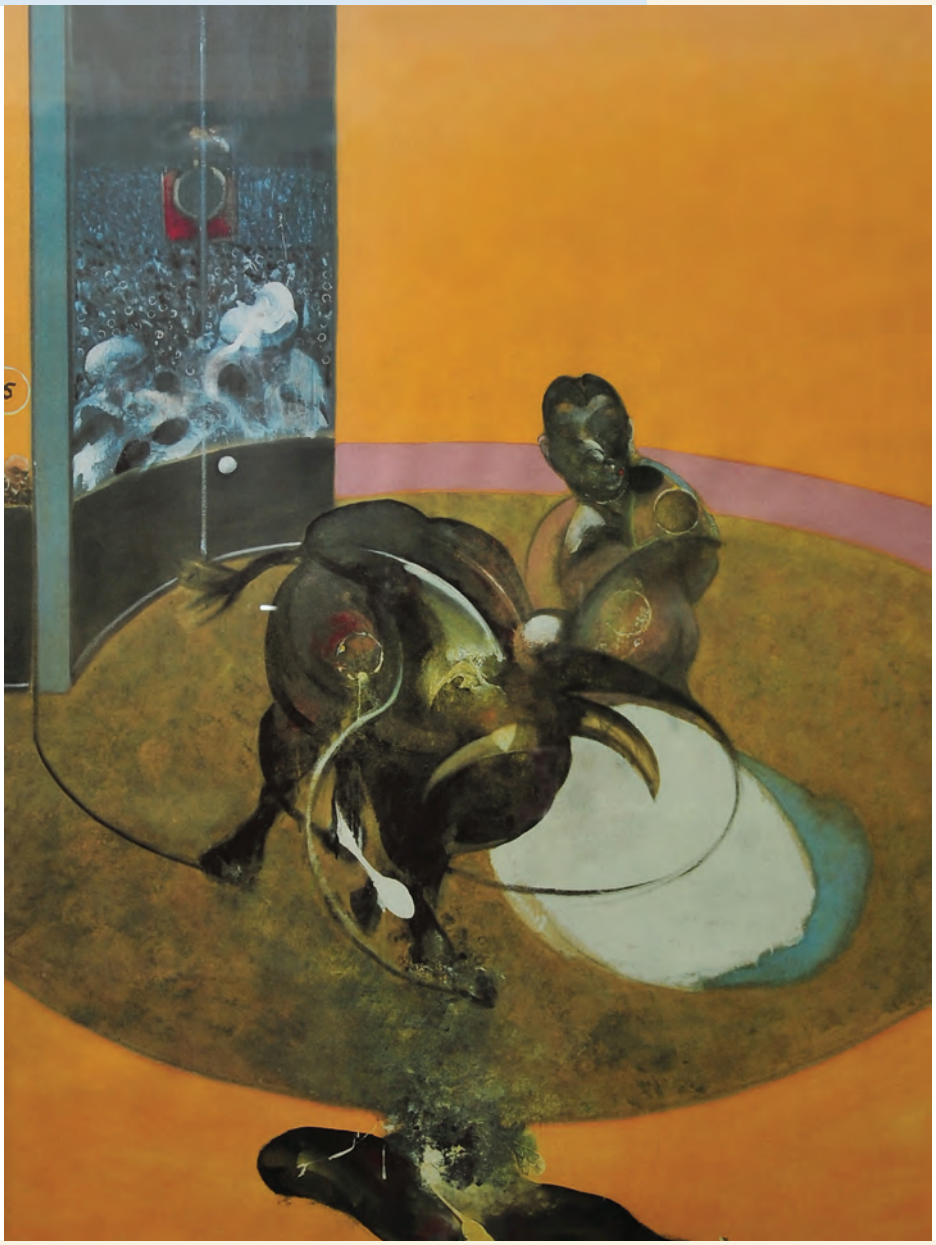
Pablo Picasso (b. 1881), ***Verve*** (Lithograph print, 32 x 21 cm, 1954)

From the Frank X. Buckley and Michael P. Burns Collection
at the Institute of Technology Carlow.

Notes

Francis Bacon (b. 1909), ***Study of Bullfight*** (Silk screen print, 75 x 59 cm, 1990)

From the Frank X. Buckley and Michael P. Burns Collection at the Institute of Technology Carlow.



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