Engage
Learn
Innovate
Lead
## CARLOW CAMPUS

### ENGINEERING – Aerospace, Mechanical and Electronic

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### ENGINEERING – Built Environment

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### SCIENCE

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## WEXFORD CAMPUS

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## MEDIA AND DESIGN

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Congratulations on taking your next steps toward building your future through higher education.

At our Institute, you will join a community of over 9,000 students and faculty members all focused on reaching new heights of learning and opportunity.

You will become part of a values-led organisation that puts the quality of your experience centre-stage. We focus on what you need to learn, the graduate attributes you must develop to ensure a successful career, life and contribution to society. We know what these attributes are because we engage with a broad range of national and international industry, academic and civic partners in all that we do.

Our undergraduate course portfolio is one of depth, breadth and diversity. How do you choose the right degree? The whole process can seem daunting. What should you focus on? How do you weigh up the different elements involved? This prospectus provides an overview of all the undergraduate possibilities at our Institute, but you can learn much more by attending our Open Days and by visiting our website. Full details on the content and learning outcomes for each component of every higher education course at the Institute are online.

As you choose your course of study, also pay particular attention to the overall experience you want. There are many opportunities at our institute for collaborative project work, participation in public showcases, international exchanges, internships and work placements. There are excellent support services for students, including our learning resource centre, sports facilities and health services. We have an extensive portfolio of clubs and societies on campus to support you in meeting your educational, personal and social goals.

Outside the lecture halls and laboratories, we are proud of the culture at Institute of Technology Carlow, a culture of openness, respect, diversity and inclusion. This, together with first class facilities and amenities on a modern and dynamic campus, supports our students in achieving their goals, making lifelong friends and memories that last a lifetime.

Over 55,000 alumni chose our Institute and are enjoying highly successful careers in all walks of life across the globe. Whatever your aspirations, I encourage you to come to Institute of Technology Carlow and enjoy the unique experience that our graduates value so highly.

Dr Patricia Mulcahy
President
In May 2019, Institute of Technology Carlow was awarded the Bronze Athena SWAN Award by Advance HE in recognition of our work in advancing gender equality in academia, and in promoting diversity and inclusion for staff and students in higher education. It is one of only two Institutes of Technology to be recognised in this way.

Welcoming the announcement, Dr Patricia Mulcahy, President, said, “This is a highly significant achievement, placing the Institute amongst the first in the Technological Sector to achieve this award, and amongst the first in the higher education sector to achieve the award under the expanded Athena SWAN Charter. Achieving this award under the expanded charter is particularly noteworthy as it recognises a commitment across the Institute to addressing gender equality challenges in higher education more broadly, including, but not limited to, those experienced by women.”

The Athena SWAN Charter is a flagship accreditation scheme which recognises action to address gender equality within our higher education institutions. Advance HE’s Athena SWAN Charter was initially established in 2005 to encourage and recognise commitment to advancing the careers of women in science, technology, engineering, maths and medicine (STEMM) in higher education and research. The charter was subsequently expanded to recognise work undertaken in arts, humanities, social sciences, business and law (AHSSBL), and in professional and support roles, and for trans staff and students. The charter now recognises work undertaken to address gender equality more broadly, and not just barriers to progression that affect women.

In a major national initiative supported by the HEA, the Athena SWAN Charter was launched in Ireland in early 2015.

The Bronze Athena SWAN award serves as the initial level of award, certifying an institution’s commitment to the 10 key principles of the Athena SWAN Charter. Institutions are required to perform a critical self-analysis to identify problem areas and indicate that a plan has been developed to address these areas.

The Institutional Bronze Award for Institute of Technology Carlow recognises that our Institute has a solid foundation for eliminating gender bias and developing an inclusive culture that values all. We will now build further upon this in the coming months and years through the implementation and further development of our gender equality action plan and related initiatives.
We will celebrate our 50th Anniversary in 2020 and to mark this milestone year in our history, we will host a series of activities; reflecting on 50 years of changing the country and world, acknowledging the people who have made it possible and looking to the future as we continue to evolve and lead.

For the past fifty years, we have made it our mission to open up education for all. As one of the largest technological higher education institutions in the country, we have already empowered over 55,000 graduates to transform their lives through learning, while helping to build stronger communities and drive the creation of a vibrant economy. Our success is founded on our long-standing commitment and responsiveness to providing essential higher education and research opportunities that underpin the economic, social, and cultural growth of Ireland, and our capacity to change, innovate and lead in a constantly changing environment.

Carlow has always been a centre of knowledge, scholarship and innovation. The region boasts a rich heritage of education, imagination and technological discovery. Tyndall, Dargan, Haughton, Lonsdale, Shackleton and Berkeley are just some of the thinkers and educators from this part of Ireland who continue to inspire current and future generations. It was within this tradition that Institute of Technology Carlow was established in 1970. Over the following years, Institute of Technology Carlow’s learner population has grown in numbers and nationalities, surpassing the original expectations of its founders. With a current student and staff cohort of almost 10,000 across centres in Carlow, Wexford and Wicklow, the Institute, together with partners in industry, government and community, continues to play a key role in driving economic growth and social development in the regions and country it was established to serve.

With the signing of the country’s Technological Universities Act into law in 2018, Institute of Technology Carlow is on the cusp of Technological University designation, a development which will see the Institute further evolve and lead once again.

Institute of Technology Carlow is grateful to the educators and learners, the thinkers and collaborators who have joined us on our journey to reach this milestone year. We look forward to celebrating our 50th anniversary in 2020 and, in reflecting on how far we have come, look to the next 50 years of knowledge and innovation, of openness and engagement, of ambition and success.
CARLOW

Institute of Technology Carlow’s primary campus is located in the town of Carlow, which has a hinterland of beautiful villages and towns from another age. With Carlow located at the centre of the south east region, many of our students come from the surrounding counties of Wexford, Kilkenny, Laois, Kildare and Wicklow. The Institute is also convenient to all the major entry points into Ireland with Dublin city just 85km away. Dublin Airport is a distance of 97km and Rosslare Europort is 92km from Carlow town centre.

County Carlow, a central part of Ireland’s Ancient East, boasts leafy roads, waterways, mountain trails and forest tracks dotted with country estates, ancient monastic sites and archaeological wonders. Visitors and locals alike enjoy Carlow’s many and varied activities and festivals, including garden and food trails, a celebrated arts festival, regatta, summer festival and an international literary festival.

The Institute campus is a short walk into Carlow town, which has a population of just over 24,000. Here, student accommodation is plentiful and the town offers a superb range of eateries, bars, cinema and nightlife. For shopping, Carlow offers a mix of national and international street brands as well as independent fashion boutiques. Students love the friendly community feel of Carlow town and its easy access to the rest of the country. Carlow is also home to several international businesses that offer both work experience and employment to the students and graduates.

For thousands of students, Carlow is the place to be and Institute of Technology Carlow is where their journey begins. Whether it is a course in business, law, humanities, science, sport or engineering, you will find all the support and encouragement you need to achieve your goals at Institute of Technology Carlow.
EMPLOYABILITY STATEMENT

Institute of Technology Carlow works closely with employers, professional bodies, community and local partners to design courses to identify the skills, knowledge and competencies that industry and society want. Our graduates are subsequently fully equipped to achieve the highest personal and professional standards in their future careers.

For more information on our Employability Statement, please visit:
W: itcarlow.ie/study/employment-employability-guide/employability-statement
Graduate attributes are descriptors of what it means to be an Institute of Technology Carlow graduate. They represent the qualities, skills and values that make our graduates unique. These attributes extend beyond academic disciplines and reflect the graduate’s overall learning journey in the Institute.

Graduate attributes are learner-owned and each student will have their own interpretation of what the attributes mean to them. Institute of Technology Carlow is committed to providing the opportunities for all students to develop these attributes so that they can become empowered citizens of tomorrow.
KEY CONTACTS

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

Schools Liaison Officer
Alison Moore
T: (059) 9175088
E: alison.moore@itcarlow.ie
OPEN DAYS
Institute of Technology Carlow hosts a number of Open Days 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. Students will have an opportunity to speak to lecturers and staff from the following areas:

- Faculty of Business & Humanities
- Faculty of Engineering
- Faculty of Science
- CAO applications/Admissions
- Fees & Grants
- Student Services
- DARE (Disability Access Route to Education), CAP (Carlow Access Programme)
- Clubs and Societies

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<td>14th May 2020</td>
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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 email: schoolvisits@itcarlow.ie

CAREERS EXHIBITIONS
The Institute participates in many careers exhibitions within the region and nationally throughout the academic year.

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

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.
“It’s a very collaborative environment.”

Dillon O’Reilly
Aerospace Engineering Student

Visit itcarlow.ie to see our full story videos.

HEAD OF FACULTY
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Faculty of Engineering
E: engineering@itcarlow.ie
T: 059 9175403

HEAD OF DEPARTMENT OF AEROSPACE, MECHANICAL AND ELECTRONIC ENGINEERING
Dr Cathal Nolan
BEng(Hons), PG Dip, MEng, PhD
E: cathal.nolan@itcarlow.ie
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<td>CW578</td>
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FACULTY OF ENGINEERING

Department of Aerospace, Mechanical and Electronic Engineering
COURSE PROGRESSION CHART

YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW558 Electronic Systems
BEng (Honours) – NFQ Level 8

CW527 Electronic Engineering
BEng – NFQ Level 7

CW568 Aerospace Engineering
BEng (Honours) – NFQ Level 8

CW507 Aircraft Systems
BEng – NFQ Level 7

CW548 Mechanical Engineering
BEng (Honours) – NFQ Level 8

CW517 Mechanical Engineering
BEng – NFQ Level 7

CW578 TV and Media Production
BSc (Honours) – NFQ Level 8

CW547 TV and Media Production
BSc – NFQ Level 7

Common First Year

Common First and Second Years

Common First Three Years

Please see course pages for full details on individual progression paths.
**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 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 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 third-level institutions.

**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 (NFQ Level 6) after Year 2 or a Bachelor of Engineering in Aircraft Systems (NFQ Level 7) after Year 3.

**What subjects will I study?**

**YEAR 1**

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<td>Introduction to Aircraft Design</td>
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<td>Piston Engine</td>
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<td>Elective Group: Avionics</td>
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<td>Instrument and Autopilot Systems</td>
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<td>Radio Communication and Navigation Systems</td>
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<td>Elective Group: Rotary</td>
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<td>Project 3 (Mechanical)</td>
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<td>Instrument and Autopilot Systems</td>
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</table>

**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 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 skill sets in the areas of aerodynamics, propulsion, aircraft networks, flight dynamics, control systems, aircraft leasing, embedded systems and project design.

**YEAR 1**

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

**YEAR 2**

- Digital Techniques
- Instrument Systems
- Mathematics 2
- Project 2 (Digital)
- Computer Applications
- Human Factors in Aviation
- Materials and Hardware
- Maintenances Practices
- Project 2 (Mechanical)

**YEAR 3**

- 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: Avionics
- Project 3 (Avionics)
- 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**

- 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

**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 in Aviation
  - Materials and Hardware
  - Maintenances Practices
  - Project 2 (Mechanical)

**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: Avionics
  - Project 3 (Avionics)
  - 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

**WHAT IS AEROSPACE ENGINEERING?**

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  - 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 in Aviation
  - Materials and Hardware
  - Maintenances Practices
  - Project 2 (Mechanical)

**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: Avionics
  - Project 3 (Avionics)
  - 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

**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
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  - Project 2 (Digital)
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**YEAR 3**

- Mandatory Subjects
  - Aviation Legislation
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  - Mathematics 3
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**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
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 (NFQ Level 6) after 2 Years.
What is Electronic Systems?
Electronic systems are at the heart of everyday life at home, at work, in our cars, 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 subjects will I study?

**YEAR 1**

*Mandatory Subjects*
- Introduction to Electronics
- Principles of Electricity
- Engineering Science
- Mathematics 1
- Technical Communications
- System Design
- Fabrication

**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 II
- Embedded Linux Development

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, telecommunications 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

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.
Bachelor of Engineering (Honours)

Mechanical Engineering

**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:
  - Bachelor of Engineering - Mechanical Engineering - (NFQ Level 7) after Year 3.

**PLACES POINTS DURATION WORK PLACEMENT PROGRAMME DIRECTOR**

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Joe Dillane
BEng (Hons), MBS, CEng, MIEI, MA, T&L
E: joe.dillane@itcarlow.ie
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
- Design and Manufacture
- Energy Systems 2
- 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

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 workshops and practical exercises.

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) in 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.
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.

Students of this course will also benefit from the Institute’s recent investment in 4K cameras and suite of digital media studios.

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 commissioning and broadcasting.

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

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. Our lecturers include Scriptwriters, TV and Radio Producers, Directors, Animators, Editors and Camera Operators.

Students of this course will also benefit from the Institute’s recent investment in 4k cameras and suite of digital media studios.

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.
"I love my course".

Sandra Nyarko
Civil Engineering Student

Faculty of Engineering
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HEAD OF FACULTY
Dr Frances Hardiman
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HEAD OF DEPARTMENT OF BUILT ENVIRONMENT AND EXTENDED CAMPUS
Eoin Homan
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E: eoin.homan@itcarlow.ie

Visit itcarlow.ie to see our full story videos.
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<td>Bachelor of Engineering (Honours) in Civil Engineering</td>
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<td>Bachelor of Engineering in Civil Engineering</td>
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<td>CW428</td>
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<td>CW407</td>
<td>Bachelor of Science in Architectural Technology</td>
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<td>CW438</td>
<td>Bachelor of Science (Honours) in Construction related areas</td>
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<td>Bachelor of Science (Honours) - Common Entry (CEY)</td>
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<td>Bachelor of Science (Honours) in Quantity Surveying (QSY)</td>
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<td>Bachelor of Science (Honours) in Facilities and Building Services Management (FBS)</td>
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<td>CW417</td>
<td>Bachelor of Science in Construction Management with Building Services</td>
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</table>

Apprenticeship Courses
Professional Bodies
Engineering School Initiatives
Graduate Profiles
Please see course pages for full details on individual progression paths.
What is Civil Engineering?
Civil engineering deals with the built environment and encompasses much of what defines modern civilization. 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 as an engineering professional.

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 specialised 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.
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
BIM for Civil Engineers
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 – allowing graduates to 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 geo/environmental 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.
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 third-level institutions.

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 specialised 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), P Hegarty & Sons, BAM Contractors, SISK Group.
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.
Bachelor of Science
Architectural Technology

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?

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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 placement (Year 3) programmes.
• Exit Award: Higher Certificate in Science in Architectural Technology (NFQ Level 6) after Year 2.
Bachelor of Science (Honours) in Construction

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

**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

**YEAR 4**

**Mandatory Subjects**
- Measurement, Tendering and Valuation
- Facilities and Building Services Management
- Building Economics
- Law, Procurement and Contract Practice
- Professional Practice Management
- Work Placement
- Dissertation

**What is this course about?**

It is an exciting time to study construction in Ireland. The industry accounts for one-tenth of the country’s GDP and is a substantial employer. There are more jobs in the construction industry than there are graduates. This means that students from our courses regularly benefit from better job prospects, more opportunities to advance in their careers and better starting salaries.

Turning a building design into a completed project is a complex challenge. It requires the careful management of experts from a range of professions and trades who, together, will liaise with clients and end users. Students will develop transferable talents, including communication, leadership, organisational skills and creative problem solving in an open and inclusive learning environment.

Building Information Modelling (BIM) is a key focus on the course. BIM is a computer-based design system that enables clients, constructors and other parties to collaborate on projects, physically and virtually. Students will participate in a number of interesting visits to residential, commercial, pharmaceutical and industrial facility sites. To enhance their experiential learning, students will also undertake a work placement between Years 3 and 4 in their chosen area of specialism.

**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 while specialising in the 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.
What is Quantity Surveying?
Quantity Surveying is the profession responsible for the management and control of all aspects of costs on a construction project.

This course teaches students to not only evaluate and manage the build costs, but also assess the running and whole life costs of a project.

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

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

Students will be involved in group coursework that will allow them to demonstrate economically and technically viable options on construction projects, from inception through to completion.

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 building contractors, local authorities and government departments.

Employment opportunities also arise within the estimating function of general or specialist building contracting firms.

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.

Lecturers bring over 20 years experience covering this important aspect of modern and complex building projects.

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 Society of Chartered Surveyors Ireland (SCSI).
• Students visit commercial, pharmaceutical and industrial facility sites during the course.
• Highly practical course with experiential ‘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.
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 specialised building services laboratories and workshops. Students visit commercial, pharmaceutical 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
- 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.
What is Construction Management?

It is an exciting time to study construction in Ireland as the National Development Plan and the National Planning Framework are set to reshape Ireland over the next two decades. There are currently more jobs in the construction industry than there are graduates. This means that students from our courses regularly benefit from better job prospects, more opportunities to advance in their careers and better starting salaries. Students will develop the necessary skills in management to deliver projects safely, on time, on budget and to the highest quality.

The complexity of construction projects requires professionals who have expertise in construction management and can work effectively with people from different cultural backgrounds and construction disciplines. Students will learn to develop their intellectual and practical competence through creative problem solving in an open and inclusive learning environment. Students develop a detailed knowledge of building services systems coordination and the appropriate usage of sustainable building energy systems in recognition of these key skillsets in the construction sector.

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

After completing this course, students will have a broad range of knowledge of the legal, technical, managerial, economic, social and environmental aspects of construction projects, and will be able to confidently manage construction projects in the commercial, industrial and residential building sectors.

The construction sector offers excellent and varied employment options for graduates at home and abroad. The course prepares graduates for exciting and varied careers at a managerial or technical level with a diverse range of employers within the rapidly evolving construction sector.

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

Developing student competency in Building Information Modelling (BIM) is a major focus of our course. Students will also learn about the immediate and long-lasting effect which construction activities have on the environment, and discover sustainable and environmentally sound construction methods and innovative management practices.

Special features of this course

• Team-based practical project completed requiring interaction with existing building owner/operator and utilising leading edge construction project management techniques and BIM software.
• 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 project and experiential learning emphasis throughout the course.
• Exit award: Higher Certificate in Science in Construction Technology (NFQ Level 6) after Year 2.
Apprenticeship Courses

HEAD OF FACULTY
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E: frances.hardiman@itcarlow.ie

HEAD OF DEPARTMENT OF BUILT ENVIRONMENT AND EXTENDED CAMPUS
Eoin Homan
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T: 059 9175403
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.
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 allocates the individual to a Training Centre and 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.

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**
Responsibility for the operation and management of national power stations and power distribution networks.

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

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

**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.

**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.

**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 the 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.

Geo Driller Apprenticeship

**INFNO Level 6**

The Geo Driller apprenticeship is a new two-year course which includes off-the-job training at Institute of Technology Carlow with the remaining time spent training on-the-job.

**What is Geo Drilling?**

Geo drilling extracts data required by built environment professions from the subsurface in the case of infrastructure development. It also explores the potential for natural resources by drilling into geological features. In addition, geo drilling facilitates the sustainable development of natural resources, in the areas of geothermal energy and ground water extraction.

**Applications**

Applications to the programme can only be submitted by registered Employers.

FOR FURTHER INFORMATION CONTACT

SOLAS or Head of Department
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E: eoin.homan@itcarlow.ie

Faculty of Engineering
Department of Built Environment and Extended Campus
T: 059 9175403
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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 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.

Society of Chartered Surveyors Ireland
The BSc (Honours) in Quantity Surveying meets all the requirements of the Society of Chartered Surveyors Ireland (SCSI) and is accredited by them. The SCSI is a worldwide recognised professional body. The SCSI matrix of competencies forms the pillar of the Quantity Surveying course. In order to begin your training to become a Chartered Quantity Surveyor, you must hold a qualification from an accredited institution.

Royal Institute of Chartered Surveyors (RICS)
Royal Institute of Chartered Surveyors is a global professional body promoting and enforcing the highest international standards in the valuation, management and development of land, real estate, construction and infrastructure. 

The BSc (Honours) in Quantity Surveying meets all the requirements of the Society of Chartered Surveyors Ireland (SCSI) and is accredited by them.
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.
Faculty of Engineering
Graduate Profiles

Lisa Sills
TV and Media Production

What did you like about the course?
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 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.

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.

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 that 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?
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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.

Clare Dowling
Civil Engineering

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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.

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.

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.
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.

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 were a great help in my present job.

What are you doing now?
I am currently doing a four-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.
"I don’t think I would have come as far somewhere else".

Ailish Kavanagh
Software Engineering Student
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<td>Bachelor of Science in Cybercrime and IT Security</td>
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FACULTY OF SCIENCE

Department of Computing
Please see course pages for full details on individual progression paths.
What is Cybercrime and IT Security?
IT security is the practice of safeguarding information from unauthorised access and modification. 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 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 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
- Cryptography
- 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

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
- Cryptography
- 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

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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.

Special features of this course
- Students follow 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.
- Exit Award: Higher Certificate in Science in Computing and Risk Management (NFQ Level 6) after Year 2.
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
- Cryptography
- Penetration Testing (Ethical Hacking)
- Work Placement/Project

What is Cybercrime and IT Security?

Cybercrime is illegal activity carried out with technology. IT 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.
Bachelor of Science (Honours)
Computing in Interactive Digital Art and Design

What is Interactive Digital Art and Design?
Interactive Digital Art and Design is one of the most creative careers within the technology industry. As concept creators, graduates will have direct influence on product design. User-focused design is critical in industries such as games, application development, entertainment media, simulation, virtual reality, animation and film production.

This course provides graduates with the skills required to become a professional digital artist and application developer. They will acquire skills in concept design, art production and graphics programming. On completion, graduates will have produced numerous concepts for games, applications and entertainment media.

Lectures and course practicals cover industry standard tools and technologies including:
• Concept Design: Balsamiq, Sketch, and Invision
• 2D Art: Photoshop, Illustrator
• 3D Art: 3D Studio Max, Blender, Maya, Zbrush
• Programming Languages: C++, Javascript, Python and HTML5.

What will I be able to do when I finish the course?
As this programme is focused on user centred design graduates will develop skills in 2D and 3D Interactive Art creation, User Experience Design, User Interface Design and Programming.

Graduates can work as 2D Concept Artists, 3D Concept Artists, Technical Artists, User Experience Designers, User Interface Designers and User Interface Programmers.

Course participants will be visual design literate within the interactive digital art space and able to effectively use colour, form, light and composition. Graduates will be ready to contribute to the development and preparation of prototypes and style determination of games, applications and entertainment media.

Further studies
Graduates have the option of progressing to postgraduate studies at either Masters or Doctoral level within the GameCORE or Research centre at the Institute of Technology Carlow or elsewhere. Graduates are also eligible to pursue MSc or MA programmes at Institute of Technology Carlow.

Special features of this course
• Institute of Technology Carlow’s final year project showcase is attended by leading employers in creative industries.
• Students will develop interactive art within a collaborative environment with an emphasis on teamwork, group work and project work throughout the programme.
• Work placements incorporated into Year 3 and are offered with leading national and international companies, students may also opt to complete a portfolio project.
• The department maintains an international perspective through widespread collaboration with other computing departments and higher education providers with active research links with Germany, Netherlands, France, China, Finland, Norway, Hungary and UK.
What subjects will I study?

**YEAR 1**

*Mandatory Subjects*
- Concept Art and Animation
- Games Studies
- Human Computer Interaction
- Programming
- Mathematics

**YEAR 2**

*Mandatory Subjects*
- Digital Media Design
- Design Psychology
- User Interface Prototyping
- User Interface Programming
- Web User Interface Design
- Project Management

**YEAR 3**

*Mandatory Subjects*
- Creative Studio
- Interactive Content Creation
- User Experience Measurement
- Advanced User Interface Programming
- Business Processes

*Electives*
- Work Placement
- Project

What is Interactive Digital Art and Design?

This course equips graduates to work in one of the most creative careers within the technology industry and the skills required to become a professional digital artist and application developer. User focused design is critical in industries such as games, application development, entertainment media, simulation, virtual reality, animation and film production and as concept creators, graduates will have direct influence on this design.

Students on this course will cover the following industry standard tools and technologies during lectures: Concept Design; 2D Art; 3D Art and Programming Languages. On completion, they will have produced numerous concepts for games, applications and entertainment media.

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

Graduates will be equipped with the knowledge and skills in 2D and 3D Interactive Art creation. User Experience Design, User Interface Design and Programming, and will be qualified to take up a variety of roles such as 2D and 3D Concept Artist, Technical Artist, User Experience Designer, User Interface Designer and Programmer.

Students will be visual design literate within the interactive digital art space and be able to effectively use colour, form, light and composition. Graduates will be ready to contribute to the development and preparation of prototypes and style determination of games, applications and entertainment media.

Further studies

Graduates are eligible to progress to Bachelor of Science (Honours) in Computing in Interactive Digital Art and Design and on graduation to either Masters or Doctoral level within the gameCORE Research Centre at Institute of Technology Carlow or elsewhere.

Special features of this course

- Students will develop interactive art within a collaborative environment with an emphasis on teamwork, group work and project work throughout the programme.
- Work placements incorporated into Year 3 and are offered with leading national and international companies. Students may also opt to complete a portfolio project.
- The department maintains an international perspective through widespread collaboration with other computing departments and higher education providers with active research links with Germany, Netherlands, France, China, Finland, Norway, Hungary and the UK.
Bachelor of Science (Honours)
Computer Games Development

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 finished game concepts in a playable form.

Lectures and course practicals cover game industry development technologies, including: programming languages (C++, C#, Javascript, Python and HTML5) game engine and frameworks (Unity 3D, Unreal Engine, SFML, SDL, OpenGL and DirectX) peripheral technology (Oculus Rift and HTC Vive).

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?

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<thead>
<tr>
<th>YEAR 1</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td></td>
<td>Concept Art and Animation</td>
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<td>Games Studies</td>
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<td>Human Computer Interaction</td>
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<td>Programming</td>
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<tr>
<th>YEAR 2</th>
<th>Mandatory Subjects</th>
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<td>Motion Graphics</td>
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<td>UI Programming</td>
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<td>Computer Architecture</td>
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<td>Programming</td>
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<td>Gameplay Programming I</td>
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<td>Software Engineering</td>
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<tr>
<th>YEAR 3</th>
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<td>3D Graphics</td>
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<td>Gameplay Programming II</td>
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<td>Project I</td>
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<td>Developing for Game Devices</td>
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<td>Web Development and Databases</td>
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<td>Data Structures and Algorithms</td>
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<td>Work Placement</td>
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<td>On-line Gaming Technologies</td>
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<td></td>
<td>Artificial Intelligence for Games</td>
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<td>Project II</td>
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</table>

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:
  - 2019 Games Fleadh: Game Studio Ireland Challenge.
  - College Cup Champions and winners of four other awards.
  - GameCraft 2019: Recipient of first, second and third prize.
- 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, DIGIT Games Studios and Microsoft.
- Exit Award: Bachelor of Science in Computer Games Programming (NFQ Level 7) after Year 3.

Games Fleadh 2019 Champions: Five teams win awards for Best Game, Best Multiplayer Game, Best Artificial Intelligence, Best Gameplay and Robocode champions.
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 4

Mandatory Subjects
- Secure Application Development
- Data Science and Artificial Intelligence
- Software Engineering
- Entrepreneurship
- Distributed and Concurrent Device Development
- Project

What is Software Development?

Software development is the creation and maintenance of software products. These products range from mobile phone apps to highly complex software control systems such as those found in self driving cars. In the broad sense, it includes everything from initial concept identification and design through to the final production of software. It can include identification of required software, analysis of software requirements, system 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 and an industry work placement. Year 4 concentrates on state-of-the-art, 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 in Ireland and around the world 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 the Institute of Technology Carlow or elsewhere. Graduates are also eligible to undertake the MSc in Data Science or the MSc in IT Management 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.
Bachelor of Science  
Software Development  

PLACES | POINTS | DURATION | WORK PLACEMENT | PROGRAMME DIRECTOR  
--- | --- | --- | --- | ---  
25 | 251 | 3 YEARS | YES | Dr Chris Meudec, BSc (Hons), MA (TL), PhD, French Maitrise  
E: chris.meudec@itcarlow.ie  

What subjects will I study?  

**YEAR 1 (Common 1st Year)**  
Mandatory Subjects  
- Mathematics  
- Programming  
- Computer Hardware  
- Operating Systems  
- Networking  
- 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  

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

After completing this course, graduates will be able to join the growing and vibrant software industry in Ireland or abroad with large multinationals or smaller companies in a variety of roles, including: software developer, software tester and mobile or web developer. Graduates have found employment with leading organisations, including: UNUM, Intel, IBM, Microsoft, HP, DoneDeal, AOL and Amazon. Graduates will also be eligible to proceed to the fourth year of BSc (Honours) in Software Development at Institute of Technology Carlow.

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.  
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- Exit Award: Higher Certificate in Computing (NFQ Level 6) after Year 2.
Bachelor of Science (Honours)
Information Technology Management

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

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.

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).
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.

• 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.

What is IT Management?
The efficient management of Information Technology is central to organisations. 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.

What subjects will I study?

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
Higher Certificate in Science
Computing (with Options in Applications or Programming)

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.
Faculty of Science
Graduate Profiles

Darren Sweeney
Computer Games Development

What did you like about the course?
The course had a lot of practical classes and projects that cemented the theory shown in lectures which allowed for a more engaging experience, while having lectures that were incredibly supportive and easy to approach with questions. There was a lot of opportunities to go to networking events such as Games Fleadh and Global Game Jam to build up a portfolio of work and meet other students and industry developers.

What are you doing now?
I work at the EA DICE studio on the Frostbite engine team as a Rendering Engineer. Frostbite is used as the engine for a diverse set of games such as FIFA, Battlefield, Star Wars Battlefront, Dragon Age and more. My job as a rendering engineer is to develop and maintain high-quality rendering systems for multiple AAA games. Working closely with game team engineers and artists to create highly productive and effective art and content workflows.

How did the course prepare you for the job you are doing now?
The course covered a lot of industry must know knowledge to get hired in the game industry such as the C++ programming language, data structures, mathematics and algorithms. I use a lot of this knowledge every day at my job and it’s the basis which I build on each day to improve and progress in my career.

Ciara McMahon
IT Management

What did you like about the course?
The course has a diverse range of subjects that touch all bases of the industry. I enjoyed the practical element and continuous assessment throughout the four years of the course. The small class sizes ensured access to lecturers who are always encouraging and easy to approach.

What are you doing now?
I work as a Cloud Support Associate (CSA) at Amazon Web Services (AWS) Premium Support, where I help customers from a diverse range of industries from around the world leverage the latest cloud technologies. I work in a fast-paced environment that is continually evolving. Day to day I help customers solve real-world complex technical problems. The support I provide ranges from help during critical event launches, applying advanced troubleshooting techniques and assisting with cloud architecture consultancy to provide unique solutions to our customers use cases.

My role allows me to work with the AWS Graduate program as an interviewer, trainer and mentor to incoming graduates and I help them progress in their career.

I am a strong advocate for Women in Tech (WIT) & STEM. I attended the Institute’s Women in Engineering and Computing seminar where I spoke as a keynote speaker about my ongoing journey into IT.

How did the course prepare you for the job you are doing now?
The unique blend of management and technology based modules allowed me to develop critical-thinking, communication and collaborative skills which are essential to work within the industry. Several of the projects I completed for my course have tied into real world examples of my career. I found one of the biggest challenges and the most worthwhile was my six month internship. During this time I was able to improve my practical skills, develop new areas of interest whilst helping me to decide which area I would like begin my career in IT.
Gerard Morris  
Software Engineering

What did you like about the course?
For me, I liked that the course gave students good exposure to a lot of languages and technologies. It also put a lot of focus on mixing practical with theoretical, so you got to apply in labs what you were learning in lectures.

What are you doing now?
I am currently working as a Senior Software Engineer with Netwatch in Carlow. My current role exposes me to a cutting-edge technology stack with a lot of opportunities for developers to really own and drive the design of features. We follow the Agile process and get to work with technologies such as Azure, Docker, Kubernetes, Xamarin, Microservices and so much more. The team itself has a nice mix of experience and backgrounds, and being a senior developer, I often help others and try to push the latest industry best practices.

How did the course prepare you for the job you are doing now?
During my time at Institute of Technology Carlow I feel I got good exposure to a lot of languages, which really helped me when I graduated as it gave me a lot of options for careers. In the end, I got the first job I applied for upon graduation, and was one of several IT Carlow students to get hired at the time. The computing department at IT Carlow is highly thought of in industry and I have found graduates from here in various companies that I have worked in all around Ireland over the past decade.

Eddy Fakhry  
Software Development

What did you like about the course?
The ease of access to the lecturers and their constant availability was a great advantage. Everyone gets to know you on first name basis and you feel that your passion for the course is appreciated and rewarded. Whether fresh out of school or a mature student, it is always a welcome confidence boost when you feel that the people in charge actually care.

What are you doing now?
I am a senior software engineer for the Financial Reporting of the Prime Brokerage Margin Risk Technology at Bank of America Merrill Lynch. A fast paced and challenging environment dealing with the daily critical changes in the global financial markets and reporting financial results to our global prime brokerage clients.

How did the course prepare you for the job you are doing now?
Team work is something that the IT tries to instil in you as a mindset. Team projects start from the onset in the course and this proved critical to quickly adapt to my role. As well as that, the broad spectrum of subjects gave me a wider understanding and a better perspective on software development as a tool for business. The course is not limited to technical subjects and this helped me greatly in being able to conduct business conversations related to my role with managing executives.
"The very first day, I knew this was the place for me".

Paul McNamara
Science Student

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Department of Science and Health Progression Chart

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<td>CW108</td>
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<td>– applicants will choose one of the following options:</td>
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<td>Bachelor of Science (Honours) - Common Entry (CEY)</td>
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<td>CW126</td>
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Graduate Profiles
Please see course pages for full details on individual progression paths.
Bachelor of Science (Honours)  
Sport and Exercise Science

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 biomechanics, physiology and psychology. Students undertake a 14-week national or international placement within the sport science sector.

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

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 the 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 a love of sport with a science education and career in a related field. The course also focuses on physical activity and exercise for health.

Possible careers include:
- Sport and Exercise Physiologist
- Exercise Professional
- Biomechanist
- Performance Analyst
- Sport and Exercise Psychologist
- Sport and Fitness Coach
- Sport Development Officer.

Graduates are eligible to apply for the taught MSc in Strength and Conditioning and MSc/PhD research programmes at IT Carlow. Opportunities also exist in Irish, UK and International universities 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 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

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. Previous work placement sites have included the Leinster and Connacht rugby teams, Stanford University, Reading Football Club, Swedish Winter Sports Research Centre.
- Fully equipped 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.
- Students can transfer to CW148 Bachelor of Science (Hons) Strength and Conditioning after Year 2.
- Exit award: Higher Certificate in Physiology and Sport Science (NFQ Level 6) after Year 2.
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

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 national or international sport organisations.

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 MSc/PhD 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) and Higher Certificate in Physiology and Sports Science (NFQ Level 6).
- Engagement with community groups, local schools and institute events.
- Students can transfer to CW138 Bachelor of Science (Hons) Sport and Exercise Science after Year 2.
Bachelor of Science (Honours)
Sport Rehabilitation and Athletic Therapy

What is Sport Rehabilitation and Athletic Therapy?
Participation in competitive and recreational sport in recent years has led to an increase in sports-related injuries. Sports rehabilitation focuses on both the 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.

What subjects will I study?

YEAR 1
**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

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.
- Exit award: Higher Certificate in Physiology and Health Science (NFQ Level 6).

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

Graduates are eligible to apply for the MSc in Strength and Conditioning and for MSc/PhD research courses at Institute of Technology Carlow. They can also transfer to a wide range of taught and research postgraduate courses at MSc and PhD Level, nationally and internationally. A number of graduates progressed to the 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 exam options 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).
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.

Graduates of Physiology and Health Science (CW106) may apply for entry to Year 3 CW188.
**Higher Certificate in Science**

**Pharmacy Technician Studies**

**What is a Pharmacy Technician?**

A pharmacy technician is a key member of the pharmacy staff, involved in ensuring the smooth 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 undertake weekly work experience.**

In Year 2 students benefit from a six-month work placement in a hospital or community pharmacy.

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

Graduates are employed as Pharmacy Technicians in community and hospital settings. Graduates of Pharmacy Technician Studies may go on to study a Level 7 in this area. Some graduates go on to pursue pharmacy degrees in Ireland, Northern Ireland and the UK and may also progress a range of science courses at Institute of Technology Carlow.

**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

**YEAR 2**

**Mandatory Subjects**

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

**Students attend lectures and also undertake weekly work experience.**

- 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.
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 - Bachelor of Science in Biosciences or Analytical Science (NFQ Level 7) after Year 3.
- Exit award – Higher Certificate (NFQ Level 6) after Year 2.

**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 - Bachelor of Science in Biosciences or Analytical Science (NFQ Level 7) after Year 3.
- Exit award – Higher Certificate (NFQ Level 6) after Year 2.
Bachelor of Science (Honours)

Common Entry (CEY), Biosciences with Biopharmaceuticals (BPH), Brewing and Distilling (BRD) or Pharmaceuticals and Drug Formulation (PDF)

Biosciences with Biopharmaceuticals (BPH)

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 sourcing and presenting scientific information in advance of the Year 4 research project. A 12-week work placement is an integral part of the course.

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 and pharmaceutical companies.

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

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

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

### 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 experiencing rapid growth. Statistics include:

- The growing Irish beer sector employs 2,000 people and supports thousands of farming families
- Direct employment in distilling is due to grow by 30% by 2025
- Massive growth in microbreweries will see 100 by 2025
- €1 billion will be invested in the Whiskey industry to grow market share by 300%
- 28 distilleries are 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, which is 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 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 may 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 also start their own company. Skills can be utilised 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.

Entry to Bachelor of Science (Honours) in Brewing and Distilling can be via CW128 or CW108 (BRD).

### 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

### Entry Requirements
- **Places**
  - CW108: 18
  - CW128: See CAO.ie/points
- **Points**
  - CW128: See CAO.ie/points
- **Duration**
  - 4 YEARS
- **Work Placement**
  - YES

### Programme Director
- Dr David Ryan
  - BSc (Hons), MSc, PhD
  - E: david.ryan@itcarlow.ie

### Programme Overview
- Bachelor of Science (Honours) in Brewing and Distilling (BRD)

### Special Features
- 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.
What is Pharmaceutics and Drug Formulation?
Pharmaceutics is the process of turning a chemical molecule into a medication to be used safely and effectively by patients. This new programme offers a solid foundation in chemistry and analytical science that will allow graduates to make a significant contribution to the pharmaceutical industry. The programme has been designed in consultation with industry experts, so students will graduate with core skills that are highly sought after. It has a strong focus on practical laboratory experience and employability, preparing students for careers in the pharmaceutical industry, and academic or industrial research.

Students will become familiar with a range of analytical techniques including identification, validation, optimisation of small molecules and the importance of pharmacokinetics and pharmacodynamics. Our extensive range of chemistry equipment allows performance of analysis techniques including electrochemical analysis; high-performance liquid chromatography (HPLC); gas chromatography (GC) and mass spectrometry (MS). A highlight of the course is the completion of an original research project relevant to the workplace. The programme also includes a 12 week work placement.

What will I be able to do when I finish the course?
Ireland is home to some of the world’s largest pharmaceutical companies and continues to develop market-leading medicines. Graduates will be skilled pharmaceutical and analytical scientists, knowledgeable in drug formulation and highly employable in areas such as: laboratory and technical work, product development and quality control.

Graduates can progress to MSc and PhD courses at the Institute of Technology Carlow, or at third-level institutions and research centres.

What subjects will I study?

YEAR 2
Mandatory Subjects
- Instrumentation
- Quantitative Methods and Quality Control
- Analytical/Inorganic Chemistry
- Organic and Physical Chemistry
- Pharmaceutical Science
- Biomolecules

YEAR 3
Mandatory Subjects
- Quality Management, Experimental Design and Data Management
- Pharmaceutical Processing and Process Analytical Technologies
- Spectrochemical Methods
- Sampling and Separation Science
- Analytic Project and Workplace Planning
- Environmental Science
- Physical Chemistry
- Pharmaceutical Microbiology

YEAR 4
Mandatory Subjects
- Assay Development
- Drug Stability
- Research Project in Pharmaceutics
- Regulatory Affairs
- Work Placement
- Pharmaceutical Formulation
- Advanced Data Analysis and Modelling
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

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 agents
• 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

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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.
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, engaging students to gain essential work-ready skills.

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) in Pharmaceutics and Drug Formulation with many graduates progressing to MSc or PhD level.

What subjects will I study?

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>Mandatory Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Biology</td>
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<tr>
<td>Chemistry</td>
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<tr>
<td>Physics</td>
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<tr>
<td>Laboratory Science</td>
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<tr>
<td>Quantitative Methods</td>
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<tr>
<td>Current Concepts in Science</td>
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</table>

<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td>Instrumentation</td>
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<tr>
<td>Quantitative Methods and Quality Control</td>
<td></td>
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<tr>
<td>Analytical and Inorganic Chemistry</td>
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<tr>
<td>Organic and Physical Chemistry</td>
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<tr>
<td>Pharmaceutical Science</td>
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<tr>
<td>Biomolecules</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 3</th>
<th>Mandatory Subjects</th>
</tr>
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<tbody>
<tr>
<td>Quality Management, Experimental Design and Data Management</td>
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<td>Sampling and Separation Science</td>
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<td>Pharmaceutical Processing and Process Analytical Technologies</td>
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<td>Pharmaceutical Microbiology</td>
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</tr>
<tr>
<td>Environmental Science</td>
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</table>

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 PDF.
- Exit award: Higher Certificate in Science - Applied Chemistry (NFQ Level 6) after Year 2.
Higher Certificate in Science

**Applied Biology OR Applied Chemistry**

**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 more than 50% of the course dedicated to practical, students gain essential 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 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; Pharmaceutical Science and Biomolecules.

**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 and healthcare industries. However, many students choose to continue their studies at Institute of Technology Carlow to degree level, studying Biosciences, Analytical Science, Pharmaceutics and Drug Formulation.

**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).

**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 and Inorganic Chemistry
- Organic and Physical Chemistry
- Pharmaceutical Science
- Biomolecules

**Programme Director**

Dr Dina Brazil
BA Mod, MA (TL), PhD
E: dina.brazil@itcarlow.ie

**Places**

18

**Points**

198

**Duration**

2 YEARS
Jack Phelan
Strength and Conditioning

What did you like about the course?
I would say the thing I liked most about the course was how multi-faceted it was. It gave me an in-depth insight into so many disciplines of sport science, which then allowed me to choose which area I wanted to specialise in, which was strength and conditioning.

What are you doing now?
I am the Assistant Strength and Conditioning Coach for the senior team at the Dragons Rugby Club in Wales. This involves designing and running weights and conditioning programmes for all senior players. In addition to this, I have to monitor running loads with the help of our GPS analyst, track our weights progressions and work alongside our physio department to make sure our ‘Return to Play’ athletes are getting the correct amount of progressive loading to ensure they are in a good position to re-join the main group post injury.

How did the course prepare you for the job you are doing now?
The three biggest things for me were the class presentations, the coaching and the group work at Institute of Technology Carlow. Presenting in front of large groups was great for my confidence and something I now have to do every day. Running speed sessions, weights sessions and multi-sport sessions for my class taught me how to control a group and gave me great coaching cues that I still use today. The group work was a great way to learn how to work with people towards the same goal which is essentially what I now have to do every day with my team.

Maria Kehoe
Science

What did you like about the course?
I found the lecturers excellent, very professional, approachable and encouraging. The lecturers love what they do and, as a result, are passionate about their professions. The one-to-one support lecturers offer is exceptional and continue after the student graduates in the form of advice with professional decisions if required.

The science courses at Institute of Technology Carlow ensured I made friends for life. It has many advantages over other courses. You spend at least 12 hours per week in a practical setting with your colleagues. I felt comfortable from the moment I walked into the college and I would be delighted to recommend this course to any potential students.

What are you doing now?
I am working in EirGen Pharma in Waterford as a Graduate Analytical Development Chemist.

How did the course prepare you for the job you are doing now?
Looking back at my time in the Institute I can see numerous advantages to studying science at Institute of Technology Carlow. There are many aspects throughout my four years that have helped prepare me for my current job. The practical classes give students many invaluable skills such as working as a group, the ability to problem solve and think quick, work under pressure and efficiently manage one’s time. Individual analytical projects allow students to explore their own ideas and have fun in the lab whilst continuously learning.

I found my work placement a huge advantage to me because it gave me confidence in my own ability and motivated me to reach my full potential.
Fiona Hill
Physiology and Health Science

What did you like about the course?
From the beginning, I loved the enthusiastic lecturers and their lectures! They have made a lasting impression on me and set the bar high for other educational institutes to reach. I knew I was going to apply to UCAS to gain entry into a physiotherapy course after graduation. The Head of the Department at Institute of Technology Carlow played a vital role in getting me accepted onto the course and I can never thank her enough. The course is very practical which I really enjoyed. The access to sports science equipment for practical classes was second-to NONE. I have not come across such easy access to sports science technology since. From VO2max testing to blood lactate testing, and everything in between, you'll never get bored. You've to work hard during the course but hard work pays off in the end!

What are you doing now?
After graduating from Institute of Technology Carlow I got accepted into Ulster University to complete my physiotherapy degree. I qualified as a Charted Physiotherapist (BSc Hons Physiotherapy) in 2015. Since qualifying I've worked exclusively in private practice physiotherapy. I've gone on to complete my post graduate training in dry needling and I'm a STOTT trained Pilates instructor. In the last year I've moved to Auckland in New Zealand where I'm continuing my work in private practice physiotherapy. My work at present involves me running my full time clinical diary while teaching Pilates to a range of clients from athletes recovering from injuries to antenatal Pilates. I've plans to complete a Masters in Sports Medicine next.

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.

Stephen Smith
Sport Rehabilitation and Athletic Therapy

What did you like about the course?
The structure, content and focus of the course was 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?
After graduating from Institute of Technology Carlow, I went 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.
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 in which to involve myself: 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 each department work hard to ensure that students have an exciting memorable experience as well as receiving a great education.

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, and 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.

Brian Gleeson
3rd Year Brewing and Distilling Student

Why did you choose this course?
Just when I made the decision to go back to college as a mature student, IT Carlow launched the new Brewing and Distilling degree. Growing up, I always had an interest in science and as home brewing was a big hobby of mine, the course was the perfect match for me to combine my two big passions. I was delighted when I got my place on the course.

What do you like about this course?
I find it really interesting learning about the scientific side of brewing; areas such as the biology of the yeast cell and the metabolic pathways of flavour compounds in certain conditions are really interesting. I love joining the dots and bringing the scientific knowledge gained in the lab back to my home brewing.

The class group has a shared interest in home brewing and fermenting foods and this makes it really enjoyable as we share our knowledge and do ferments and brews together in the Brewing and Distilling Society.

What do you hope to do after this course?
I hope to continue my studies and do an MSc at IT Carlow and I would like to work in the Irish Whiskey industry after this as it has been a major area of growth in Ireland and this is expected to continue.
Major Award Graduates Annually

2,500+
It’s like a home away from home.

Melanie Mynhardt
Marketing Student
## Department of Business Progression Chart

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW908</td>
<td>Bachelor of Business (Honours)</td>
</tr>
<tr>
<td></td>
<td>- applicants will choose one of the following options:</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) - Common Entry (CEY)</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) in Business Management (BMT)</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) in Human Resource Management (HRM)</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) in International Business (INT)</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) in Supply Chain Management (SCM)</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) in Finance and Accounting (FAC)</td>
</tr>
<tr>
<td></td>
<td>Bachelor of Business (Honours) in Marketing (MKT)</td>
</tr>
<tr>
<td>CW938</td>
<td>Bachelor of Business (Honours) in Business with Law</td>
</tr>
<tr>
<td>CW948</td>
<td>Bachelor of Arts (Honours) in Accounting</td>
</tr>
<tr>
<td>CW917</td>
<td>Bachelor of Business</td>
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<td>- applicants will choose one of the following options:</td>
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<tr>
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<tr>
<td></td>
<td>Bachelor of Business in Marketing (MKT)</td>
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<tr>
<td>CW906</td>
<td>Higher Certificate in Business</td>
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<tr>
<td>CW936</td>
<td>Higher Certificate in Accounting</td>
</tr>
<tr>
<td>CW926</td>
<td>Higher Certificate in Business with Law</td>
</tr>
</tbody>
</table>

Graduate Profiles
FACULTY OF BUSINESS AND HUMANITIES

Department of Business
COURSE PROGRESSION CHART

<table>
<thead>
<tr>
<th>CW938</th>
<th>Business with Law</th>
<th>BB (Honours) – NFQ Level 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW926</td>
<td>Business with Law</td>
<td>Higher Certificate – NFQ Level 6</td>
</tr>
<tr>
<td>CW708</td>
<td>Law (LLB)</td>
<td>Honours Bachelor – NFQ Level 8</td>
</tr>
<tr>
<td>CW706</td>
<td>Legal Studies</td>
<td>Higher Certificate – NFQ Level 6</td>
</tr>
<tr>
<td>CW917</td>
<td>Business</td>
<td>BB – NFQ Level 7 (with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)</td>
</tr>
<tr>
<td>CW906</td>
<td>Business</td>
<td>Higher Certificate – NFQ Level 6</td>
</tr>
<tr>
<td>CW908</td>
<td>Business</td>
<td>BB (Honours) – NFQ Level 8 (Common Entry (CE) with options after Year 2)</td>
</tr>
<tr>
<td>CW936</td>
<td>Accounting</td>
<td>Higher Certificate – NFQ Level 6</td>
</tr>
<tr>
<td>CW948</td>
<td>Accounting</td>
<td>BA (Honours) – NFQ Level 8</td>
</tr>
</tbody>
</table>

Common First and Second Years

Postgraduate Opportunities
Masters or PhD
NFQ Levels 9 and 10
(please refer to www.itcarlow.ie)

Please see course pages for full details on individual progression paths.
Bachelor of Business (Honours)

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

<table>
<thead>
<tr>
<th>PLACES</th>
<th>POINTS</th>
<th>DURATION</th>
<th>WORK PLACEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>270</td>
<td>4 YEARS</td>
<td>YES</td>
</tr>
</tbody>
</table>

**Business – When you apply for Business you must select ONE of the following options: CEY; BMT; HRM; INT; SCM; FAC or MKT**

<table>
<thead>
<tr>
<th>CW908</th>
<th>CEY Common Entry</th>
<th>BMT Business Management</th>
<th>HRM Human Resource Management</th>
<th>INT International Business</th>
<th>SCM Supply Chain Management</th>
<th>FAC Finance and Accounting</th>
<th>MKT Marketing</th>
</tr>
</thead>
</table>

Applicants who select a specific degree option (e.g., CW908 BMT, HRM, INT, SCM, FAC 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 CW908 CEY (Common Entry). All applicants may change their selection up to the end of Year 2, at which point they must confirm their specialism.

**Application procedure**

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

**What is this course about?**

This course equips students with a broad business 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).

Those who have previously selected a specialty may change their option at this stage.

**Course options**

**Common Entry (CEY)**

By choosing ‘CEY’ Common Entry students are applying for a place on the course but postponing their choice of business speciality 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 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 sectors 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.

**Supply Chain Management (SCM)**

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

**Finance and Accounting (FAC)**

Finance and Accounting is a sector that demands graduates with key skills and understanding of the finance context in which businesses operate – the accountancy profession, the business entity, the capital markets and the public sector. Graduates will be equipped to work in areas such as accountancy, banking, financial services and tax.

**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.

**Special features of this course**

- Work placement is an integral part of the course in Year 3.
- All students are 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 (NFQ Level 7) after Year 3.
- Exit Award - Higher Certificate in Business (NFQ Level 6) after Year 2.
What subjects will I study?

YEAR 1
Mandatory Subjects
- Financial Accounting 1
- Quantitative Techniques
- Economics 1
- Management
- Business Applications 1
Plus One Elective
- Communications/Work Placement 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 almost every aspect of modern human society and careers in business are diverse and often highly paid. At undergraduate level, students gain a foundation in many aspects of the business world, before choosing a specialisation.

In the Business Management (BMT) option, Year 3 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 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 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
- Work Placement
Plus One Elective from:
- Strategic HRM
- Enterprise 1
- Business Information Systems 1
- Managerial Economics
- Business English/Project

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
- Corporate Finance

** Erasmus and international students may take Business English/Project instead of the Business Research Methods elective in Year 3.
What is Human Resource Management?
Human Resource Management (HRM) is the function within an organisation that focuses on the recruitment and management of staff and their direction within an organisation. The HRM function deals with issues relating 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 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 HRM 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.

What subjects will I study?
YEAR 3
Mandatory Subjects
Strategic HRM
Organisational Behaviour
Business Finance
Employment Law
Business Research Methods
Work Placement

YEAR 4
Mandatory Subjects
Strategic Management
Contemporary Development in HRM
Applied HRM
Industrial Relations
Dissertation

Plus One Elective
Enterprise
Corporate Finance
Corporate Governance and Business Practice
International Business
The Global Economy

* Erasmus and international students may take Business English/Project instead of the Business Research Methods elective in Year 3.
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 3 study specialist subjects in more detail including: International Marketing; International Business Culture; Business Finance; Business Research Methods; Organisational Behaviour; Work Placement.

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 with 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.
Bachelor of Business (Honours)
Supply Chain Management (SCM)

What is Supply Chain Management?
Supply Chain Management (SCM) 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: 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 3 will study specialist subjects in more detail including: Purchasing and Supplier Management; Inventory and Material Management; Operations Management; Global Logistics and Supply Chain Management; Strategic Procurement 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 the manufacturing sector in a variety of roles, including: 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 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?

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<thead>
<tr>
<th>YEAR 3</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td></td>
<td>Purchasing and Supplier Management</td>
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<td></td>
<td>Inventory and Material Management</td>
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<td>Operations Management</td>
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<td>Business Finance</td>
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<td>Business Research Methods</td>
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<td>Work Placement</td>
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<tr>
<th>YEAR 4</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td></td>
<td>Supply Chain Planning and Control</td>
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<td></td>
<td>Global Logistics and Supply Chain Management</td>
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<td></td>
<td>Strategic Procurement</td>
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<td>Strategic Management</td>
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<td>Dissertation</td>
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<tr>
<th>Elective Options</th>
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<tbody>
<tr>
<td>Corporate Governance and Business Practice</td>
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<tr>
<td>Enterprise</td>
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<tr>
<td>International Economics</td>
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<tr>
<td>Industrial Relations</td>
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<tr>
<td>International Business</td>
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<tr>
<td>Corporate Finance</td>
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</tbody>
</table>

* Erasmus and international students may take Business English/Project instead of the Business Research Methods elective in Year 3.
What subjects will I study?

**YEAR 3**

**Mandatory Subjects**
- Management Accounting
- Financial Accounting 2
- Corporate Finance
- Information Systems
- Corporate Governance and Commercial Law
- Marketing
- Taxation 1

**YEAR 4**

**Mandatory Subjects**
- Advanced Management Accounting
- Audit and Assurance
- Financial Reporting
- Advanced Corporate Finance
- Strategic Management
- Taxation 2

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 bookkeeping to managing balance sheets and income statements. A degree in this area is a great starting point for careers in accounting and financial services across business, banking and consultancy sectors. Those in finance and accounting 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 finance and accounting contexts in which business operates including 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 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.

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, Formation 2 and Professional 1 - all subjects
  - Chartered Accountants in Ireland (CAI)
    - CA Proficiency 1 (CAP 1) – all subjects
  - The Association of Chartered Certified Accountants (ACCA)
    - Applied Knowledge and Applied Skills Level - all subjects
  - The Chartered Institute of Management Accountants (CIMA)
    - Certificate Level – all subjects
    - Operational Level – all subjects
    - Management Level - P2 Advanced Management Accounting and F2 Advanced Financial Reporting
  - Strong emphasis on communications and computing equips graduates with real-world skills required by employers.
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; brand design; customer psychology; market research; 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 and small businesses. A marketing degree equips graduates with the skill set to pursue a variety of careers in marketing and business.

In the Marketing (MKT) option, students study a variety of up-to-date specialist marketing subjects such as: New Product Innovation; Digital Marketing; Brand Management; Integrated Marketing Communications; Market Research; Consumer Psychology; Services Marketing; International Marketing; 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 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.

What subjects will I study?

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<thead>
<tr>
<th>YEAR 3</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td></td>
<td>Services Marketing</td>
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<td></td>
<td>Consumer Psychology and Insights</td>
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<td>Integrated Marketing Communications</td>
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<td>Marketing Research Theory and Practice</td>
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<td>Business Finance</td>
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<td>Plus One Elective</td>
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<td>Selling and Sales Management</td>
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<td>Business English Project*</td>
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<tr>
<th>YEAR 4</th>
<th>Mandatory Subjects</th>
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<tr>
<td></td>
<td>Strategic Management</td>
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<td></td>
<td>Marketing Management</td>
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<td>Client Research Project</td>
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<td></td>
<td>International Marketing</td>
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<td></td>
<td>Category Management</td>
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<td></td>
<td>New Product Innovation</td>
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<td>Plus One Elective</td>
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<tr>
<td></td>
<td>Digital Marketing</td>
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<td></td>
<td>Corporate Governance and Business Practice</td>
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</tbody>
</table>

* Erasmus and international students may take Business English/Project instead of the Business Research Methods elective in Year 3.
Bachelor of Business (Honours)

Business with Law

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.

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.

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
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

*And One Elective From:*
Consumer Protection Law
EU Law

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 degree courses in Business (see CW908 on page 88 or CW708 on page 120).
Bachelor of Arts (Honours)  
Accounting

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.

The course will also provide a foundation for specialised accounting careers, as well as other related careers. Accounting careers typically involve analysing and utilising financial information in order to evaluate a business’s financial position. This can involve anything from basic bookkeeping to managing balance sheets and income statements.

A degree in this area is a great starting point for careers in accounting, financial services across the business, banking and consultancy sectors.

What subjects will I study?

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<thead>
<tr>
<th>YEAR 1</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td></td>
<td>Business Law for Accountants</td>
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<td></td>
<td>Economics</td>
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<td>Financial Accounting 1</td>
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<td>Computer Applications Management</td>
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<td>Quantitative Techniques Communications for Accountants</td>
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<tr>
<th>YEAR 2</th>
<th>Mandatory Subjects</th>
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<tr>
<td></td>
<td>Taxation 1</td>
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<td></td>
<td>Financial Accounting 2</td>
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<td>Information Systems</td>
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<td>Management Accounting</td>
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<td>Corporate Governance and Commercial Law</td>
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<td>Marketing</td>
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<td>Corporate Finance</td>
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<tr>
<th>YEAR 3</th>
<th>Mandatory Subjects</th>
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<td></td>
<td>Advanced Management Accounting</td>
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<td>Advanced Corporate Finance</td>
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<td>Financial Reporting</td>
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<td>Audit and Assurance</td>
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<td></td>
<td>Strategic Management Taxation 2</td>
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</tbody>
</table>

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, Formation 2 and Professional 1 - all subjects
  - Chartered Accountants in Ireland (CAI)
    - CA Proficiency 1 (CAP 1) – all subjects
  - The Association of Chartered Certified Accountants (ACCA)
    - Applied Knowledge and Applied Skills Level - all subjects
  - The Chartered Institute of Management Accountants (CIMA)
    - Certificate Level – all subjects
    - Operational Level – all subjects
    - Management Level - P2 Advanced Management Accounting and F2 Advanced Financial Reporting
  - Strong emphasis on communications and computing equips graduates with real-world skills required by employers.
Bachelor of Business

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

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**What subjects will I study?**

**YEAR 1**

*Mandatory Subjects*
- Financial Accounting 1
- Quantitative Techniques
- Economics 1
- Management
- Business Applications 1

*Plus One Elective*
- Communications/Work Placement 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 *

**YEAR 3**

*Specialism Subjects*
- Business Management (BMT) see page 89
- Human Resource Management (HRM) see page 90
- International Business (INT) see page 91
- Supply Chain Management (SCM) see page 92
- Marketing (MKT) see page 107

* subject to demand

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**Application procedure**

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

**Course options**

Common Entry (CEY)

By choosing "CEY" Common Entry applicants apply for a place on the course but postpone their choice of business speciality 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 and ultimate choices can then be considered in light of academic performance across a range of business subject areas.

Students can 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).

For more information on these specific areas, please refer to page 88.

The progression chart on page 87 also illustrates the progression options in CW908 and CW917.

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**Special features of this course**

- Work Placement is an integral part of the course in Year 3.
- Exit award – Higher Certificate in Business (NFQ Level 6) after Year 2.
- Maximum flexibility enabling students to choose a speciality after Year 2.
Higher Certificate
Business

What is Business about?
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 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 can expect to work in roles such as: Trainee Manager, Personal Assistant, Accounts Assistant, Customer Services Assistant, Bank Official, Sales Representative and 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).

What subjects will I study?

YEAR 1
Mandatory Subjects
Financial Accounting 1
Quantitative Techniques
Economics 1
Management
Business Applications 1

Plus One Elective
Communications/Work Placement 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

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.
Higher Certificate in Accounting

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

What is this Accounting course about?
Accounting identifies, measures and communicates economic information to the managers/owners of a business. It facilitates informed judgements 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 can 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).
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.

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.

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 expansion 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 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 Accounting
- Supply Chain Management
- Financial Accounting 2
- Management

Plus One Elective
- Constitutional Law
- Economics 2
- Management Accounting
- Supply Chain Management
- Financial Accounting 2

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 Accounting
- Supply Chain Management
- Financial Accounting 2
- Management

Plus One Elective
- Constitutional Law
- Economics 2
- Management Accounting
- Supply Chain Management
- Financial Accounting 2

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).
8,448 Learners
851 Staff
3 Campuses
HEAD OF FACULTY
Ms Maebh Maher
BCL, Solr
E: maebh.maher@itcarlow.ie

HEAD OF DEPARTMENT OF SPORT, MEDIA AND MARKETING
Myles Kelly
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E: businessandhumanities@itcarlow.ie
T: 059 9175302

Visit itcarlow.ie to see our full story videos.

“The facilities are top class.”

Colin Dunford
Marketing Graduate
<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>CW908</td>
<td>Bachelor of Business (Honours) in Marketing (MKT)</td>
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<tr>
<td>CW917</td>
<td>Bachelor of Business in Marketing (MKT)</td>
</tr>
<tr>
<td>CW848</td>
<td>Bachelor of Science (Honours) in Digital Marketing with Analytics</td>
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<tr>
<td>CW837</td>
<td>Bachelor of Science in Digital Marketing with Analytics</td>
</tr>
<tr>
<td>CW858</td>
<td>Bachelor of Arts (Honours) in Sports Management and Coaching (GAA, Rugby or Soccer)</td>
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<tr>
<td>CW807</td>
<td>Bachelor of Arts in Sport Coaching and Business Management (GAA)</td>
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<tr>
<td>CW827</td>
<td>Bachelor of Arts in Sport Coaching and Business Management (Soccer)</td>
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<tr>
<td>CW817</td>
<td>Bachelor of Arts in Sport Coaching and Business Management (Rugby)</td>
</tr>
<tr>
<td>CW808</td>
<td>Bachelor of Arts (Honours) in Media and Public Relations</td>
</tr>
</tbody>
</table>

Graduate Profiles
Please see course pages for full details on individual progression paths.
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; brand design; customer psychology; market research; 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 and small businesses. A marketing degree equips graduates with the skill set to pursue a variety of careers in both 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; Brand Management; Integrated Marketing Communications; Market Research; Consumer Psychology and Insights; Services Marketing; International Marketing; Sales and Strategic Management. Students also 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 areas such as: research; advertising; marketing; brand management; product development; public relations; international marketing and sales.

Graduates who achieve a minimum 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.

What will I study?

**YEAR 1**
Mandatory Subjects
- Financial Accounting 1
- Quantitative Techniques
- Economics 1
- Management
- Business Applications 1

Plus One Elective
- Communications/Work Placement 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*

**YEAR 3**
Mandatory Subjects
- Services Marketing
- Consumer Psychology and Insights
- Integrated Marketing Communications
- Marketing Research Theory and 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

* subject to demand

** Erasmus and international students may take Business English/Project instead of the Business Research Methods elective in Year 3.

Special features of this course
- Emphasis on professional practice throughout the programme including project-based assessments and working with client organisations to devise creative marketing solutions.
- Industry guest speakers bring the experience of marketing professionals and latest developments right into the classroom.
- All students, regardless of the original option chosen, will be permitted to change their selection at the end of Year 2 and confirm their specialism for Years 3 and 4.
- Exit Awards - Ordinary Bachelor Degree (NFQ Level 7) after Year 3.
- Exit Award – Higher Certificate (NFQ Level 6) after Year 2.
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; brand design; customer psychology; market research; 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: Services Marketing; Consumer Psychology and Insights; Integrated Marketing and Communications; Market Research and Selling and Sales 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.

Special features of this course
- Emphasis on professional practice throughout the programme including project-based assessments and working with client organisations to devise creative marketing solutions.
- Industry guest speakers bring the experience of marketing professionals and latest developments right into the classroom.
- Maximum flexibility enabling students to choose a speciality after Year 2.
- Exit award — Higher Certificate in Business (NFQ Level 6) after Year 2.
- Graduates of the Level 7 Bachelor of Business may apply to Year 4 of the Level 8 Bachelor of Business (Honours) in Marketing.
## Course Overview

**Bachelor of Science (Honours) Digital Marketing with Analytics**

- **Exit Awards:** Higher Certificate (NFQ Level 6) and Bachelor (NFQ Level 7) of Science in Digital Marketing with Analytics.
- **Special Features:**
  - Semester-long work placement or study abroad option.
  - Broad-based interdisciplinary programme focusing on the creative, commercial, technological and analytical strands of marketing, providing the opportunity to explore all facets of marketing, identifying and developing core strengths and preferences.
  - Emphasis on marketing analytics, digital and analytical knowledge and skills that are highly sought by employers, and with a semester-long work placement or study abroad option.
  - Partnerships with other postgraduate opportunities and the opportunity to pursue further postgraduate qualifications.
  - Industry guest speakers bring the experience of marketing professionals and latest developments right into the classroom.
  - Access to MAC labs, and up-to-date software for design, digital marketing and analytics, as well as extensive off and online library resources.
  - Your learning will be nurtured by a dedicated team of highly qualified lecturing staff delivering digital marketing programmes up to masters level 9.
  - Exit Awards: Higher Certificate (NFQ Level 6) and Bachelor (NFQ Level 7) of Science in Digital Marketing with Analytics.

### What is Marketing with Analytics?

Marketing is essential to all organisations. Understanding the marketplace, competitors and customers, and delivering exceptional customer experiences is what drives organisational success. Achieving success in the digital era requires marketing graduates who can exploit digital technologies and data analysis to create inspired marketing solutions.

The new Bachelor of Science (Hons) in Digital Marketing with Analytics was developed by a team of marketing, design, digital technology, and analytics specialists. The result is a broad-based and unique degree that successfully blends the customer & commercial focus of marketing, the creativity of design and digital technology, and the analytical world of data, to deliver an innovative and exciting new interdisciplinary programme with a strong focus on professional practice and career readiness. The course includes a semester-long work placement or study abroad option.

### What subjects will I study?

<table>
<thead>
<tr>
<th>Year</th>
<th>Mandatory Subjects</th>
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</thead>
<tbody>
<tr>
<td><strong>YEAR 1</strong></td>
<td>Introduction to Digital Marketing &amp; Social Media Technologies, Digital Media Design, Marketing, Finance for Marketing 1, Introduction to Data Analysis for Digital Marketing, Business Applications for Digital Marketing, Communication &amp; Study Skills</td>
</tr>
<tr>
<td><strong>YEAR 3</strong></td>
<td>Ecommerce, Professional Selling, Marketing Research, Content Writing, SEO &amp; SEM, Data Reporting for Digital Marketing, Work Placement semester or Study Abroad semester</td>
</tr>
</tbody>
</table>

### Contact Information

- **Programme Director:** Una Grant
  - BBs (Hons), MSc
  - E: uma.grant@itcarlow.ie

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**Special Features of this Course**

- A semester-long work placement or study abroad option.
- Broad-based interdisciplinary programme focusing on the creative, commercial, technological and analytical strands of marketing.
- Emphasis on professional practice throughout the programme.
- A focus on digital marketing analytics.
- Innovative portfolio assessment allowing you to integrate your learning & skills, culminating with a showcase of your work in the wider community and employers.
- Opportunity to qualify for Graduate Membership of the Marketing Institute of Ireland.
- Industry guest speakers bring the experience of marketing professionals and latest developments.
- Access to MAC labs, and up-to-date software for design, digital marketing and analytics.
- Exit Awards: Higher Certificate (NFQ Level 6) and Bachelor (NFQ Level 7) of Science in Digital Marketing with Analytics.
Bachelor of Science
Digital Marketing with Analytics

What is Digital Marketing with Analytics?
The Level 7 Bachelor of Science in Digital Marketing with Analytics provides an excellent entry into the dynamic world of digital marketing and data analytics. Demand is growing for marketing graduates with digital marketing, design and technology skills, and an ability to use data to deliver and measure successful marketing strategies. Creativity matched with analytical know-how is what makes this new programme and the follow on Level 8 Bachelor of Science (Honours) in Digital Marketing with Analytics, unique.

A team of marketing, design, digital technology, and analytics specialists behind the development of this programme have created the ideal space to explore all aspects of marketing: from understanding customer markets and designing websites and social media campaigns; to exploring the legal side of digital marketing and using data to test and measure the success of campaigns; and all underpinned by key finance; communications and project planning modules. To get the best from your time with us, our innovative Portfolio Assessment model supports you to integrate your learning across modules and from year to year, while our emphasis on professional practice, real client company projects and semester-long work placement or study abroad option provides a stimulating learning environment.

What will I be able to do when I finish the course?
The Level 7 Bachelor of Science in Digital Marketing with Analytics gives you the knowledge and practical experience to go straight into employment or consider further study with our Level 8 Bachelor of Science (Honours) in Digital Marketing with Analytics.

As a graduate in Digital Marketing with Analytics you will have a competitive edge in the employment market, with a qualification that provides that rare blend of creativity and analytics much sought by employers in Ireland and abroad. Opportunities exist in small, medium and large organisations from all spheres of business. Graduates have the opportunity to work locally or internationally; in an SME or multinational; with a not-for-profit organisation, a high-tech business; in finance, food services. This marketing qualification is a ticket to a rewarding and exciting career as a marketing professional.

What subjects will I study?

YEAR 1
Mandatory Subjects
Introduction to Digital Marketing & Social Media Technologies
Digital Media Design
Marketing
Finance for Marketing 1
Introduction to Data Analysis for Digital Marketing
Business Applications for Digital Marketing
Communication & Study Skills

YEAR 2
Mandatory Subjects
Customer Behaviour & Insights
Finance for Marketing 2
Integrated Marketing Communications
Web Design, UX & CRM
Law & Regulation in the Digital Economy
Digital Analytics
Applied Project Planning

YEAR 3
Mandatory Subjects
Ecommerce
Professional Selling
Marketing Research
Content Writing
SEO & SEM
Data Reporting for Digital Marketing
Work Placement semester or Study Abroad semester

Special features of this course
• Semester-long work placement or study abroad option in Year 3, further enhancing career prospects and promoting work-based learning.
• The programme explores all aspects of digital era marketing from both the creative and analytical.
• Developing professional practice is at the heart of the programme and students’ work on projects with real client companies.
• Access to guest speakers from a wide range of industries; MAC labs and up-to-date software for design; digital marketing & analytics; and a dedicated team of highly qualified lecturing staff delivering digital marketing programmes up to masters level 9.
• Graduates of the Level 7 Bachelor of Science may apply to Year 4 of the Level 8 Bachelor of Science (Honours) in Digital Marketing with Analytics.
• Exit Award: Higher Certificate (NFQ Level 6) of Science in Digital Marketing with Analytics.
Bachelor of Arts (Honours)  
Sports Management and Coaching  
(with options in: GAA, Rugby or Soccer)

**What is Sports Management and Coaching?**
The field of sports management and coaching is changing rapidly. Professional sporting bodies require management and coaching staff to have an excellent understanding of their chosen sport, as well as 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?**
Gradsutes 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.

Gradsutes 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.

**What 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

**Special features of this course**
- This is the only course of its kind in Ireland and is delivered in association with the FAI, Leinster GAA and Leinster Rugby.
- Experienced coaches and coach educators from each of the sporting bodies deliver the player development and coach education modules of the course.
- Competitive Institute of Technology Carlow team environment in GAA, Rugby and Soccer with recent achievements as follows: Senior Hurling Division 1 League Champions 2018 (4-in-a-row); Fitzgibbon Cup semi-finalists 2018; Women’s Soccer Intervarsity Kelly Cup and Premier League winners 2018; Women’s soccer Futsal Cup Winners 2018 (3-in-a-row); Men’s soccer CFAI Futsal Finalists 2018 and CFAI Cup Winners 2012 - 2017 (6-in-a-row); IRFU Student Sport Ireland Brendan Johnston Cup Finalists 2018.
- Premium sporting facilities including elite sports gym, general student gym, GAA and rugby pitches with full changing facilities and viewing stands.
- A new Sports Campus is currently being developed, phase one of the development will include six new pitches and dressing room facilities.
- Exit Awards: Higher Certificate (NFQ Level 6) and Bachelor of Arts (NFQ Level 7) Sport Coaching and Business Management (GAA, Soccer, Rugby) after Year 3.
What is Sport 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; GAA Development officers; video analysts; sports management; club development and/or administration; sports coaching and fitness instruction.

Graduates have also taken up various roles in business and marketing.

Graduates of this course may be eligible to progress to Year 4 of the BA (Honours) Sport Management and Coaching (CW858) or Year 4 of the BA (Honours) Management Practice (CW868).

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
- GAA Club Development
- 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

- This course is unique in Ireland as it is delivered in association with the GAA and is only available in IT Carlow.
- Institute of Technology Carlow GAA teams compete in the Sigerson football, Fitzgibbon hurling, Purcell cup camogie & Giles Cup Ladies Football competitions. In the past 3 years our Fitzgibbon team have been in a QF, SF & Final while winning four division 1 leagues in a row. Our Sigerson team has been in two QFs and a SF in past 4 years. Our Giles cup team have been in two QFs and SF in the past 3 years with our Purcell cup team competing in two SFs in past 3 years.
- Experienced coaches and coach educators from the GAA deliver the player development and coach education modules of the course with the opportunity to attain GAA coaching qualifications and practical experience in each of the three years 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: Higher Certificate (NFQ Level 6) in Arts in Sports Coaching and Business Management (GAA).
Bachelor of Arts
Sport Coaching and Business Management (Soccer)

What is Sport 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 knowledge. A Sport 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) Sports Management and Coaching (CW858 – NFQ Level 8) and the BA Sport 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
- Performance 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) Sports Management and Coaching (CW858) or Year 4 of the BA (Honours) Management Practice (CW868).

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 obtain coaching qualifications.
- 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.
- Exit Award: Higher Certificate (NFQ Level 6) in Arts in Sports Coaching and Business Management (Soccer).

What subjects will I study?

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<thead>
<tr>
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<th>Mandatory Subjects</th>
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<tr>
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<td>Player Development 1</td>
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<td>Applied Anatomy and Sports Physiology</td>
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<td>Effective Writing and Research</td>
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<td>Foundations of Sport Management</td>
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<td>Sports Marketing</td>
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<td>Finance for Sports 2</td>
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<td>Sponsorship and Media Management in Sport</td>
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<th>Elective Subjects</th>
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<td>Player Development 3</td>
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<td>Coach Education 3</td>
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<tr>
<td>Community Sport and Social Inclusion</td>
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</tbody>
</table>
What subjects will I study?

YEAR 1
Mandatory Subjects
Player Development 1
Coach Education 1 (IRFU Stage 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 (IRFU Stage 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 (IRFU Stage 3)
Community Sport and Social Inclusion

What is Sport 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 knowledge. A Sport 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 Sport 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) Sports Management and Coaching (CW858) or Year 4 of the BA (Honours) Management Practice (CW868).

Special features of this course

- Course delivered in association with Leinster Rugby and the IRFU.
- 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.
- Exit Award: Higher Certificate (NFQ Level 6) in Arts in Sports Coaching and Business Management (Rugby).
Bachelor of Arts (Honours)

Media and Public Relations

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 utilised daily include: TV, online video streaming and social media sites. Media is recognised as a 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 create messages using words, pictures and sound to communicate with wide audiences.

Media interacts seamlessly with the profession of Public Relations (PR) as PR helps maintain lines of communications between an organisation and its public. 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 at advanced levels in the public relations departments of 'blue chip' companies and organisations.

Graduates are particularly skilled at corporate communications tasks such as web content development, crafting press releases, creating video and audio artefacts, 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.

What subjects will I study?

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td>Media Studies 1</td>
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<td>Public Relations 1</td>
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<td>Social Psychology</td>
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<td>Effective Writing and Research</td>
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<tr>
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<th>Mandatory Subjects</th>
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<tbody>
<tr>
<td>Media Studies 2</td>
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<td>Public Relations 2</td>
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<td>IT and New Media</td>
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<td>Visual Language and Media</td>
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<th>YEAR 3</th>
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<td>Media Studies 3</td>
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<td>Public Relations 3</td>
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<td>Contemporary Film and Literature Studies</td>
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<td>New Media and Society</td>
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<td>Design Process and Terminology</td>
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<tr>
<td>Dissertation</td>
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Special features of this course

- This course includes extensive use of our first-class TV and radio studios on campus.

PLACES | POINTS | DURATION | PROGRAMME DIRECTOR
---|---|---|---
30 | 252 | 3 YEARS | Dr Pauline Madigan
BA, PG Dip, MA, EdD
E: pauline.madigan@itcarlow.ie
sport clubs and societies

% participation rate
HEAD OF FACULTY
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BCL, Solr
E: maebh.maher@itcarlow.ie

Faculty of Business and Humanities
E: businessandhumanities@itcarlow.ie
T: 059 9175302

HEAD OF DEPARTMENT OF HUMANITIES
Dr Eileen Doyle Walsh
BA (Hons) Psychology, MLitt Psychology, PhD Psychology
E: eileen.doyle@itcarlow.ie

"The lecturers know all of us personally."

Molly Scott
Law Student

Visit itcarlow.ie to see our full story videos.
# Department of Humanities Progression Chart

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FACULTY OF BUSINESS AND HUMANITIES

Department of Humanities
COURSE PROGRESSION CHART

NOTE:
Graduates of CW706 may have an option to progress to Year 2 of CW708 or Year 3 of CW938.

Please see course pages for full details on individual progression paths.
Honours Bachelor Law (LLB)

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 approved by the relevant legal 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.

What subjects will I study?

**YEAR 1**
- **Mandatory Subjects**
  - The Irish Legal System
  - Criminal Law
  - Law of Tort
  - 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

Special features of this course
- One of the only law degrees available outside the major cities of Ireland, providing students 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.
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.

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)
Product Design Innovation

What is Product Design Innovation?
Product Design Innovation is a creative and collaborative activity which uses a 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 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 and manufacturing to 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 of Arts in Interaction Design, a Research Masters through designCORE or a Master of Science in Medical Devices at Institute of Technology Carlow, among other postgraduate opportunities in Ireland and abroad.

What subjects will I study?

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>Mandatory Subjects</th>
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<tbody>
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<td>Design Introduction</td>
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<td>Workshop Practice</td>
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<td>Model-Making and Ergonomics</td>
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<td>Materials and Process</td>
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<td>Graphics</td>
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<tr>
<td>Design Education</td>
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<tr>
<td>Principles of Research</td>
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<tr>
<td>Professional Practice and Professional Development</td>
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<tr>
<th>YEAR 2</th>
<th>Mandatory Subjects</th>
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<tr>
<td>Design Visualisation</td>
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<tr>
<td>3D Computer Modelling</td>
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<td>Model Detailing</td>
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<td>International Design Movement</td>
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<tr>
<td>Applied Project Planning</td>
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<td>Work Placement/Erasmus</td>
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<th>YEAR 3</th>
<th>Mandatory Subjects</th>
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<tr>
<td>Research Visualisation and Graphics</td>
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<td>Industrial Design</td>
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<tr>
<td>Advanced 3D Computer Modelling</td>
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<tr>
<td>Prototyping and Surfaces</td>
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<tr>
<td>Design, Culture and Society</td>
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<tr>
<td>Design Literature Review</td>
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<td>Marketing for Design</td>
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<tr>
<th>YEAR 4</th>
<th>Mandatory Subjects</th>
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<tr>
<td>Design Communications</td>
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<td>Product Design Innovation</td>
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<td>Detailing and Specification</td>
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<td>Enterprise and Leadership</td>
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<tr>
<td>Project Management</td>
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<tr>
<td>Thesis</td>
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* 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 organisational issues.

- Facilities for students include: customised studios and design offices; dedicated access to computing and industry standard design software, printing/plotting resources, multiple 3D modelling 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 to 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 – Higher Certificate in Arts in Industrial Design (NFQ Level 6) after Year 2 and BA in Industrial Design (NFQ Level 7) after Year 3.
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 such as 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.

**What is Industrial Design?**

**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 Movements
- 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

* Students must choose to complete either a one semester long work placement or study abroad option.
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 six 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 are eligible to apply to progress onto the Masters in Leadership in Early Years Education and Care or a Research Masters through socialCORE at Institute of Technology Carlow.
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 Principles and Practices of Social Care Work
Introduction to Sociology and Social Policy for Social Care Practice
Health, Wellbeing and Safety in Social Care Practice

YEAR 2

Mandatory Subjects
Legal Studies 1
Supervised Professional Practice 1
Protection of Children and Vulnerable Persons
Disability and Positive Ageing
Community Based Social Care Services
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 and Human Rights
Global Perspectives for Social Care Practice
Advanced Social Care Practice
Psychology: Adjustment and Positive Change
Social Research Dissertation

What is Professional Social Care Practice?
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. The course provides graduates with the skills and expertise to work in the social care profession and work across this diverse sector, in fields such as residential care, disability and community based services. IT Carlow’s strong links to practice facilitates 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.

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.

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 or a Research Masters through SocialCORE at Institute of Technology Carlow.

Special features of this course

- 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.
- Students take part in an annual Social Care Careers Seminar hosted by IT Carlow and sector talks relating to social care practice.
- 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 in Professional Social Care Practice (NFQ Level 7) after Year 3 and Higher Certificate in Arts in Applied Social Studies (NFQ Level 6) after Year 2.
What is Professional Social Care Practice?
The course provides graduates with the skills and expertise to work in the social care profession across a diverse sector, typically in fields such as residential care, disability and community based services. IT Carlow’s strong links to practice facilitates 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 Professional Social Care Practice (CW758).

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.
• Students take part in an annual Social Care Careers Seminar hosted by IT Carlow and in sector talks relating to social care practice.
• 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 Arts in Applied Social Studies (NFQ Level 6) after Year 2.
Aimee Trayor  
Media and Public Relations

What did you like about the course?
I enjoyed the variety of modules the course offers, I particularly enjoyed the more practical subjects like Film & Radio and Irish Literature Studies in my final year.

What are you doing now?
Since graduating I’ve been working on my career while focusing on travelling. So far, I’ve lived and worked at home in Ireland, America, Australia and next up is New Zealand. I’m currently living in Melbourne, working as a Senior Client Manager in a creative marketing agency called Dig & Fish. I manage a range of clients in alcohol, fast food and tourism industries and each client has a different need ranging from advertising, public relations, brand development and strategy to digital marketing and social media. The role requires me to be available at all hours of the day and night (including weekends), and to manage the teams within the agency including digital, design and PR. My next career goal is to move from agency to in-house which is something I remember learning about in Year 1 PR with Pauline.

How did the course prepare you for the job you are doing now?
Since graduating in PR, I can see how the course is designed to prepare students for a career in this field. However, the beauty about the course is how broad it is and once you graduate you can go down many different routes. I chose PR but my career has evolved into marketing and advertising and the course gave me the stepping stones to do that.

Ann Marie Guinan  
Media and Public Relations

What did you like about the course?
I didn’t know what I wanted to do in college, my guidance teacher in school was pushing me towards psychiatric nursing and social care. At the time I was the captain of the Offaly u16 team that reached an All-Ireland, so I was getting interviewed a lot as we made progress. My aunt suggested a course with media studies and the rest is history.

I have to say I thoroughly enjoyed my course in IT Carlow, during this time I did a media studies essay for Dr Irene McCormack titled “Citizen Journalism, the death of journalism” which was a pretty interesting title and now we see in the modern day how everyone is a journalist with their smartphone. In my final year I completed a Public Relations campaign under the guidance from our lecturer Dr Pauline Madigan for the Walsh Whiskey Distillery in Carlow. It was a very tough but exciting project which we got to present to Walsh Whiskey.

In 2018, I was awarded the Mick Dunne Memorial Public Relations Officer of the Year award by the Camogie Association, an award I don’t think I would have won without the skills I learned at IT Carlow.

How did the course prepare you for the job you are doing now?
I currently work as a Client Relationship Manager for an Irish Company called Future Ticketing based in Tullamore. Every day I use lots of elements that I learned during my course such as relationship management, IT, Photoshop and design, communicating your message effectively, social media skills, to name just a few.
Faculty of Business and Humanities
Graduate Profiles

Gary Sweeney
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 into 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’s 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 three successful years before moving to my current position in March 2016, 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 (GAA)

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 my job 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 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.
Noelle Reilly  
Professional Social Care

What did you like about the course?
I particularly enjoyed the applied nature of the course. Most of the lecturers had worked in practice prior to moving into education, and therefore they could provide practical examples and case studies relevant to the topics under discussion. Class discussion was actively encouraged which I found very beneficial. The modules were interlinked so very often content covered in one module came up again but from a different perspective in another. This facilitated our learning as we could look at topics from a variety of different perspectives and consider different points of view. The placement module was particularly relevant as the time spent on work placement gave us the space to see the content learned in college in a practical setting. I particularly enjoyed my final year research project as this brought together a lot of the knowledge we had studied over the course of the four year degree programme.

What are you doing now?
Having worked in the social care sector for a number of years, I am now back in IT Carlow as the Supervised Professional Practice Coordinator. My role is to secure placement opportunities for students, to ensure that students gain the necessary experience whilst on placement to develop their professional and personal skills and to maintain links between IT Carlow and industry. It is an exciting and varied position with a broad range of duties and responsibilities associated with it.

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.

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 Stage 3. I was surrounded by a professional environment from day one. When not taking part in my academic studies, I won 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 become the Club Community Rugby Officer for both West Offaly Lions and Wexford Wanderers. I handle the screening and coaching of youth players entering the Leinster System. This year I was appointed coach of the Institute of Technology Carlow 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.
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 three 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.
Tracy Whyte  
Early Childhood Education and Care

What did you like about the course?  
Returning to education as a mature student was probably the best decision I’ve ever made! There were obviously stressful moments but overall, my time on the BA in Early Childhood was a hugely positive, enriching experience. It ignited a love for learning and a passion for working professionally with young children. I still find all aspects of early childhood learning and development fascinating. The Philosophy in Early Childhood module has a special place in my heart, it made me realise that it’s not necessarily important to have all the right answers, but so important to ask the right questions. I am very interested in promoting young children’s creative and critical thinking skills. The Psychology and Working with Families and Communities modules were also particularly influential for me. I continued on my studies after the degree, to do a Masters in Child Family Community in DIT. However, IT Carlow for me was where it all started - it really transformed me as a person.

What are you doing now?  
I am currently working as the Early Years Professional Practice Coordinator at IT Carlow, with responsibility for all aspects of professional practice workshops and placement for our full and part time Early Childhood students. Prior to this, I worked as an Early Years Educator, a Parent Support Coordinator and a Family Visitor on a child development programme. How did the course prepare you for the job you are doing now?  
My learning on the degree programme helped me to develop certain values that are vital for any professional working in the field of early childhood- recognition and respect of children’s rights and being in awe of the potential of young children. (We underestimate them so much!), I hope I am as effective in passing these values on to the students I work with. Also, I acquired the knowledge and skills to learn how to apply theory to practice and be a critically reflective practitioner and educator. Every day I am still learning, reflecting and asking myself how I can improve, which I think is critical for any educator working with children or adults.

Helena O’Brien  
Early Childhood Education and Care

What did you like about the course?  
I loved the mix of theory and the practical side of work experience. It allowed me to gain a large basis of experience in crèches/pre-schools both large and small scale, Early Start Programme, Junior Infant classes, community education services and special and additional needs. This experience allowed me to reflect on my strengths and lay the foundations and ethical ethos of my practice.

What are you doing now?  
I am a Board Certified Behaviour Analyst (BCBA) and the Senior Behaviour Support Specialist for a private pre-school service for children with Autism. I did my final work experience in final year in this service and I am still working for them 11 years later. I work part-time 3 days a week. I also lecture part-time 2 days a week in IT Carlow as an Assistant Lecturer in Early Childhood Education and Care.

How did the course prepare you for the job you are doing now?  
The job prepared me to be ethical, accountable and transparent in my practice and these core values were rooted in the course. The importance of the child, their wellbeing and development was always and remains to be at the forefront. I learned to manage my time between assignments, exams, portfolios etc. and to be able to prioritise my work load which has stood to me over the years. The range of work experience taught me to be flexible and adaptable as each new setting was different. This has helped me in my current role when working with children, training and working with staff, working with different professionals and liaising with parents. The degree also gave me the learning bug and I went on to do my Masters in Applied Behaviour Analysis. Continuing Professional Development is a regular part of my job now and each year I attend different conferences in the field of Applied Behaviour Analysis and Early Childhood Education and Care.
“I couldn’t be happier with my course.”

Shannon Devereux
Sustainable Farm Management Student

Wexford Campus
E: wexfordcampus@itcarlow.ie
T: 053 9185800
<table>
<thead>
<tr>
<th>COURSE</th>
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<tbody>
<tr>
<td>CW028</td>
<td>Bachelor of Arts (Honours) in Early Childhood Education and Care</td>
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<tr>
<td>CW068</td>
<td>Bachelor of Arts (Honours) in Applied Social Studies in Professional Social Care</td>
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<tr>
<td>CW018</td>
<td>Bachelor of Business (Honours)</td>
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<td>- applicants will choose one of the following options:</td>
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<td></td>
<td>Bachelor of Business (Honours) - Common Entry (CEY)</td>
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<td>Bachelor of Business (Honours) in Business (BUS)</td>
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<td>Bachelor of Business (Honours) in Digital Marketing (DMK)</td>
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<td>CW037</td>
<td>Bachelor of Business</td>
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<td>- applicants will choose one of the following options:</td>
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<td>Bachelor of Business (Honours) - Common Entry (CEY)</td>
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<td>CW038</td>
<td>Bachelor of Arts (Honours) in Art</td>
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<td>CW057</td>
<td>Bachelor of Arts in Art</td>
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<tr>
<td>CW078</td>
<td>Bachelor of Science (Honours) in Sustainable Farm Management and Agribusiness</td>
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<tr>
<td>CW027</td>
<td>Bachelor of Science in Sustainable Farm Management and Agribusiness</td>
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<td>Graduate Profiles</td>
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WEXFORD CAMPUS

CW068
Applied Social Studies in Professional Social Care
BA (Honours) – NFQ Level 8

CW078
Sustainable Farm Management and Agribusiness
BSc (Honours) – NFQ Level 8

CW027
Sustainable Farm Management and Agribusiness
BSc – NFQ Level 7

CW028
Early Childhood Education and Care
BA (Honours) – NFQ Level 8

CW018
Business
BB (Honours) – NFQ Level 8
Common Entry (CEY) with options after Year 2

CW006
Business
Higher Certificate – NFQ Level 6

CW037
Business
BB – NFQ Level 7
Common Entry (CEY) with options to progress to CW018 BB Business (Hons), NFQ Level 8 of same course stream after Year 2

Postgraduate Opportunities
Masters or PhD
NFQ Levels 9 and 10
(please refer to www.itcarlow.ie)

Digital Marketing (DMK)
Business (BUS)

Common First Three Years
Common First Two Years

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COURSE PROGRESSION CHARTS

Please see course pages for full details on individual progression paths.
Institute of Technology Carlow has offered courses at its Wexford Campus since 1995. Degree courses in business, 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 Undergraduate Level 6 through to Postgraduate Level 9, on the National Framework of Qualifications (NFQ) – refer to the NFQ wheel on page 175. Full-time Honours Degree courses are offered in: Business; Digital Marketing; Tourism and Event Management; 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; Visual Communications and Digital Marketing. Higher Certificates are offered in Business.

Institute of Technology Carlow Wexford Campus also 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 cover areas such as Early Childhood Education and Care, Energy Management, Business, Visual Communications, Aquabusiness and Social Studies. Wexford Campus also offers part-time MBA and MB courses. A postgraduate prospectus for these courses is available from the Campus.

A substantial investment has been made by the Institute in the student facilities at 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 library website provides students with excellent research facilities to assist them with projects and continuous assessments. This infrastructure, together with the small class sizes in Wexford, create an excellent learning environment for students to reach their potential.

Wexford Campus boasts a dedicated lecturing staff who are available to their students both formally, through tutorial structures, and informally. Many of the lecturers are also involved with student clubs and societies and campus sports teams. Ongoing course developments and infrastructure improvements will further 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
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W: 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 Curracloe Beach all year round and the famous Wexford Opera Festival attracts numerous visitors each year. Retailers of all types, from popular high street branches to exceptional boutiques and artisan shops, 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 friendly atmosphere that greatly adds to the student life experience.
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)
Early Childhood Education and Care

What is Early Childhood Education and Care?

Children learn and grow when provided with 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 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 a Research Masters in early childhood education and care or Taught Masters in Child, Youth and Family Studies at Institute of Technology Carlow.

What subjects will I study?

YEAR 1
Mandatory Subjects
Introduction to Psychology
Introduction to Sociology and 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

What exemptions are available from professional bodies?

Graduates are eligible to join the National Children Nurseries Association or the Irish Preschool Playgroup Association.

Programme Director
Lillian Byrne, BA (Hons) Applied Social Studies (Social Care), MA
E: lillian.byrne@itcarlow.ie

PLACES POINTS DURATION WORK PLACEMENT

30 249 3 YEARS YES

Programme Code: CW028
Qualification: Bachelor of Arts (Honours)
Level: NFQ Level 8
A variety of teaching, learning and assessment methodologies are used, such as discussions, group projects, placements, facilitations, a range of external guest lectures, poster displays, problem-based learning and case studies.

Practice placements (400 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 in Applied Social Studies in Professional Social Care (NFQ Level 7) after Year 3 and Higher Certificate in Applied Social Studies – Professional Social Care (NFQ Level 6).

What is Professional Social Care?
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 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 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.

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 Principles and Practices of Social Care Work
Introduction to Sociology and Social Policy for Social Care Practice
Health, Wellbeing and Safety in Social Care Practice

YEAR 2

Mandatory Subjects
Legal Studies 1
Supervised Professional Practice 1
Protection of Children and Vulnerable Persons
Disability and Positive Ageing
Community Based Social Care Services
Cognitive and Social Psychology
Sociology 2

YEAR 3

Mandatory Subjects
Legal Studies 2
Management for Social Care Practice
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 and Human Rights
Global Perspectives for Social Care Practice
Advanced Social Care Practice
Psychology: Adjustment and Positive Change
Social Research Dissertation

Special features of this course

• A variety of teaching, learning and assessment methodologies are used, such as discussions, group projects, placements, facilitations, a range of external guest lectures, poster displays, problem-based learning and case studies.

• Practice placements (400 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 in Applied Social Studies in Professional Social Care (NFQ Level 7) after Year 3 and Higher Certificate in Applied Social Studies – Professional Social Care (NFQ Level 6).
Bachelor of Business (Honours)

Common Entry (CEY), Business (BUS)
or Digital Marketing (DMK)

Application procedure
CAO applicants who choose the Bachelor of Business (Honours) CW018 will be required to choose a course option when completing their CAO application. They include:
• Common Entry (CEY)
• Business (BUS)
• Digital Marketing (DMK).

Applicants should choose CEY (Common Entry) if they are undecided on their speciality and can select 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 their specialism at that point.

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. After two years, students separate into their chosen specialist area. The following two pages detail these specialist areas.

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)
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.

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.
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 in the areas of 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 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 (DMK)**

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<th>Mandatory Subjects</th>
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<td>Marketing Management</td>
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<td>Digital Marketing</td>
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<tr>
<td>Commercial Law</td>
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<td>HRM</td>
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<tr>
<td>Business Research Methods</td>
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<td>Professional Digital Marketing - Work Placement</td>
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<td>Entrepreneurship</td>
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<td>Digital Media Design</td>
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**YEAR 4 (DMK)**

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<td>iBusiness</td>
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<td>Services Marketing</td>
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<td>Operations Management</td>
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<td>Web Design Methods</td>
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<tr>
<td>Digital Marketing Project</td>
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**Plus Two Electives**

- International Business
- Financial Management

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.
What is Business and Digital Marketing?
This course provides an academic qualification for anyone interested in a career in business or business with digital marketing.

The first two years of the course 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 business with 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 in the areas of e-business, digital media design and marketing management. A key feature of the 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.

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

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; Information Technology; 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).

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**
- Management Accounting
- Marketing
- IT and Digital Media
- Business Law

**Plus Two Electives**
- Tourism
- Economics 2
- Financial Accounting 2 (including Computerised Accounting)

PlACES POINTS DURATION PROGRAMME DIRECTOR
10 129 2 YEARS Ailish O’Brien
BComm (Hons), HDE, MBA
E: ailish.obrien@itcarlow.ie

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.
Bachelor of Science (Honours)
Tourism and Event Management

What subjects will I study?

YEAR 1
Mandatory Subjects
Communications & Customer Service
Principles of Event Management
Introduction to Tourism
Cultural Studies 1
Information Technology
Business Maths

YEAR 2
Mandatory Subjects
Marketing
Digital Technologies
Event Controlling
Event Planning
Cultural Studies 2
Tourism Elements
Regional Tour Guiding

YEAR 3
Mandatory Subjects
International Tourism and Event Management
Research Skills and Event Tourism Project
Employability and Placement Skills
Services Marketing
Digital Media Design
Work Placement Semester or Study Abroad Semester

Plus Two Electives
Cultural Studies 3
Financial Management
Human Resource Management
Law & Regulation for Tourism and Event Management

YEAR 4
Mandatory Subjects
Event Project
Tourism and Event Management
Dissertation
Sustainable Tourism Development
Strategic Management
Digital Marketing
Data Analytics

Plus One Elective
Entrepreneurship
Cultural Studies 4

What is Tourism and Event Management?
Tourism is one of Ireland’s most important economic sectors supporting jobs on both a national and international level. The tourism industry is largely driven by the sustainable promotion of natural and cultural heritage. Festivals and events are critical for tourism growth as they specifically attract both domestic and overseas visitors to Ireland and contribute significantly to the annual economy. Event management has become an integral element of the Irish tourism offering. Demand is growing for high-calibre graduates who have the necessary skills to develop their careers in this exciting area. This course has been developed in consultation with a number of unique visitor attractions and event management organisations in the region.

The course combines tourism and event modules with a strong business, entrepreneurial and research focus. From project management, to designing websites, to understanding key management issues relating to events in the tourism sector, this course equips students with the required knowledge and skill set to develop careers in this area. There is a strong emphasis on professional practice, with real client company projects and a semester-long work placement or study abroad option that provides a stimulating and exciting learning environment.

What will I be able to do when I finish the course?
Students on this course will develop strong management skills in the context of tourism and event management, enabling them to take up full-time positions in a diverse range of careers such as: festival manager; event organiser; marketing executive; tourism executive; event planner; fund raising officer and entrepreneur amongst many more.

Event management professionals are widely seen as important to the development and success of the Irish tourism industry. The specific blend of specialised modules in Tourism and Event Management, Digital and Analytical Skills and Business Management will produce graduates with the necessary knowledge and skills to equip them for employment in these sectors. 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, such as the MSc in Digital Marketing or Masters of Business or postgraduate courses in other institutions.

Special features of this course

- Gain practical skills through multiple site visits to key cultural, festival and tourist attractions.
- A semester long work placement or study abroad option that provides a stimulating and exciting learning environment.
- Substantive work placement that will bring students in direct contact with key organisations in the Tourism and Event Management sectors.
- Exit Awards: Bachelor of Science Tourism and Event Management (NFQ Level 7) after Year 3 and Higher Certificate in Business Tourism and Event Operations (NFQ Level 6) after Year 2. Students will also have an additional industry recognised award in Regional Tour Guiding.
- Digital and analytical skills in key communication areas such as marketing, project management and research.
What is Tourism and Event Management?

The tourism and event management sector is one of the fastest growing sectors in our economy. Two key growth areas of tourism are heritage tourism and event management. This course provides students with specialised modules in both heritage tourism and event management. Students will also become proficient in applying practical business concepts and digital skills to help them to understand the key issues facing modern tourism and event management.

This three year course will prepare graduates to develop crucial transferable business and life skills in the tourism and event sector. It includes a semester long placement that will bring students into direct contact with key tourism organisations. This will provide valuable experience and enhance employability skills. Students will also have the option to study abroad.

This course has been developed in consultation with a number of unique attractions and event management organisations. Such collaboration will ensure a high calibre of graduates to support and enhance this dynamic and exciting sector.

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

Graduates of this course will have an understanding and appreciation of the arts, culture and heritage combined with business acumen and event management skills. They will be a valuable asset to the local, regional and national tourism industries.

Students on this course will develop a strong management background in the context of tourism and events management, enabling them to take up full-time positions in a diverse range of careers such as: festival manager; event organiser; marketing executive; tourism executive; event planner; fundraising officer and entrepreneur amongst many more.

Graduates may apply for Year 4 of the Bachelor of Science (Honours) in Tourism and Event Management.

What subjects will I study?

**YEAR 1**

**Mandatory Subjects**

- Communications & Customer Service
- Principles of Event Management
- Introduction to Tourism
- Cultural Studies 1
- Information Technology
- Business Maths

**YEAR 2**

**Mandatory Subjects**

- Marketing
- Digital Technologies
- Event Planning
- Cultural Studies 2
- Tourism Elements
- Regional Tour Guiding

**YEAR 3**

**Mandatory Subjects**

- International Tourism and Event Management
- Research Skills and Event Tourism Project
- Employability and Placement Skills
- Services Marketing
- Digital Media Design
- Work Placement Semester or Study Abroad Semester

**Plus Two Electives**

- Cultural Studies 3
- Financial Management
- Human Resource Management
- Law & Regulation for Tourism and Event Management

Special features of this course

- Gain practical skills through multiple site visits to key cultural, festival and tourist attractions.
- A semester long work placement or study abroad option in Year 3, further enhancing your career prospects and promoting work-based learning.
- Substantive work placement that will bring students in direct contact with key organisations in the tourism and event management sectors.
- Exit Awards: Students can exit at Level 6 with a Higher Certificate in Business in Tourism and Event Operations and will also have an additional industry-recognised award in Regional Tour Guiding.
Bachelor of Arts (Honours)

Visual Communications and Design

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. The discipline originates from graphic design and incorporates the traditional skills of drawing, printing, photography, typography and other graphic processes with the new digital realms of video, web 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. The 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 graduates 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.

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 and have been shortlisted for the Institute of Designer in Ireland (IDI) Graduate 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.
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. The 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 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.
Bachelor of Arts (Honours)  
Art

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.
What is Art?

Art is a diverse range of activities involving imaginative or technical skill and includes the production of works of art, criticism of art, study of the history of art, and 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 include related disciplines such as film studies or digital media.

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

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.
What will I study?

**YEAR 1**
- **Mandatory Subjects**
  - Animal and Plant Biology
  - Physical and Chemical Sciences for Agriculture
  - Introduction to Crop Production
  - Introduction to Animal Production
  - Basic Mathematics
  - Agribusiness Management
  - Academic and Personal Skills Development
  - ICT in Agriculture 1

**YEAR 2**
- **Mandatory Subjects**
  - Agricultural Sustainability 1
  - Animal Nutrition
  - Genetics and Breeding
  - ICT in Agriculture 2
  - Soil Science 1
  - Crop Production Weed Science
  - Farm Mechanisation and Regulations
  - Agricultural Marketing 1
  - Agricultural Economics 1
  - Farm Financial Accounting

**YEAR 3**
- **Mandatory Subjects**
  - Professional Work Experience
  - Farm Buildings and Regulations
  - Animal Product Quality
  - Research Skills
  - Agricultural Marketing 2
  - Agricultural Economics 2
  - Soil Science 2
  - Agricultural Sustainability 2
  - Farm Business Law

**YEAR 4**
- **Mandatory Subjects**
  - Environmentally Sustainable Farm Management
  - Advanced Crops
  - Farm Systems
  - Rural Entrepreneurship
  - Agribusiness Strategy
  - Dissertation

What study this course?
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 agribusiness will require a dynamic workforce to be at the heart of the sector. This workforce will deploy a broad range of skills to 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 that are essential for agribusinesses to succeed. The modules studied will deliver a broad range of skills in the business, science and technical aspects of modern day agriculture, with an emphasis on the sustainability of the agricultural industry.

Why 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 are opportunities for further studies in a range of taught or research post graduate degrees.

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.
- Certified young trained farmer after two years, allowing students to qualify for Revenue Stamp Duty Exemption.
- 24-weeks Professional Work Experience in Year 3.
- Exit Award: Higher Certificate in Sustainable Farm Management and Agribusiness (NFQ Level 6) after Year 2.
- Exit Award: Bachelor of Science in Sustainable Farm Management and Agribusiness (NFQ Level 7).
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.

The modules will deliver a broad range of skills in business, land based sciences and sustainability, all of which are essential in the management of a modern farm enterprise.

The course includes multiple site visits to farms and 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, and many successful Irish agribusinesses.

It is worth noting that most Teagasc state agencies require a minimum level 8 degree, when recruiting.

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).

What subjects will I study?

YEAR 1
Mandatory Subjects
- Animal and Plant Biology
- Physical and Chemical Sciences for Agriculture
- Introduction to Crop Production
- Introduction to Animal Production
- Basic Mathematics
- Agribusiness Management
- Academic and Personal Skills Development
- ICT in Agriculture 1

YEAR 2
Mandatory Subjects
- Agricultural Sustainability 1
- Animal Nutrition
- Genetics and Breeding
- ICT in Agriculture 2
- Soil Science 1
- Crop Production Weed Science
- Farm Mechanisation and Regulations
- Agricultural Marketing 1
- Agricultural Economics 1
- Farm Financial Accounting

YEAR 3
Mandatory Subjects
- Professional Work Experience
- Farm Buildings and Regulations
- Animal Product Quality
- Research Skills
- Agricultural Marketing 2
- Agricultural Economics 2
- Soil Science 2
- Agricultural Sustainability 2
- Farm Business Law

Special features of this course
- 24-week work placement in relevant farm or agricultural business.
- Certified young trained farmer after two years, allowing students to qualify for Revenue Stamp Duty Exemption.
- Multiple site visits to farms and 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.
**Chris Farrington**  
Visual Communications and Design

**What did you like about the course?**  
With smaller class numbers than most colleges, you get much more one-to-one time with lecturers which is invaluable. The combination of great staff across the modules, a fantastic set-up and high end equipment make it an incredibly enjoyable experience. The range of modules included in the course means you leave with many options, whether you want to go into one of the many areas of graphic design or web design and development.

**What are you doing now?**  
Since finishing my degree I have relocated to Manchester where I work as a graphic designer for Mondiale Publishing, which owns and publishes international business-to-business magazines and websites across the hospitality, entertainment technology and architectural markets. Having such a large portfolio I am fortunate enough to have been given a number of roles. I feel incredibly lucky to be given the job of editorial designer for darc magazine, the leading magazine in decorative lighting in interior design, as well being the advertising designer for three other magazines, Sleeper, TPi and TPMEA. This is largely down to my lecturers recommending I look at advertising design as a career path.

**How did the course prepare you for the job you are doing now?**  
The modules you take on in the Vis Comm course means there are a huge amount of opportunities when it’s time to step into the working world. On a daily basis I use everything I learned in college whether its creating advertising artwork or updating one of our 20 plus websites. Learning how to manage multiple assignments at once is crucial while studying and you will have the ability and confidence to multi-task once you are finished.

**What were the key benefits to the course?**  
Having the best equipment, software and resources may get you far but having the level of dedicated and knowledgeable lecturers the Wexford Campus has will make sure you can walk into any company and be confident you can exceed their expectations.

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**Charlene Somers**  
Applied Social Studies

**What did you like about the course?**  
I completed the Applied Social Studies (Professional Social Care) course and enjoyed all aspects of my undergraduate studies and could not accredit one module over another as all were equally important and interesting. I have recently completed the President’s Research Fellowship. The Institute invests considerably in the fellowship programme and offers successful candidates a scholarship to pursue a masters. I received great support from all faculty members and fellow postgraduate students. I made lifelong friends along the way.

**What are you doing now?**  
I am pursuing a teaching career in the third-level education sector. I would be delighted to become a third-level educator to impart the wisdom and knowledge I have acquired unto others.

**How did the course prepare you for the job you are doing now?**  
Postgraduate students must conduct weekly teaching contributions and this provided me with two years teaching experience. Through this I discovered a future career goal.

**What were the key benefits to the course?**  
I feel I owe a lot to the Wexford Campus and the lecturers I had the pleasure of gaining knowledge and guidance from. Their belief in me transcended into a belief in myself. For this I am eternally grateful. Wexford campus has and always will be a place I hold dear.
Wexford Campus
Graduate Profiles

Roisin Sheil
Bachelor of Business

I am currently employed by PwC as part of its Assurance Graduate Programme. My main role in PwC is to audit clients, both national and international. Through the Graduate Programme, I am also sitting accountancy exams with Chartered Accountants Ireland.

The Bachelor of Business course in Wexford Campus really helped me in the preparation for a role in PwC. There is a wide variety of subjects on offer through the course, and each subject I studied helped me in some way in my new role. As PwC is a company that relies of technology, the emphasis on IT in the course is very beneficial to me now. In third year, I undertook a 12-week work placement in a finance department. The practical experience I gained during this work placement inspired me to apply to PwC. This work experience opportunity is one of the best aspects of the course, I believe.

One of my favourite things about my time at Wexford Campus was the people. The lecturers are brilliant! Each lecturer pushed me to do the best that I could in each subject, and their knowledge and experience helped me to achieve this. Every lecturer was approachable and always had enough time to help with any questions the students had. The other college students also made my experience memorable, I made friends for life there.

I will never forget my time at the Wexford Campus. The experience that I gained through the subjects that I studied and the work experience that I undertook has been vital in helping me transition into my job in PwC.

Marie O’Connor
Early Childhood Education and Care

What did you like about the course?
For me, it was that we were constantly challenged, not just to learn but to really consider what it meant in terms of practice. The enthusiasm the lecturers have is contagious - they helped us to think creatively about what we were doing and how we could move forward.

What are you doing now?
I am currently working as an early childhood educator and I am also studying part-time with a Forest School Leadership course 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 academically and practically. I graduated with a passion for both early childhood and education.
OVER 55,000 GRADUATES TO DATE
WHAT YOU NEED TO KNOW
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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/student-services

**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 Health Centre on the Carlow Campus provides a full comprehensive medical service for students including full-time nursing services and surgeries from visiting doctors.

**Careers Service**
The Careers Service provides information and advice to students on course and career decisions, the development of employability skills and advice and guidance on employment and further learning opportunities. Student and graduate placement and recruitment is supported through engagement with employers and graduate careers fairs such as GradIreland.

**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 172 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.

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. Institute of Technology Carlow is the institution of choice for students wishing to combine their academic study while participating at Performance, Competitive or Recreational Level in their chosen sports.

Institute of Technology Carlow Sporting Success 2018/2019

The 2018/2019 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.

2018/2019 Sports Achievements

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<th>Athletics</th>
<th>2018/2019 Achievements</th>
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<td>FISU World University Games 2019</td>
<td>Gold in Women’s 60m</td>
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<td>IUAA Indoor Intervarsity Championships 2019</td>
<td>Silver in Men’s 60m, Gold in Men’s 60m Hurdles</td>
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<td>Gold in Men’s 4x200m Relay</td>
<td>Gold in Men’s High Jump</td>
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<td>Gold in Men’s Combined Events</td>
<td>Silver in Men’s Pole Vault</td>
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<tr>
<td>IUAA Outdoor Intervarsity Championships 4th/5th April 2019</td>
<td>Gold in Men’s 200m, Gold in Women’s 400m, Silver in Men’s 4 x 100m, Silver in Men’s 100m Hurdles, Silver in Men’s 800m</td>
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<td>Archery</td>
<td>ISAA League Individual Recurve 3rd Place, ISAA League Compound Team 3rd Place</td>
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| Badminton       | Six Place Finish at Student Sport Ireland (SSI) 3rd Level Badminton League Final    |
| Basketball      | Men’s National League Division 1 Playoffs Semi Finalist                              |
|                 | Men’s Basketball Ireland National Cup Semi Finalist                                 |
|                 | NBCC Women’s Division 1 League Semi Finalists                                       |
|                 | Women’s Basketball Ireland Super League Shield Finalists                             |
|                 | Retained Women’s Super League Status for 2019/2020 Season                           |
|                 | Men’s National League 1st team All Star – Johnny McCarthy                          |
| Boxing          | IATBA Lightweight National Boxing Title – 60kg                                     |
| Camogie         | Purcell Shield Winners 2019                                                         |
| Gaelic Football (Men’s) | Sigerson Quarter Finalists 2019                                           |
| Hurling         | Fitzgibbon Cup Quarter Finalists 2019                                               |
| Kitting         | Student Sport Ireland (SSI) Karting Team Championship 2nd Place 2019               |
| Pool            | UPC Irish Intervarsity 8 Ball Pool Championship Winners 2019                        |
| Power Lifting   | National University Championship Under 52kg Individual Category Winner               |
| Rugby (Men’s)   | IRFU Student Sport Ireland (SSI) Brendan Johnston Cup Winners 2019                  |
|                 | IRFU Student Sport Ireland (SSI) Division 1 League Winners 2018                     |
|                 | Student Sport Ireland (SSI) Freshener U20 O’Boyle Shield Winners                     |
|                 | IRFU Student Sport Ireland (SSI) Tier 2 Semi Finalist 2019                          |
|                 | IRFU Student Sport Ireland (SSI) Division 2 Third Place 2018                        |
| Rugby (Women’s) | Student Sport Ireland/IRFU Women’s Rugby Division 1 Cup Semi-Finalists              |
|                 | IURU Kay Bowen Sevens Plate Winners                                                 |
| Soccer (Men’s)  | Men’s Rustlers CUFL Premier Division Winners 2019                                   |
|                 | Men’s CUFL Futsal Champions 2019                                                    |
|                 | CFAI Plate Winners 2019                                                              |
| Soccer (Women’s)| Women’s WSCAI Intervarsity Kelly Cup 3rd Place Play Off Winners                     |
|                 | Women’s CUFL Premier Division League Finalists                                       |

Other sports at the fore for Institute of Technology Carlow include: Women’s Gaelic football, Cricket, Volleyball, Golf and Airsoft, 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.
Ireland’s Marcus Lawler celebrates winning bronze in the Men’s 200m Final at the 2019 World University Games, Stadio San Paolo, Naples, Italy – July 2019.
SPORT

Institute Sporting Facilities

South Sports Campus
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 is due for completion in the Summer of 2020. Situated 1km from the main campus, South Sports Campus will be a world-class training facility, consolidating Institute of Technology Carlow’s position as one of Ireland’s leading third-level institutes for the provision of sport and physical activity.

Barrow Centre
The Barrow Centre sport 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. 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.
ALL-WEATHER

400 METRE

ATHLETICS TRACK

31 ACRE

WORLD-CLASS

SPORTS CAMPUS
Sports Scholarships
Awarded for Excellence in Sport
Now in its 21st 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.

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 2018/19, nine 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

Gold Sports Scholarships
Institute of Technology Carlow provides a number of Gold Sports Scholarships. 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 2018/19 over 90 such scholarships were made across a wide range of sports disciplines.

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 2020.
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:
• Gym Membership
• Personal Strength and Conditioning
• Advice on Diet/Nutrition
• Injury Rehabilitation
• Sports Scholarship Sportswear
• Academic Support
• Scholarship Training Grant or Fee Support.

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

Molly Scott, 3rd Year Law Student, was one of the four-person Irish Women’s 4 x 100m relay team that stormed to a silver medal at the U20s IAAF World Championships 2018 in Tampere, Finland.
CLUBS AND SOCIETIES

Sport at the Institute of Technology Carlow enhances the learner experience through its vibrant clubs and societies which promotes opportunities for social involvement, community engagement and personal development. 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. 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
T: 059 9175608
E: paula.hickey@itcarlow.ie

Societies
Chaplain Fr. Martin Smith
T: 059 9175612
E: martin.smith@itcarlow.ie
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 print items comprising of books, reports, official publications, working papers, theses, standards and newspapers. It also has an extensive DVD and audio-visual collection. In addition, journals and newspapers available in print format and further journals and newspapers are 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.

Study desks are available throughout 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 KOHA 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.

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 us on:
W: itcarlow.ie/library
Facebook: IT Carlow library
Twitter: @itcarlowlibrary
T: 353 59 9175760
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.volunteer.ie](http://www.volunteer.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.volunteerwexford.ie](http://www.volunteerwexford.ie).

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.

E: studentservices@itcarlow.ie  
T: 353 59 917 5600
HOW TO APPLY

GENERAL ADMISSION

General Admission Requirements
Applicants seeking admission to the first year of courses listed in this prospectus should apply to the Central Applications Office (CAO). Online applications made by the 20th January 2020 avail of the discounted application rate. The CAO closing date is 1st February 2020.

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 2018 are listed on the CAO course chart at the back of the prospectus, page 178.

Late Applicants and Change of Mind Applications
The closing date for Late Applications is 1st May 2020.
The closing date for Change of Mind applications is 1st July 2020.

Points Scale for Entry to Higher Education
The 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 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.

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 Mathematics. This means that the maximum cumulative Leaving Certificate points total will increase from 600 to 625 (existing maximum points plus bonus points).

<table>
<thead>
<tr>
<th>Grade (%)</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 (90-100)</td>
<td>100</td>
</tr>
<tr>
<td>H2 (80-90)</td>
<td>88</td>
</tr>
<tr>
<td>H3 (70-80)</td>
<td>77</td>
</tr>
<tr>
<td>H4 (60-70)</td>
<td>66</td>
</tr>
<tr>
<td>H5 (50-60)</td>
<td>56</td>
</tr>
<tr>
<td>H6 (40-50)</td>
<td>46</td>
</tr>
<tr>
<td>H7 (30-40)</td>
<td>37</td>
</tr>
<tr>
<td>H8 (0-30)</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade (%)</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1 (90-100)</td>
<td>56</td>
</tr>
<tr>
<td>O2 (80-90)</td>
<td>46</td>
</tr>
<tr>
<td>O3 (70-80)</td>
<td>37</td>
</tr>
<tr>
<td>O4 (60-70)</td>
<td>28</td>
</tr>
<tr>
<td>O5 (50-60)</td>
<td>20</td>
</tr>
<tr>
<td>O6 (40-50)</td>
<td>12</td>
</tr>
<tr>
<td>O7 (30-40)</td>
<td>0</td>
</tr>
<tr>
<td>O8 (0-30)</td>
<td>0</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>20</td>
</tr>
<tr>
<td>F2</td>
<td>12</td>
</tr>
<tr>
<td>F3</td>
<td>0</td>
</tr>
</tbody>
</table>

Basic Entry Requirements

<table>
<thead>
<tr>
<th>QQI-FET (FETAC) - Entry Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 8</td>
</tr>
<tr>
<td>2H5s and 4O6/H7</td>
</tr>
<tr>
<td>Level 6/7</td>
</tr>
<tr>
<td>5 O6/H7</td>
</tr>
</tbody>
</table>

Please note that there will be variations on these entry requirements for certain courses. Please see course listings on pages 178-179.

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.

Leaving Certificate Vocational Programme

Entry requirements – Honours Bachelor Degrees (NFQ 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 (NFQ Level 7) and Higher Certificate (NFQ 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.

<table>
<thead>
<tr>
<th>LCVP Link Modules Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinction</td>
<td>66</td>
</tr>
<tr>
<td>Merit</td>
<td>46</td>
</tr>
<tr>
<td>Pass</td>
<td>28</td>
</tr>
</tbody>
</table>

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.

Revised Scoring for QQI-FET Awards
The maximum possible points awarded through QQI-FET is 390. The scoring system only applies where all of the requirements for the major award are met i.e. where the named component awards specified have been achieved to a minimum of 120 credits. 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:

<table>
<thead>
<tr>
<th>Programme Code</th>
<th>Programme Title</th>
<th>Number of Reserved Places</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW106</td>
<td>Higher Certificate in Physiology and Health Science</td>
<td>6</td>
</tr>
<tr>
<td>CW138</td>
<td>Bachelor of Science (Honours) in Sport and Exercise Science</td>
<td>2</td>
</tr>
<tr>
<td>CW148</td>
<td>Bachelor of Science (Honours) in Strength and Conditioning</td>
<td>2</td>
</tr>
<tr>
<td>CW188</td>
<td>Bachelor of Science (Honours) Sports Rehabilitation and Athletic Therapy</td>
<td>2</td>
</tr>
</tbody>
</table>

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 are advised to contact their Guidance Counsellor to see if their course and college are part of this Institute of Technology Carlow scheme.
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. 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.

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.

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: www.itcarlow.ie or see pages 178-179.

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.
  E: 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.
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 scholarships on the basis of Leaving Certificate performance, is one of the most generous in the country.

Find out more on our website: [www.itcarlow.ie/academicscholarships](http://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.
Those seeking admission to an Add-on Honours Degree course should apply to the Institute Admissions Office by 31st May 2020. 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 178-179. The closing date for receipt of applications is 31st May 2020.

For further detail on Advanced Entry, please refer to Institute website.

Carlow Access Programme (CAP)
Carlow’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 shortlisted 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 reserved a number of reduced points course places for DARE applicants. DARE (Disability Access Route to Education) 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
T: 059 9175603
E: aisling.mchugh@itcarlow.ie

Access Officer – Wexford Campus
Janette Davies, Deputy Head of Campus (Programmes)
Summerhill Road, Wexford
T: 053 9185800
E: janette.davies@itcarlow.ie
APPLICATION INFORMATION

Schedule of Fees 2019/20 *

**Undergraduates**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Details</th>
<th>Tuition Fee</th>
<th>Student Contribution Fee</th>
<th>Total Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate Year 1</td>
<td>Maintenance Grant Holder</td>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
</tr>
<tr>
<td></td>
<td>Non Maintenance Grant Holder</td>
<td>NIL</td>
<td>€3,000</td>
<td>€3,000</td>
</tr>
<tr>
<td>Certificate Year 2</td>
<td>Maintenance Grant Holder</td>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
</tr>
<tr>
<td></td>
<td>Non Maintenance Grant Holder</td>
<td>NIL</td>
<td>€3,000</td>
<td>€3,000</td>
</tr>
<tr>
<td>Degree Year 1/2/3</td>
<td>Maintenance Grant Holder</td>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
</tr>
<tr>
<td></td>
<td>Non Maintenance Grant Holder</td>
<td>NIL</td>
<td>€3,000</td>
<td>€3,000</td>
</tr>
<tr>
<td>Honours Degree Year 1/2/3/4</td>
<td>Maintenance Grant Holder (Vocational Education Committee)</td>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
</tr>
<tr>
<td></td>
<td>Non Maintenance Grant Holder</td>
<td>NIL</td>
<td>€3,000</td>
<td>€3,000</td>
</tr>
</tbody>
</table>

* Fees may be subject to change in 2020/21.

**Notes**

When students undertake a course at a third-level institution, they are liable to pay both Tuition fees for the course, and a Student Contribution Fee. The amount of the Tuition Fee is dependent on the course undertaken.

However, under the terms of the Free Fees Initiative, many undergraduate students attending publicly funded third-level courses do not have to pay the Tuition element of the annual fees. Instead, the Department of Education and Skills pays this fee to the third-level institutions. 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.

Tuition fees are determined annually by the Higher Education Authority and are currently under review for 2020/21.

**Student contribution fees**

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 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 who 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 9175174
E: admissions@itcarlow.ie
APPLICATION INFORMATION

Grant Information
All students are required to pay the Student Contribution Fee. 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 2020/21 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 who hold a SUSI student grant in the current year and who 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.

<table>
<thead>
<tr>
<th>Grant Rates for the 2019/2020 Academic Year</th>
<th>Greater Than 45 km from IT Carlow</th>
<th>Less than 45 km from IT Carlow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full 100% Maintenance</td>
<td>€3025</td>
<td>€1215</td>
</tr>
<tr>
<td>Part 75% Maintenance</td>
<td>€2270</td>
<td>€910</td>
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<tr>
<td>Part 50% Maintenance</td>
<td>€1515</td>
<td>€605</td>
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<tr>
<td>Part 25% Maintenance</td>
<td>€755</td>
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<td>Special Rate of Maintenance Grant</td>
<td>€5915</td>
<td>€2375</td>
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<tr>
<td>Fees only</td>
<td>€0</td>
<td>€0</td>
</tr>
</tbody>
</table>

For more information on grants:
Grants Helpline
T: 059 9175113
E: grants@itcarlow.ie
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

<table>
<thead>
<tr>
<th>Old Awards - up to 2004</th>
<th>NFQ Level</th>
<th>New Awards</th>
<th>NFQ Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral Degree</td>
<td>10</td>
<td>Doctoral Degree</td>
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</tr>
<tr>
<td>Masters Degree</td>
<td>9</td>
<td>Masters Degree</td>
<td>9</td>
</tr>
<tr>
<td>Graduate Diploma (first stage of Masters Degree)</td>
<td>9</td>
<td>Postgraduate Diploma</td>
<td>9</td>
</tr>
<tr>
<td>Graduate Diploma (stand alone/conversion award)</td>
<td>8</td>
<td>Higher Diploma</td>
<td>8</td>
</tr>
<tr>
<td>Honours Bachelor Degree</td>
<td>8</td>
<td>Honours Bachelor Degree</td>
<td>8</td>
</tr>
<tr>
<td>National Diploma</td>
<td>7</td>
<td>Bachelors Degree</td>
<td>7</td>
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<tr>
<td>National Certificate</td>
<td>6</td>
<td>Higher Certificate</td>
<td>6</td>
</tr>
</tbody>
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- Applied Biology/Chemistry: 79
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- Business with Law: 100
- Computing: 61
- Legal Studies: 121
- Physiology and Health Science: 71
- Pharmacy Technician: 72

### Degrees
- Aircraft Systems: 21
- Analytical Science: 78
- Architectural Technology: 36
- Biosciences: 77
- Business: 97
- Business Management: 97
- Civil Engineering: 33
- Construction Management with Building Services: 40
- Cybercrime and IT Security: 53
- Digital Marketing with Analytics: 109
- Electronic Engineering: 23
- Human Resource Management: 97
- Industrial Design: 123
- Interactive Digital Art and Design: 55
- International Business: 97
- IT Management: 60
- Marketing: 97
- Mechanical Engineering: 25
- Social Studies - Professional Social Care Practice: 126
- Software Development: 58
- Sports Coaching and Business Management (GAA): 111
- Sports Coaching and Business Management (Rugby): 113
- Sports Coaching and Business Management (Soccer): 112
- Supply Chain Management: 97
- TV and Media Production: 27

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- Accounting: 96
- Aerospace Engineering: 20
- Architectural Technology: 35
- Biopharmaceuticals: 74
- Brewing and Distilling: 75
- Business: 88
- Business Management: 89
- Business with Law: 95
- Civil Engineering: 32
- Computer Games Development: 56
- Cybercrime and IT Security: 52
- Digital Marketing with Analytics: 108
- Early Childhood Education and Care: 124
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- Finance and Accounting: 93
- Human Resource Management: 90
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- International Business: 91
- IT Management: 59
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- Mechanical Engineering: 24
- Media and Public Relations: 114
- Pharmaceuticals and Drug Formulation: 76
- Product Design Innovation: 122
- Quantity Surveying: 38
- Social Studies - Professional Social Care Practice: 125
- Software Development: 57
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- Sport Rehabilitation and Athletic Therapy: 70
- Sport and Exercise Science: 68
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#### Higher Certificates
- Business: 144

#### Degrees
- Art: 150
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- Sustainable Farm Management and Agribusiness: 151
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Leaving Certificate Points Scoring System
Entry to the vast majority of courses in the CAO system in 2020 will be determined according to the following common points scale and accompanying conditions:

<table>
<thead>
<tr>
<th>Grade (%)</th>
<th>Points</th>
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<tbody>
<tr>
<td>H1 (90-100)</td>
<td>100</td>
</tr>
<tr>
<td>H2 (80&lt;90)</td>
<td>88</td>
</tr>
<tr>
<td>H3 (70&lt;80)</td>
<td>77</td>
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<tr>
<td>H4 (60&lt;70)</td>
<td>66</td>
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<tr>
<td>H5 (50&lt;60)</td>
<td>56</td>
</tr>
<tr>
<td>H6 (40&lt;50)</td>
<td>46</td>
</tr>
<tr>
<td>H7 (30&lt;40)</td>
<td>37</td>
</tr>
<tr>
<td>H8 (0&lt;30)</td>
<td>0</td>
</tr>
<tr>
<td>O1 (90-100)</td>
<td>56</td>
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<tr>
<td>O2 (80&lt;90)</td>
<td>46</td>
</tr>
<tr>
<td>O3 (70&lt;80)</td>
<td>37</td>
</tr>
<tr>
<td>O4 (60&lt;70)</td>
<td>28</td>
</tr>
<tr>
<td>O5 (50&lt;60)</td>
<td>20</td>
</tr>
<tr>
<td>O6 (40&lt;50)</td>
<td>12</td>
</tr>
<tr>
<td>O7 (30&lt;40)</td>
<td>0</td>
</tr>
<tr>
<td>O8 (0&lt;30)</td>
<td>0</td>
</tr>
</tbody>
</table>

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 2018 points range.

EUROPEAN SOCIAL FUND

All Institute of Technology Carlow courses are funded by Project Ireland 2040 and by the European Union.

The information in this publication is correct at the time of going to Press. It is issued on the express condition that it shall not form part of any contract between the Institute and any student. All matters covered in this Publication are subject to change from time to time. The Institute reserves the right in every case and at its own discretion and for any reason to alter or not offer courses or parts of courses.
## Courses available through CAO Application System 2020

### CARLOW Honours Bachelor Degrees - Level 8 (HD)

<table>
<thead>
<tr>
<th>CODE</th>
<th>TITLE</th>
<th>GENERAL LC REQUIREMENT</th>
<th>OTHER</th>
<th>SUBJECT REQUIREMENTS</th>
<th>2018 FINAL CUT-OFF POINTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW108</td>
<td>Science – CAO applicants must choose ONE course option: Common Entry: CEY; Biopharmaceuticals: BPH; Brewing and Distilling: BRD; Pharmaceuticals and Drug Formulation: PDF - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>276</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>CW128</td>
<td>Brewing and Distilling - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>NEW COURSE</td>
<td>75</td>
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</tr>
<tr>
<td>CW138</td>
<td>Sport and Exercise Science - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW148</td>
<td>Strength and Conditioning - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW188</td>
<td>Sport Rehabilitation and Athletic Therapy - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW208</td>
<td>Computer Games Development - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW248</td>
<td>Information Technology Management - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>293</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>CW258</td>
<td>Cybercrime and IT Security - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW268</td>
<td>Computing in Interactive Digital Art and Design - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW438</td>
<td>Construction – CAO applicants must choose ONE course option: Common Entry: CEY; Quantity Surveying: QSY; Facilities and Building Services Management: FBS - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>263</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>CW468</td>
<td>Architectural Technology - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>260</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>CW478</td>
<td>Civil Engineering - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 H4</td>
<td>331</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>CW548</td>
<td>Mechanical Engineering - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>330</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>CW558</td>
<td>Electronic Systems - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>282</td>
<td>22</td>
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<tr>
<td>CW568</td>
<td>Aerospace Engineering - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>368</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>CW578</td>
<td>TV and Media Production - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>360</td>
<td>26</td>
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<tr>
<td>CW708</td>
<td>Law (LLB) - Three Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O3/H6 Eng</td>
<td>298</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>CW728</td>
<td>Product Design Innovation - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>252</td>
<td>122</td>
<td></td>
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<tr>
<td>CW748</td>
<td>Early Childhood Education and Care - Three Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>275</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>CW758</td>
<td>Professional Social Care Practice - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>270</td>
<td>125</td>
<td></td>
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<tr>
<td>CW808</td>
<td>Media and Public Relations - Three Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O3/H6 Eng</td>
<td>252</td>
<td>114</td>
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<tr>
<td>CW848</td>
<td>Digital Marketing with Analytics - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7</td>
<td>NEW COURSE</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>CW858</td>
<td>Sports Management and Coaching (Options: GAA, Rugby, Soccer) - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>NEW COURSE</td>
<td>110</td>
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<tr>
<td>CW938</td>
<td>Business with Law - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>281</td>
<td>95</td>
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<tr>
<td>CW948</td>
<td>Accounting - Three Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>O4/H6 Eng O3/H6</td>
<td>307</td>
<td>96</td>
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### CARLOW Ordinary Bachelor Degrees - Level 7 (DG)

<table>
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<th>CODE</th>
<th>TITLE</th>
<th>GENERAL LC REQUIREMENT</th>
<th>SUBJECT REQUIREMENTS</th>
<th>2018 FINAL CUT-OFF POINTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW107</td>
<td>Analytical Science</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>213</td>
<td>78</td>
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<tr>
<td>CW117</td>
<td>Biosciences</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>214</td>
<td>77</td>
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<tr>
<td>CW207</td>
<td>Software Development</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>251</td>
<td>58</td>
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<td>CW217</td>
<td>Information Technology Management</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>234</td>
<td>60</td>
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<tr>
<td>CW227</td>
<td>Cybercrime and IT Security</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>251</td>
<td>53</td>
</tr>
<tr>
<td>CW237</td>
<td>Computing in Interactive Digital Art and Design</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>NEW COURSE</td>
<td>55</td>
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<tr>
<td>CW407</td>
<td>Architectural Technology</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>186</td>
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<tr>
<td>CW417</td>
<td>Construction Management with Building Services</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>226</td>
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<tr>
<td>CW427</td>
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<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>200</td>
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<td>CW507</td>
<td>Aircraft Systems</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
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<tr>
<td>CW517</td>
<td>Mechanical Engineering</td>
<td>5O6/H7</td>
<td>O6/H7 O6/H7</td>
<td>272</td>
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</table>

See: [www.itcarlow.ie/courses/type/undergraduate-cao-courses](http://www.itcarlow.ie/courses/type/undergraduate-cao-courses) for all Institute of Technology Carlow course information.
### CARLOW - Ordinary Bachelor Degrees - Level 7 (DG)

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<tr>
<th>CODE</th>
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<th>GENERAL LC REQUIREMENT</th>
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<th>SUBJECT REQUIREMENTS</th>
<th>2018 FINAL CUT-OFF POINTS</th>
<th>PAGE</th>
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<tbody>
<tr>
<td>CW27</td>
<td>Business</td>
<td>5O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
<td>217</td>
<td>23</td>
</tr>
<tr>
<td>CW54</td>
<td>TV and Media Production</td>
<td>5O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
<td>325</td>
<td>27</td>
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<tr>
<td>CW71</td>
<td>Electronic Engineering</td>
<td>5O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
<td>207</td>
<td>123</td>
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<tr>
<td>CW80</td>
<td>Sport Coaching and Business Management - GAA</td>
<td>5O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
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<td>126</td>
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<tr>
<td>CW81</td>
<td>Sport Coaching and Business Management - Rugby</td>
<td>5O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
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<td>111</td>
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<tr>
<td>CW82</td>
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<td>5O6/H7</td>
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<td>O6/H7</td>
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<td>112</td>
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<tr>
<td>CW16</td>
<td>Business – CAO applicants must choose ONE course option:</td>
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<td>Garda vetting required</td>
<td>O6/H7</td>
<td>250</td>
<td>140</td>
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<tr>
<td>CW02</td>
<td>Early Childhood Education and Care - Three Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
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<td>79</td>
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<tr>
<td>CW03</td>
<td>Art - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
<td>*</td>
<td>149</td>
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<tr>
<td>CW05</td>
<td>Tourism and Event Management - Four Year</td>
<td>2H5 &amp; 4O6/H7</td>
<td>Garda vetting required</td>
<td>O6/H7</td>
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### CARLOW - Higher Certificates - Level 6 (HC)

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### WEXFORD - Honours Bachelor Degrees - Level 8 (HD)

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### WEXFORD - Ordinary Bachelor Degrees - Level 7 (DG)

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* CW038 and CW057: Combination of Leaving Cert points and portfolio.
** CW058, CW087, CW017 and CW027: Combination of Leaving Cert points, interview and portfolio.