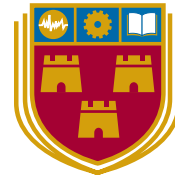itcarlow.ie

INSTITUTE *of*
TECHNOLOGY
CARLOW

Institiúid Teicneolaíochta Cheatharlach

CARLOW & WEXFORD

Undergraduate
Prospectus
2022

A technological university for the south east

Institute of Technology Carlow

INSTITIÚID TEICNEOLAÍOCHTA
CHEATHARLACH

Waterford Institute of Technology

INSTITIÚID TEICNEOLAÍOCHTA
PHORT LÁIRGE

ENGAGE

LEARN

INNOVATE

LEAD

CHOOSE YOUR COURSE

CONTENTS

WELCOME FROM THE PRESIDENT

As we emerge from a particularly difficult and challenging 18 months, there are many reasons to feel positive. I am happy and grateful to see students returning to campus and the lecture halls, classrooms and social areas once again filled with laughter and chat.

This is a positive time for you too as you take your next steps towards building your future through higher education. I trust that Institute of Technology Carlow can be part of that future.

While we continue to face and overcome challenges, there are many achievements of which we can be proud. In the past academic year, Institute of Technology Carlow marked its 50th anniversary. In a half century, we have grown from a regional technical college to an institute of technology with over 10,000 learners pursuing more than 200 programmes of study, from certificates to doctorates. This college has grown in size and in reputation to become one of Ireland's most respected higher education institutions with 65,000 global alumni, and which is an engine of growth for the regions we serve.

Our achievements over the last number of years were recently recognised in the ranking of our Institute in the five top performing universities in Ireland,

according to U-Multirank, the largest and most inclusive global university ranking system. University performance was compared across teaching and learning, research, knowledge transfer, international orientation and regional engagement.

This is a significant international vote of confidence for Institute of Technology Carlow and a great endorsement of the incredible work undertaken across our campuses – from the introduction of new programmes of study to our international research and publications, from facilities to gender equality and graduation rates.

Now we are preparing to take another significant step in the months ahead by becoming a technological university. At this momentous time in our history, we are grateful to the dedicated and talented students, alumni, faculty, staff, collaborative partners and friends who have helped bring us to this point. We know this inclusive community will continue to be a large part of our identity and our success as we transition into a new era. I hope you will consider studying at Institute of Technology Carlow and being part of our story – current and future.

Dr Patricia Mulcahy
President

Ranked in the
TOP 5
**Performing
Universities**
in Ireland 2021

multirank

Institute of Technology Carlow Awarded **Athena SWAN Bronze Award** for Advancing Gender Equality

In March 2021, Institute of Technology Carlow appointed a permanent Director for Equality, Diversity, Inclusion and People. This post has responsibility for overseeing the many initiatives designed to advance gender equality, representation, progression and success for all, and to provide an inclusive and diverse learning environment in which all of our students are supported in reaching their full potential.

In May 2019, Institute of Technology Carlow received the Bronze Athena SWAN Award from Advance HE for progressing gender equality in academia and promoting diversity and inclusion in higher education. Following on from this, three of the Institute's departments - computing, engineering and humanities - prepared and applied for departmental awards. This self-assessment process, involving extensive consultation with undergraduate and postgraduate students prior to application at departmental level, was hugely beneficial and enlightening for all participants.

Institute of Technology Carlow has also adopted a comprehensive gender expression policy developed in response to the need to recognise the range, type, and nature of gender diversity within our student and staff body and to form a policy framework to ensure good practice in its approach to diversity. It followed extensive consultation with the Institute's Student Union (SU) and Transgender Equality Network Ireland (TENI).

CREATING A TECHNOLOGICAL UNIVERSITY FOR THE SOUTH EAST

Join 20,000 students in the south east's first university on an exciting journey of ambition.

Institute of Technology Carlow and Waterford Institute of Technology have been working together to create the first technological university in the south east.

Together, we can be proud about what we have achieved in the last 50 years. We are both ambitious for our future.

Choosing to study with us is about being part of something bigger. You will, in time, be joining a community of students studying in locations such as Carlow, Wexford and Waterford.

We will help you achieve your dreams by giving you more than 100 CAO courses across arts, business, engineering, health, science and technology to choose from.

Studying with us means you will have no limits. There are opportunities to start at apprenticeship and undergraduate level and keep going as far as PhD level. Our teaching, learning and research is guided by real-world challenges and we will give you the skill set to explore, be inquisitive and discover.

You will enjoy opportunities to study abroad, undertake work placement, and experience an exciting campus life as we prepare you for your chosen career.

Choose to be part of the future of the south east. First hand, you will see how our exceptional education, research, and innovation platforms play a role in supporting our region to reach its full potential.

We have an exciting journey together ahead, built on our strengths.

Our focus has been on creating a university that places your ambition at the heart of everything we do. We think about your future, and set everything in place for you to achieve it.

For information on CAO courses and how to apply, visit

www.itcarlow.ie
for courses in Carlow and Wexford

www.wit.ie
for courses in Waterford

CARLOW

© Carlow Tourism

© Carlow Weather

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.

© Carlow Tourism

© Carlow Weather

GRADUATE ATTRIBUTES

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**

INSTITUTE of TECHNOLOGY CARLOW

Graduate Attributes

CREATIVE
- I think imaginatively and differently
- I find innovative solutions to problems
- I am a co-creator of the future
- I understand that the future is creative
- I am flexible and adaptable to different environments

KNOWLEDGEABLE
- I can demonstrate a comprehensive knowledge of a particular discipline area
- I am a knowledge creator
- I can conduct research independently
- I have an appreciation of knowledge beyond my own discipline
- I can analyse critically

CONNECTED
- I am a team player
- I feel part of a community
- I am civically and environmentally aware
- I can communicate confidently
- I think about my impact on others

CONFIDENT
- I can work autonomously
- I welcome challenge
- I am confident adapting to the work environment
- I am self-motivated
- I am professionally ready

REFLECTIVE
- I learn from what I do
- I seek learning opportunities
- I am curious
- I continue to learn
- I am a reflective practitioner

GLOBAL
- I am outward looking
- I embrace diversity and inclusivity
- I see the world as my home
- I am interested in and sensitive to different cultures
- I am open to new experience

INTEGROUS
- I am ethically aware
- I am committed to equality and fairness
- I uphold professional standards
- I am socially aware and responsible
- I understand that it is my responsibility to be ethical

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.

OPEN DAYS AND SCHOOL LIAISON

KEY CONTACTS

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

Schools Liaison Team
T: (059) 9175088
E: **schoolvisits@itcarlow.ie**

OPEN DAYS

Institute of Technology Carlow hosts a number of open days every academic year on both the Carlow and Wexford campuses, 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**
· **HEAR** (Higher Education Access Route), **DARE** (Disability Access Route to Education) and **CAP** (Carlow Access Programme)
· **Clubs and Societies**

SCHOOL VISITS

Institute of Technology Carlow offers both online and in-person school visits. The school visits offer us a wonderful opportunity to present details about the Institute, its courses, facilities and future developments to senior cycle students.
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. To book, please email: **schoolvisits@itcarlow.ie**

GUIDANCE COUNSELLORS

Guidance counsellors meet with both 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.

COVID-19

The exact proportion of on-campus versus online activities will be determined by the public health advice at any given time. We remain committed to providing schools and those students interested in studying in Institute of Technology Carlow with full access to information about our campus, courses and supports.

The most up-to-date information is available on **itcarlow.ie**

FACULTY OF **ENGINEERING**

"It's a very collaborative environment".

Dillon O'Reilly
Aerospace Engineering Student

Visit **itcarlow.ie** to see our full story videos.

HEAD OF FACULTY **Dr Frances Hardiman** E: frances.hardiman@itcarlow.ie
BEng (Hons), PhD, CEng, MIEI, IPMA

HEAD OF DEPARTMENT OF AEROSPACE, MECHANICAL AND ELECTRONIC ENGINEERING

Dr Cathal Nolan
BEng (Hons), PG Dip, MEng, PhD
E: cathal.nolan@itcarlow.ie

HEAD OF EXTENDED CAMPUS

Anne Meaney
BA, MA, MIITD
E: anne.meaney@itcarlow.ie

HEAD OF DEPARTMENT OF BUILT ENVIRONMENT

Dr Eoin Homan
BEng (Hons), MSc, CEng, MIEI
E: eoin.homan@itcarlow.ie

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

Aerospace Engineering
Bachelor of Engineering (Honours) or Bachelor of Engineering

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW568 NFQ LEVEL 8	Bachelor of Engineering (Honours) in **Aerospace Engineering**	15	4 YEARS	YES	**Dr Gerard Gibbs** MEng, PhD, MIET **E**: gerard.gibbs@itcarlow.ie
CW507 NFQ LEVEL 7	Bachelor of Engineering in **Aircraft Systems**	28	3 YEARS	NO	

What is Aerospace Engineering | Aircraft Systems?

Aerospace Engineering covers 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. Aircraft Systems refer to the 'sub systems' required to maintain the airworthiness of an aircraft, including flight controls, landing gear, electrical systems, hydraulics, avionics, navigation, communications and instrumentation.

Course Structure

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 flights of aerial vehicles (AVs). The courses provide students with skill sets in the areas of aerodynamics, propulsion, aircraft networks, flight dynamics, control systems, aircraft leasing, embedded systems and project design.

Is this course for you?

If you are someone who is interested in aircraft design, aerodynamics, flight control, then this is the course for you.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Aircraft Systems (NFQ Level 6) after Year 2.
- Bachelor of Engineering in Aircraft Systems (NFQ Level 7) after Year 3.

Further Studies

Graduates may apply to undertake either the taught Masters in Flight Test Engineering (MEng) or the research masters at Institute of Technology Carlow or another third-level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Engineering Mathematics 1
Aircraft Anatomy and Design 1
Aviation Science 1
Avionics Fundamentals 1
Communications and Management

Semester 2
Engineering Mathematics 2
Aircraft Anatomy and Design 2
Aviation Science 2
Avionics Fundamentals 2
Aviation Engineering Practices

YEAR 2 (Level 7 & 8)

Semester 3
Engineering Mathematics 3
Avionics 1
Propulsion Systems
Human Factors in Aviation
Project 1 (Avionic)

Semester 4
Engineering Mathematics 4
Aviation Maintenance Practices
Aviation Construction Material and Hardware
Mechanics of Materials 1
Project 2 (Mechanical)

YEAR 3 (Level 7 only)

Semester 5
Engineering Mathematics 5
Propulsion Systems 2
Aviation Legislation
Electrical Power Systems
Avionics 2

Semester 6
Industrial Studies
Aircraft Structures
Aircraft Systems
Development Project (Engineering)

GRADUATE FEEDBACK

Shane Donnellan
Technical Manager, ORIX Aviation

This course provided me with the required hands-on practical experience and theoretical knowledge to start the building blocks for an exciting career in the aviation industry. The positive atmosphere and enthusiasm from staff in the facility make this course enjoyable and exciting. The grounding this course gave me in how aircraft function has been hugely helpful. My degree choice has definitely been a factor in my success.

YEAR 3 (Level 8 only)

Semester 5

Engineering Mathematics 5
Electrical Propulsion
Intro to Space Engineering
UAS Technology
Mechanics of Materials 2

Semester 6

Work Placement
Industrial Studies
Aircraft Structures
Aircraft Systems
Development Project (Engineering)

YEAR 4 (Level 8 only)

Semester 7

Research Project (Engineering)
Aerodynamics and Computational Analysis
Flight Mechanics
Conceptual Design
Embedded Systems

Semester 8

Research Project (Engineering)
Aircraft Structural Mechanics and Analysis
Aircraft Stability and Control
Computer Networks for Aircraft
Technical Aircraft Leasing & Management

SPECIAL FEATURE

- Access to the Institute's Centre for Aerospace Engineering on campus grounds with facilities including a fleet of aircraft and an avionics workshop.

COURSE PROGRESSION CHART

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW568	**Aerospace Engineering** BEng (Honours) – NFQ Level 8	Common First Two Years				Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10
CW507	**Aircraft Systems** BEng – NFQ Level 7					
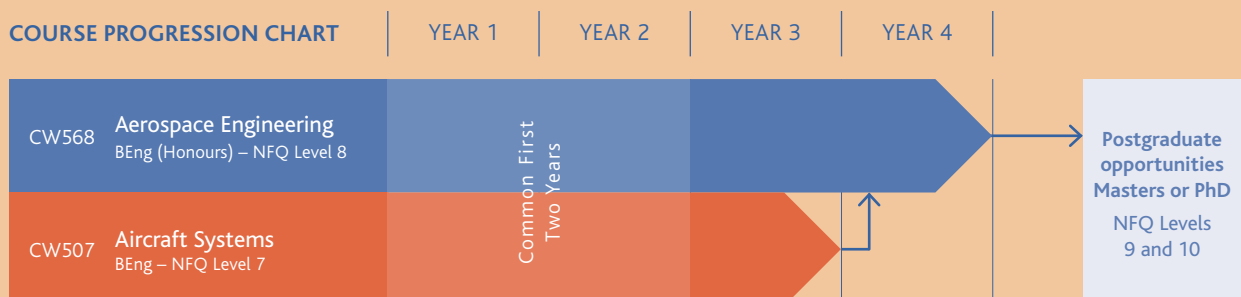
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW568** and **www.itcarlow.ie/CW507**

Biomedical Electronics

Bachelor of Engineering (Honours) or Bachelor of Engineering

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW598 NFQ LEVEL 8	16	**4 YEARS**	**YES**	**Dr Darren Francis Kavanagh** BEng (Hons), PhD **E**: darren.kavanagh@itcarlow.ie
CW577 NFQ LEVEL 7	16	**3 YEARS**	**NO**	

What is Biomedical Electronics?

Biomedical electronics involves the application of electronic circuits and technologies for treating medical conditions, monitoring health problems and improving the quality of life for patients.

Major advances have occurred which have led to highly sophisticated medical devices, e.g.:

- Medical implants (cardiac defibrillators, pacemakers, deep brain neuro-stimulators, gastric stimulators, cochlear implants & insulin pumps).
- Medical monitors (ECG, EEG, & blood pressure);
- Diagnostic equipment (ultrasound, MRI, PET, CT, & X-ray);
- Life support (ventilators, incubators, anaesthetic machines);
- Surgical equipment (endoscopy & electrosurgical).

Course Structure

A blended mix of theory classes, practical experiments and laboratory sessions combined with project-based learning (PBL) elements (hands-on) with medical device equipment and software tools.

Is this course for you?

- Learn electronic circuit design, & analysis techniques for medical devices,
- Master problem solving and critical thinking,
- Knowledge of treatment methods of medical conditions & disorders,
- Develop practical abilities in prototyping, design, & teamwork skills.

If you want to work in a high-tech industry that is advancing medical devices for state-of-the-art healthcare, then this is the course for you.

Career Opportunities

Excellent career prospects exist for graduates within the medical devices sector in Ireland and abroad:

- The global medical devices market in 2020 was valued at €390 billion,
- Ireland is one of Europe's largest MedTech hotspots, which is home to 300+ companies that employ over 32,000 people, which is the highest number of MedTech personnel per capita in Europe,
- Exports of medical devices and diagnostic products now represent 8% of Ireland's total merchandise exports, which is worth €12.6 billion in exports annually,
- MedTech companies require a continuous supply of graduates with electronic engineering skills and domain knowledge of the medical devices sector.

Employment roles include:

- Research and development (R&D),
- Design of electronic circuits and systems for medical technologies,
- Advanced manufacturing processes,
- Specialist rehabilitation engineering,
- Wearable and connected health products,
- Clinical medicine & pharmaceutical products,
- Engineering consultancy on biomedical technologies.

Further Studies

Graduates can progress to taught masters (NFQ Level 9) in Master of Science in Medical Device Regulatory Affairs or postgraduate research study at Masters (NFQ Level 9) or Doctorate (NFQ Level 10) level.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Mathematics and Computer Applications 1
Electrical and Electronic Fundamentals
Programming Systems
Physiology and Cell Biology 1

Semester 2
Mathematics and Computer Applications 2
Electrical and Electronic Circuits
Technical Communications
Prototyping
Physiology and Cell Biology 2

YEAR 2 (Level 7 & 8)

Semester 3
Engineering Mathematics 1
Analogue and Digital Electronics 1
System Design and Test
Computer Programming
Fundamentals of Microbiology 1

Semester 4
Engineering Mathematics 2
Analogue and Digital Electronics 2
Embedded Systems 1
Fundamentals of Microbiology 2
Medical Devices and Instrumentation

YEAR 3 (Level 7 only)

Semester 5
Engineering Mathematics 3
Embedded Systems 2
Digital Communications
Analysis of Analogue Circuits
Molecular Biology & Immunology 1

Semester 6
Network Automation and Programmability
Development Project
Software Defined Radio
Molecular Biology & Immunology 2
Medical Device Standards and Regulations

YEAR 3 (Level 8 only)

Semester 5

Engineering Mathematics 3
Embedded Systems 2
Digital Communications
Analysis of Analogue Circuits
Molecular Biology & Immunology 1

Semester 6

Work Placement
Medical Device Standards and Regulations

YEAR 4 (Level 8 only)

Semester 7

Research Project (Capstone Medical Device Project)
Microelectronic Design 1
Hardware Description Language
Signals and Systems 1
Power Electronics for Biomedical Systems

Semester 8

Research Project (Capstone Medical Device Project)
Digital Systems
Signals and Systems 2
Professional Studies
Biomedical Signal Processing

SPECIAL FEATURES

- This course strikes the perfect balance between theory, practical laboratory classes (electronics/biology) and hands-on project-based learning exercises.

- State-of-the-art laboratory equipment and resources on campus as well as computer software, tools & simulation labs, e.g. Proteus, Cadence, Vivado and MATLAB.

- Work placement and project collaboration opportunities exist with leading global medical device companies which are based here in Ireland, examples include Boston Scientific, Medtronic, BD, Stryker, Cook Medical & Abbott.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW598 **Biomedical Electronics** BEng (Honours) – NFQ Level 8

Common First Five Semesters

CW577 **Biomedical Electronics** BEng – NFQ Level 7

Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10
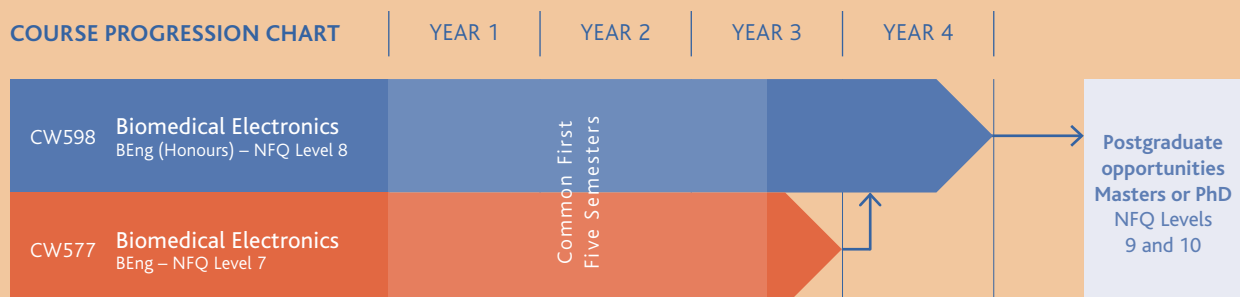
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW598** and **www.itcarlow.ie/CW577**

Robotics and Automated Systems

Bachelor of Engineering (Honours) or Bachelor of Engineering

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW588 NFQ LEVEL 8	16	**4 YEARS**	**YES**	**Dr Dorel Picovici** BEng (Hons), MEng, PhD **E**: dorel.picovici@itcarlow.ie
CW567 NFQ LEVEL 7	16	**3 YEARS**	**NO**	

What is Robotics and Automated Systems?

Robotics and automated systems continue to grow in importance within manufacturing and industrial production systems as companies leverage their ability to advance manufacturing and increase production. Robots have an impressive range of applications e.g. packaging, welding, painting, machining, inspecting parts to name a few and find application in almost every industry such as pharmaceutical, chemical, automotive, healthcare, agricultural etc.

Robotics and automated systems is a multidisciplinary area that combines electronic engineering, mechanical engineering, and computer science. In particular, it includes embedded programming, control systems, automated decision making, and power electronics. Due to the level of technicality involved in this specialized and interdisciplinary field, there is a shortage of qualified graduates and personnel in the industry.

Course Structure

The programme is based on three pillars: electronics, mechanics and computing, enabling candidates to acquire knowledge, skill and expertise to design, develop, commission and maintain robotics and automated systems in a variety of environments and applications for relevant industries. This programme is designed to produce an adaptable graduate, capable of working across present and future industries where robotic and automated systems are employed.

Career Opportunities

Robotics and automated systems draws on expertise of many engineering disciplines and elements of mechanical, manufacturing, electrical, electronic, telecoms, networking, and industrial engineering. Robotics and Automated Systems Engineers could be suitable for the following job titles:

- Robotics Engineers
- Robotics Test Engineers
- Automation System Engineers
- Senior Automation Engineer
- Senior Controls Engineer
- Senior C++ Engineer – R&D role
- Process Excellence Analyst
- Controls Team Lead
- Robotics Process Automation (RPA) Consultant
- Maintenance Test Engineer
- Field Service Engineer
- Solutions Architect Consultant (Very senior role)
- Engineering Project Manager.

The above positions are suitable for the following areas: automotive, aerospace, nuclear, mining, textile, computer industries, military, space, educational, life sciences, pharmaceuticals, medical devices and high volume manufacturing.

Exit Awards

Higher Certificate in Robotics and Automated Systems (NFQ Level 6) after Year 2, Bachelor of Electronic Engineering (NFQ Level 7) after Year 3.

Further Studies

Graduates can progress to postgraduate study at Masters (NFQ Level 9) or Doctorate (NFQ Level 10) level.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Electrical & Electronic Fundamentals
Robotics Programming 1
Computer Aided Drafting
Engineering Mathematics 1
Static Mechanics

Semester 2
Robotics Project
Engineering Mathematics 2
Dynamic Mechanics
Electrical & Electronic Circuits

YEAR 2 (Level 7 & 8)

Semester 3
Engineering Mathematics 3
Robotics Programming 2
Industrial Automation and Robotics
Drives and Actuators
Dynamics 2

Semester 4
Engineering Mathematics 4
Embedded Systems 1
Introduction to systems and control
Mechatronics Project
Robotics Programming 3

YEAR 3 (Level 7 only)

Semester 5
Engineering Mathematics 5
Industrial Compliance, Safety and Law
Robotic Operating Systems
Control and Human Interfacing
Computer Networks 1

Semester 6
Industrial Studies
Network Programmability and Automation
Software Defined Radio
Computer Networks 2
Development Project

YEAR 3 (Level 8 only)

Semester 5

Engineering Mathematics 5
Industrial Compliance, Safety and Law
Robotic Operating Systems
Control and Human Interfacing
Computer Networks 1

Semester 6

Work Placement

YEAR 4 (Level 8 only)

Semester 7

Final Year Project (Part 1 of 2)
Autonomous Robotics
Computer Vision
Artificial Intelligence and Machine Learning
Industrial Networks for Robotics

Semester 8

Final Year Project (Part 2 of 2)
Advanced PLCs
Deep Learning
Power Electronics and Electrical Systems
Robot Mechanics
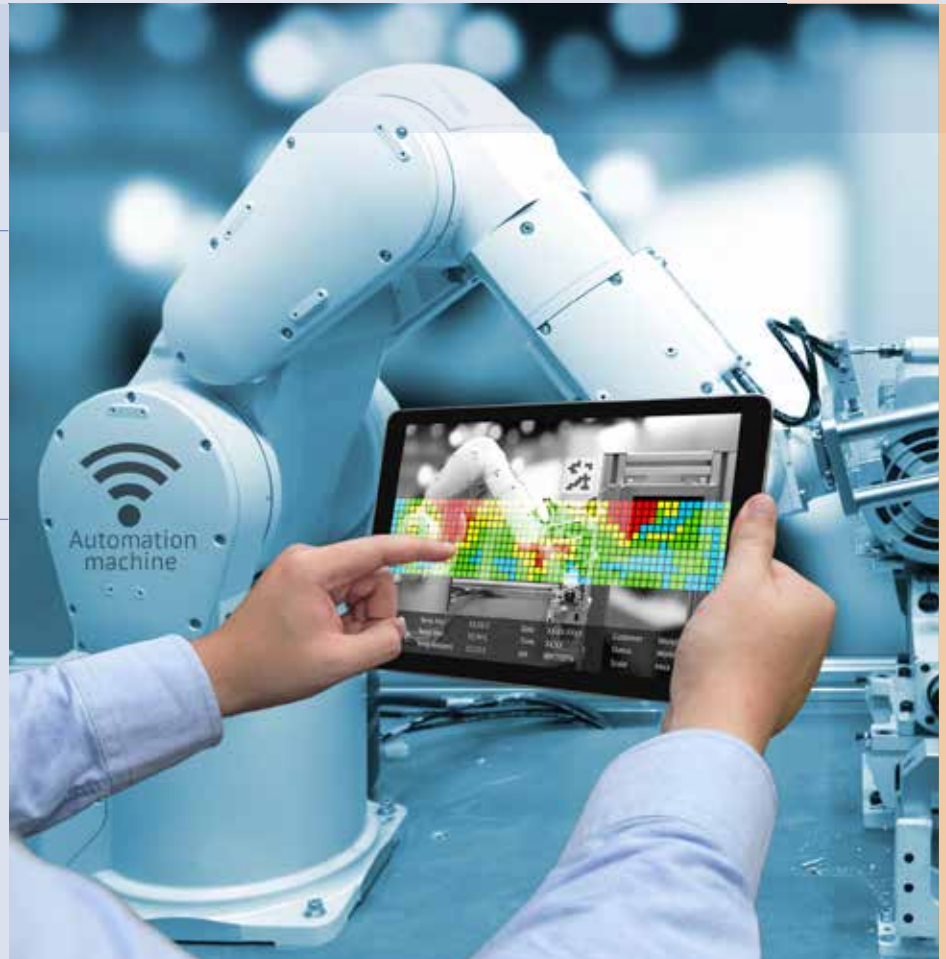
SPECIAL FEATURES

- This course is designed to have a good balance between theory, practical laboratory classes & hands-on project-based learning exercises.

- Access to Robotics and Automated Systems laboratory equipment and resources on campus as well as computer software, tools & simulation labs.

- Work placement and project collaboration opportunities exist with leading Robotics and Automation companies which are based here in Ireland.

COURSE PROGRESSION CHART

	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW588	**Robotics and Automated Systems** BEng (Honours) – NFQ Level 8	Common First Five Semesters	**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10
CW567	**Robotics and Automated Systems** BEng – NFQ Level 7		
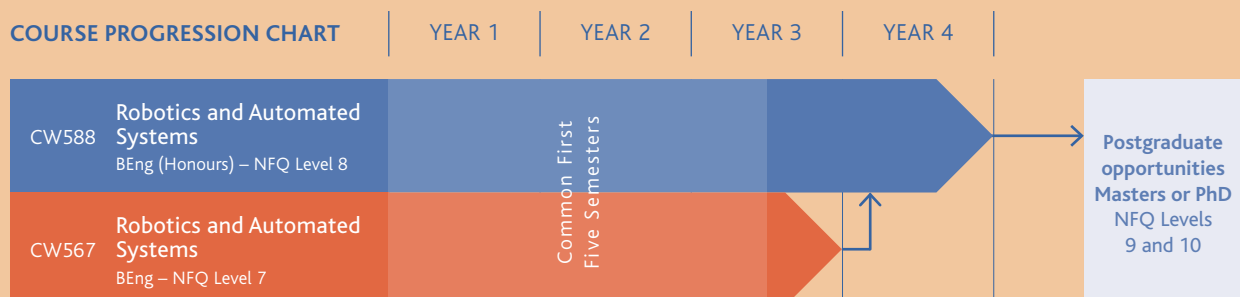
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW588** and **www.itcarlow.ie/CW567**

Electronic Engineering

Bachelor of Engineering (Honours) or Bachelor of Engineering

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW558 NFQ LEVEL 8	Bachelor of Engineering (Honours) in **Electronic Systems**	15	4 YEARS	YES	**Dr Violeta McLoone** BE (Hons), PhD E: violeta.mcloone@itcarlow.ie
CW527 NFQ LEVEL 7	Bachelor of Engineering in **Electronic Engineering**	18	3 YEARS	NO	

What is Electronic Engineering?

Electronics is at the heart of everyday life. Consumer electronics, mobile devices, vehicles, renewable energy systems, medical devices, wearable fitness technologies, as well as advanced robotics are now ubiquitous. As these technologies continue to evolve and grow, skilled electronic engineers continue to work at the forefront of this technological revolution. Electronic engineers work on cutting-edge research and development (R&D), advanced semi-conductor fabrication, design, prototyping, software simulation, coding, new product and applications development.

Course Structure

Our electronics courses offer a blended mix of theory classes, practical laboratories as well as project-based learning elements (hands-on). Extensive use is also made of computer-aided design (CAD) software tools and simulation resources.

Is this course for you?

- Master problem solving and critical thinking
- Develop practical prototyping CAD, and teamwork skills
- Learn circuit design, coding & analysis techniques
- Understand how the internet operates.

If you want to work towards advancing electronics and new technologies for the benefit of humanity, then maybe this is the course for you.

Career Opportunities

A wide range of career opportunities exist which covers different areas and branches of electronic engineering. The electronics and ICT industry in Ireland continues to thrive and has an export revenue of over €10 billion per year. Ireland has similarities with Silicon Valley in San Francisco, in that all of the major electronics companies are based here, e.g. Intel, Apple, Analog Devices, Qualcomm, Dell, Microchip, Boston Scientific, Medtronic, Xilinx, ARM, Cypress, HUAWEI and Maxim Integrated to name but a few. All of these high-tech companies require a continuous supply of talented electronic engineering graduates.

Exit Awards

- Higher Certificate in Electronic Engineering (NFQ Level 6) after Year 2.
- Bachelor of Engineering in Electronic Engineering (NFQ Level 7) after Year 3.

Further Studies

Graduates can progress to postgraduate study at Masters (NFQ Level 9) or Doctorate (NFQ Level 10) level at IT Carlow or another third level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Mathematics and Computer Applications 1
Electrical and Electronic Fundamentals
Electronic Engineering Practice 1
Engineering Science
Programming Systems

Semester 2
Mathematics and Computer Applications 2
Electrical and Electronic Circuits
Technical Communications
Electronic Engineering Practice 2
Development on GNU/Linux

YEAR 2 (Level 7 & 8)

Semester 3
Engineering Mathematics 1
Analogue and Digital Electronics 1
Electronic Communications 1
System Design and Test
Computer Programming

Semester 4
Engineering Mathematics 2
Analogue and Digital Electronics 2
Electronic Communications 2
Embedded Systems 1
Satellite & Microwave Systems

YEAR 3 (Level 7 only)

Semester 5
Engineering Mathematics 3
Embedded Systems 2
Digital Communications
Computer Networks 1
Analysis of Analogue Circuits

Semester 6
Network Automation and Programmability
Development Project
Software Defined Radio
Computer Networks 2
Industrial Studies

GRADUATE FEEDBACK

Jessica Hutton
Electronic Systems Graduate 2019
Graduate Engineer at Iarnród Éireann Irish Rail

The course was split between practical hands-on lab classes and theory classes. I particularly liked the fact that the classes were small, allowing for the development of good working relationships between lecturers and students.

I undertook work placement with an innovative electronics company during the summer months between third and fourth year. This was a great way to prepare myself for life after college. The lecturers were of great support in finding the placement.

My college experience was amazing. IT Carlow gave me the tools and skills needed to achieve my goals and helped me to make the best of any opportunities that have come my way.

YEAR 3 (Level 8 only)

Semester 5

Engineering Mathematics 3
Embedded Systems 2
Digital Communications
Computer Networks 1
Analysis of Analogue Circuits

Semester 6

Work Placement
Industrial Studies

YEAR 4 (Level 8 only)

Semester 7

Research Project (Part 1 of 2)
Microelectronic Design 1
Hardware Description Language
Signals and Systems 1
Artificial Intelligence and Machine Learning

Semester 8

Research Project (Part 2 of 2)
Microelectronic Design 2
Digital Systems
Signals and Systems 2
Professional Studies
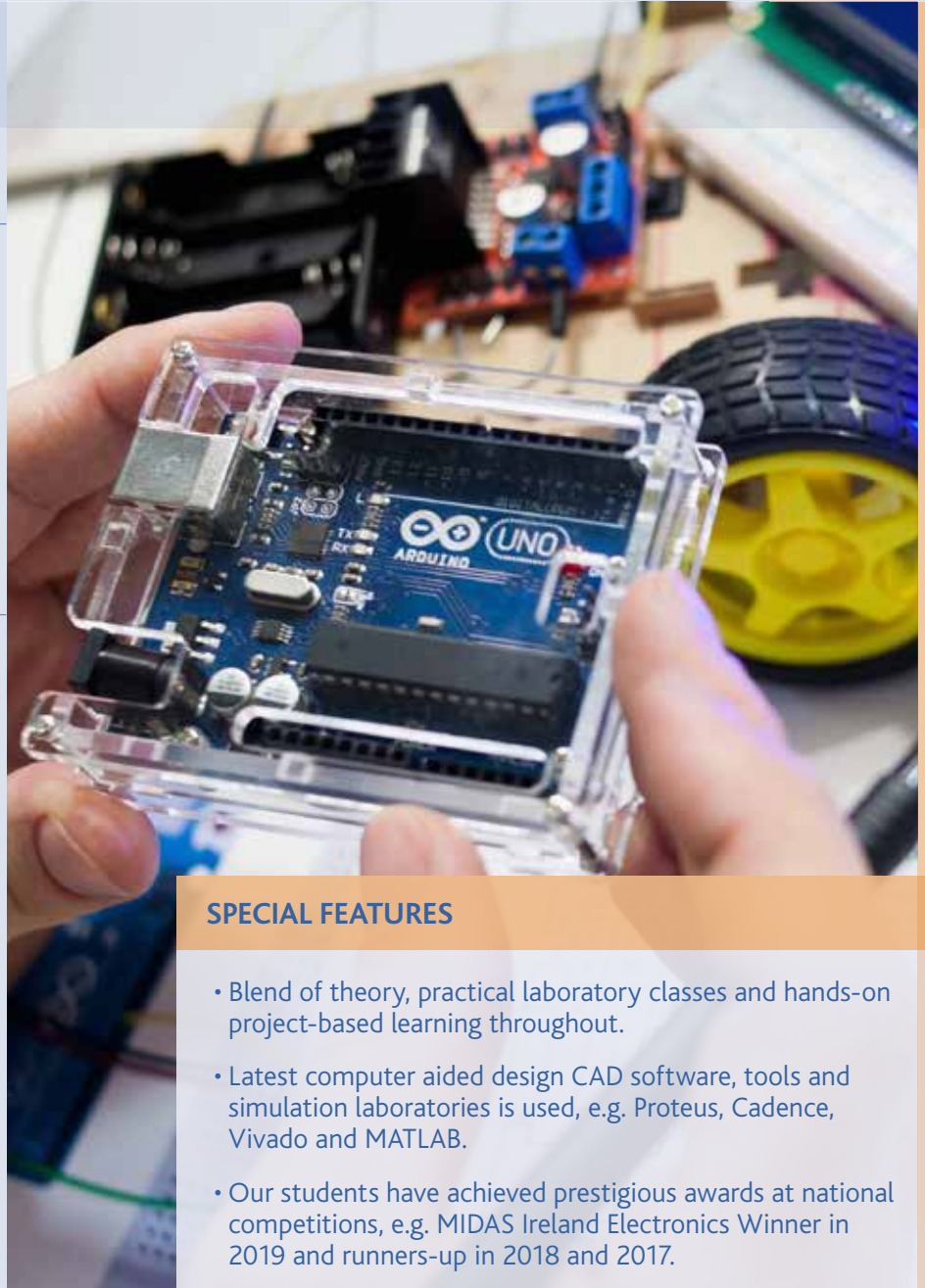
SPECIAL FEATURES

- Blend of theory, practical laboratory classes and hands-on project-based learning throughout.

- Latest computer aided design CAD software, tools and simulation laboratories is used, e.g. Proteus, Cadence, Vivado and MATLAB.

- Our students have achieved prestigious awards at national competitions, e.g. MIDAS Ireland Electronics Winner in 2019 and runners-up in 2018 and 2017.

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

Common First Five Semesters

Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10
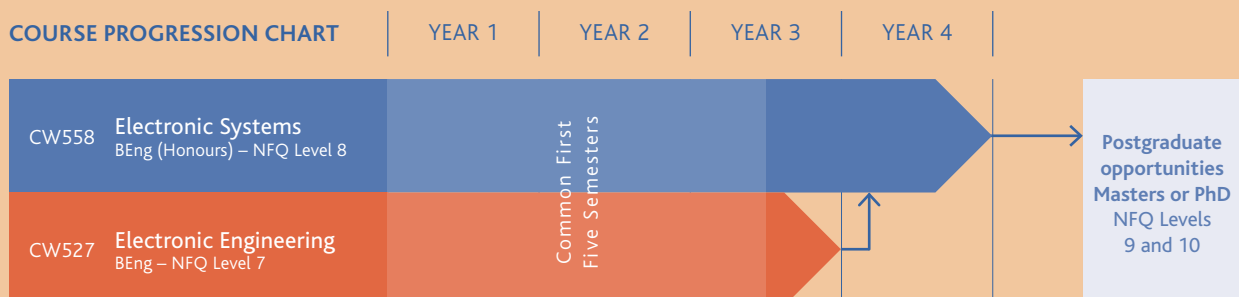
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW558** and **www.itcarlow.ie/CW527**

Mechanical Engineering

Bachelor of Engineering (Honours) or Bachelor of Engineering

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW548 NFQ LEVEL 8	**22**	**4 YEARS**	**YES**	**Joe Dillane** BEng (Hons), MBS, CEng, MIEI, MA, T&L **E:** joe.dillane@itcarlow.ie
CW517 NFQ LEVEL 7	**14**	**3 YEARS**	**NO**	**Justin Townsend** BSc Eng (Hons), MSc. MIEI **E:** justin.townsend@itcarlow.ie

What is Mechanical Engineering?

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

Course Structure

This course equips graduates with the specialist knowledge and practical experience required to manage complete mechanical engineering processes, from product/project design to manufacturing output and commissioning. The course features extensive practical workshops and includes challenging projects in Years 3 and 4.

Is this course for you?

- Mechanical and Computer Aided Design
- Mechanical Processes and Systems
- Figuring out how things work.

If you are someone who is interested in the above topics, then maybe this is the course for you.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Engineering - Mechanical Engineering (NFQ Level 6) after Year 2.
- Bachelor of Engineering - Mechanical Engineering - (NFQ Level 7) after Year 3.

Further Studies

Graduates can progress to postgraduate study at either Masters (NFQ Level 9) or Doctoral level (NFQ Level 10) at Institute of Technology Carlow or another third level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Engineering Mathematics 1
Mechatronics 1
Statics Mechanics
CAD
Technical Communications

Semester 2
Engineering Mathematics 2
Mechatronics 2
Dynamic Mechanics
Workshop Practices
Fluids Mechanics 1

YEAR 2 (Level 7 & 8)

Semester 3
Engineering Mathematics 3
Mechatronics 3
Statics 2
Dynamics 2
Manufacturing and CAD

Semester 4
Engineering Mathematics 4
Mechatronics 4
Material Science in Engineering
Dynamics 3
Thermodynamics 1

YEAR 3 (Level 7 only)

Semester 5
Engineering Mathematics 5
Mechanics of Materials
Mechatronics 5
Advanced Manufacturing
Fluids Mechanics 2

Semester 6
Development Project (Engineering)
Industrial Studies

Electives
Process Instrumentation
Introduction to systems and control
Advanced PLCs

GRADUATE FEEDBACK

Yona Samuel
Mechanical Engineering Graduate
Postgraduate research student

Having completed my honours degree in mechanical engineering from IT Carlow, it is an immense pleasure to say that the course is designed to give an in-depth practical and theoretical knowledge of engineering. This course allows you to develop the essential skills for a variety of career sectors in which to specialise. Students of this course learn from experienced lecturers who are ready to support students. This career path will suit anyone who is technically minded, good at problem-solving and skilled at mathematics and physics.

YEAR 3 (Level 8 only)

Semester 5

Engineering Mathematics 5
Mechanics of Materials
Mechatronics 5
Advanced Manufacturing
Fluids Mechanics 2

Semester 6

Work Placement
Industrial Studies

YEAR 4 (Level 8 only)

Semester 7

Research Project (Engineering)
Advanced Simulation
Materials Engineering
Control System Design
Thermodynamics 2

Semester 8

Research Project (Engineering)
Sustainable Energy
Quality in Manufacturing
Professional Studies
Dynamics - Vibration Analysis

SPECIAL FEATURES

- 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 number of years.

- Well-balanced mixture of theory and practical elements with an extensive design project in Year 4.

- Use of industry standard design tools ANSYS and SOLIDWORKS.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW548 **Mechanical Engineering**
BEng (Honours) – NFQ Level 8

Common First Five Semesters

CW517 **Mechanical Engineering**
BEng – NFQ Level 7

Postgraduate opportunities Masters or PhD
NFQ Levels 9 and 10
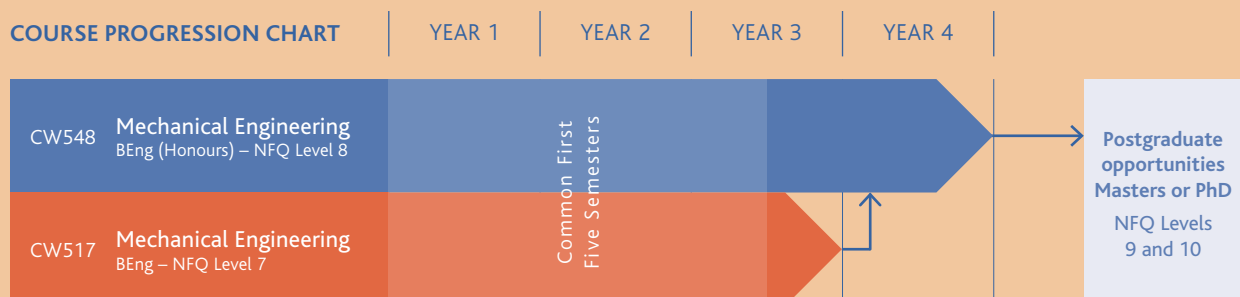
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW548** and **www.itcarlow.ie/CW517**

TV and Media Production

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW578 NFQ LEVEL 8	**15**	**4 YEARS**	**YES**	**Paula Mulroe** BA (Hons), MA **E:** paula.mulroe@itcarlow.ie
CW547 NFQ LEVEL 7	**15**	**3 YEARS**	**NO**	**Trina Rea** BA (Hons), MA **E:** trina.rea@itcarlow.ie

What is TV and Media Production?

The Bachelor of Science Honours in TV and Media Production is a hands-on course where students find themselves completely immersed in the practical world of media production.

Course Structure

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, and 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.

Is this course for you?

- Film and TV production
- Multimedia
- Graphics and Animation

If you are someone who is interested in the above topics, then maybe this is the course for you.

Career Opportunities

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 standards
- 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.

Exit Award

- Bachelor of Science in TV and Media Production (NFQ Level 7) after Year 3.

Further Studies

Graduates of this course will be eligible to progress to postgraduate study at either masters or doctoral level at Institute of Technology Carlow or another third level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Introduction to TV Studio Production 1
Introduction to Production
Visual Culture
Introduction to Audio
Principles of Light
Semester 2
Introduction to Single Camera Production
Introduction to Post Production
Writing for the Screen
Media Skills
Principles of Sound

YEAR 2 (Level 7 & 8)
Semester 3
Shooting and Editing
TV Studio Production I
Graphics and Animation
Radio
TV Research & Writing
Semester 4
Single Camera Video Production
TV Studio Production II
Web technology and video
Sound for Film
TV Producing

YEAR 3 (Level 7 only)
Semester 5
Cinematography and Post Production
Documentary Making
TV Studio Production III
Production Management
Motion Graphics
Semester 6
Group Production
Advanced Lighting & Sound Techniques
Location Video Production Level 7
Production Co-ordination Level 7

YEAR 3 (Level 8 only)

Semester 5
Cinematography and Post Production
Documentary Making
TV Studio Production III
Production Management
Motion Graphics

Semester 6
Industrial Work Placement

YEAR 4 (Level 8 only)

Semester 7
Media Culture
Project
Digital Marketing
Advanced Editing
Media Law

Semester 8
Advanced Graphics
Project
Contemporary TV & Film Analysis
Post Production
Enterprise

SPECIAL FEATURES

- 60% of the course is practical work.

- 70% of the course is assessed through continuous assessment in place of exams.

- Dedicated TV and audio studio and editing facilities.

- Editing suite with all of the latest editing and animation software (AVID, Adobe, ProTools).

- Location filming on and off campus.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW578 **TV and Media Production** BSc (Honours) – NFQ Level 8	Common First Five Semesters				**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10
CW547 **TV and Media Production** BSc – NFQ Level 7					
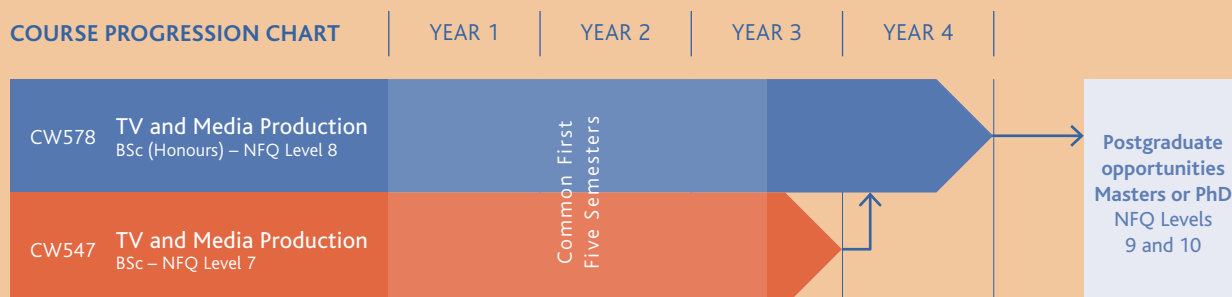
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW578** and **www.itcarlow.ie/CW547**

Civil Engineering

Bachelor of Engineering (Honours)

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
32	**4 YEARS**	**YES**	**Shane Murray** BA (Hons), BAI, MSc, HCert, CEng, MIEI **E:** shane.murray@itcarlow.ie

What is Civil Engineering?

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

Course Structure

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 through working on real-life design or construction projects as part of a professional engineering team.

Is this course for you?

You will likely enjoy hands-on involvement in practical projects. In aspiring to become a civil engineer, you will also likely be motivated to improve and protect the world around you, through planning, designing and building the facilities we use every day, from houses to factories to transport systems.

Career Opportunities

Civil engineers can be found working in industries as varied as aerospace, shipbuilding, 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.

Further Studies

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

Semester 1
Mathematics & Statistics 1
Civil Engineering Technology 1
Engineering Physics
Material Science & Soil Mechanics
Engineering Drawing

Semester 2
Engineering Mathematics 1
Civil Engineering Technology 2
Engineering Chemistry
Quantity Surveying & Estimating
Engineering Drawing 2 & Surveying & Setting Out 1

YEAR 2

Semester 3
Mathematics &Statistics 2
Structural Analysis 1
Geotechnical Engineering 1
Civil Engineering Economics & Management
Civil Engineering Drawing and Surveying

Semester 4
Engineering Mathematics 2
Structural Design 1
Geotechnical Engineering 2
Earthworks Analysis
Civil Engineering Drawing and BIM

YEAR 3

Semester 5
Structural Analysis 2
Engineering Mathematics 3
Road Design
Engineering Geology 1
Environmental Engineering 1 and Hydraulics

Semester 6
Structural Design and Analysis 1
Mathematics & Statistics 3
Highway & Traffic Engineering 1
Engineering Geology 2
Hydraulics

YEAR 4

Semester 7
Engineering Mathematics 4
Geotechnical Engineering 3
Environmental Hydraulics 1
Structural Design and Analysis 2
Engineer in Society and Work Placement
Dissertation

Semester 8
Highway & Traffic Engineering 2
Geotechnical Engineering 4
Environmental Hydraulics 2
Structural Design and Analysis 3
Dissertation

GRADUATE FEEDBACK

Clare Dowling
Civil Engineering Graduate
Civil Engineer, Carlow Precast

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 an Infrastructure Engineer and a Geotechnical Engineer before taking up my current role.

SPECIAL FEATURES

- 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 and SISK Group.

- Advanced entry to Stage 3 of CW478 is available for Bachelor of Engineering in Civil Engineering graduates (NFQ Level 7) who have attained an M2 award outcome, 70% in maths and meet the other course entry requirements.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW478 **Civil Engineering** BEng (Honours) – NFQ Level 8

CW427 **Civil Engineering** BEng – NFQ Level 7

Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10
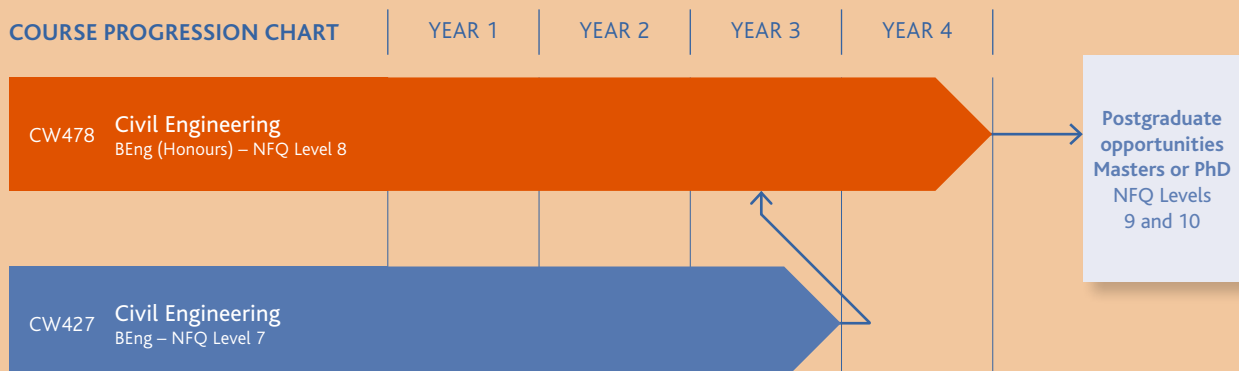
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW478**

Civil Engineering
Bachelor of Engineering

PLACES	DURATION	PROGRAMME DIRECTOR
15	**3 YEARS**	**Brian Byrne**, BSc Eng (Hons), MSc Eng, CEng, FIEI, CMIOSH
		E: brian.byrne@itcarlow.ie

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 Engineers Ireland's schools programme: www.steps.ie.

Course Structure

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.

Is this course for you?

You will likely enjoy hands-on involvement in practical projects. In aspiring to become a civil engineer, you will also likely be motivated to improve and protect the world around you, through planning, designing and building the facilities we use every day, from houses to factories to transport systems.

Career Opportunities

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.

Exit Award

- Higher Certificate in Engineering in Civil Engineering (NFQ Level 6) after Year 2.

Further Studies

Subject to attaining a Merit 2 award outcome and 70% in Advanced Mathematics II in Year 3 of the Bachelor of Engineering in Civil Engineering (NFQ Level 7), graduates may progress to Year 3 of the Bachelor of Engineering (Honours) in Civil Engineering (CW478) course. These students will complete their Level 8 degree over a five-year period.

What subjects will I study?

YEAR 1
Semester 1
Mathematics 1
Material Science
Engineering Science 1
Civil Engineering Technology 1
Engineering Drawing and Information Technology 1

Semester 2
Mathematics 2
Surveying and Setting Out 1
Engineering Science 2
Civil Engineering Technology 2
Engineering Drawing and Information Technology 2

YEAR 2
Semester 3
Mathematics & Statistics 1
Soil Mechanics
Structural Analysis 1
Water Engineering
Civil Engineering Drawing and Surveying

Semester 4
Engineering Mathematics 1
Quantity Surveying and Estimating
Structural Design 1
Concrete Technology
Civil Engineering Drawing and BIM

YEAR 3
Semester 5
Mathematics & Statistics 2
Structures 1
Geotechnical Engineering 1
Civil Eng Economics & Management
Highway Engineering & Surveying
Civil Engineering Project (Part 1 of 2)

Semester 6
Engineering Mathematics 2
Structures 2
Geotechnical Engineering 2
Earthworks Analysis
BIM for Civil Engineers
Civil Engineering Project (Part 2 of 2)

Gerard Doyle
BEng in Civil Engineering
Civil Engineer, Irish Geotechnical Services Ltd

I chose a degree in civil engineering because of the wide variety of career options available to me upon completion. Since completing my degree in civil engineering at Institute of Technology Carlow I have been working across Ireland on a wide variety of projects with Irish Geotechnical Services Limited. I found studying at Institute of Technology Carlow very rewarding with an excellent mix of both practical and classroom learning. The lecturers were very knowledgeable, supportive and helpful throughout my study. I have recommended Institute of Technology Carlow to many people since I graduated and will continue to do so into the future.

SPECIAL FEATURES

- This course is accredited by Engineers Ireland (EI) and graduates of the course are eligible for Associate Engineer membership of EI.

- The emphasis of the course is on geoenvironmental specialities where civil engineering skills save money, resources and lives.

- Significant class time is 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.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW478   **Civil Engineering**
BEng (Honours) – NFQ Level 8

CW427   **Civil Engineering**
BEng – NFQ Level 7

Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10
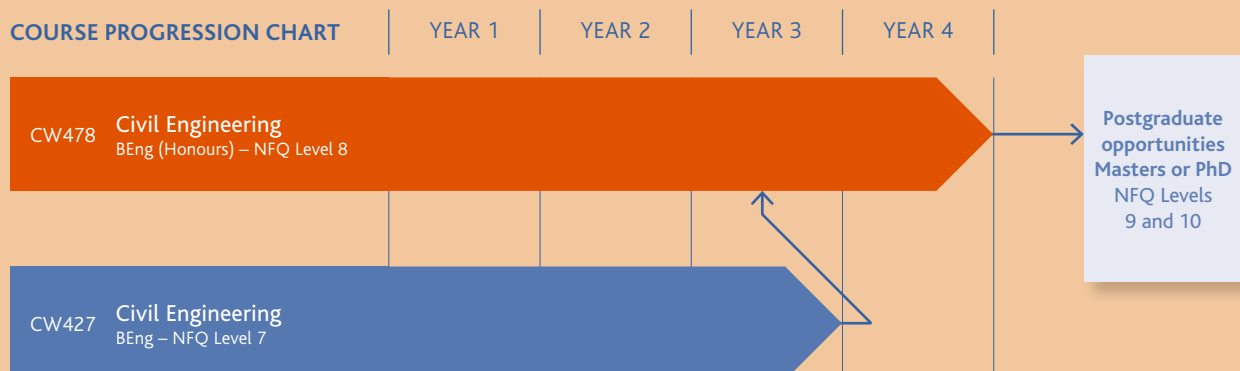
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW427**

Architectural Technology

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	PROGRAMME DIRECTOR
CW468 NFQ LEVEL 8	**15**	**4 YEARS**	**Mark Duffy**, RIAI, MSc Arch, PG Dip Arch, PG Cert Prof Arch, PG Dip Arch, BA Arch (Hons), NC **E**: mark.duffy@itcarlow.ie
CW407 NFQ LEVEL 7	**14**	**3 YEARS**	**Margaret Doyle Hughes**, MCIAT, RIAI Arch Tech, MA, BSc Arch Tech (Hons) **E**: margaret.doyle@itcarlow.ie

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.

Course Structure

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

Students will complete a 30-credit work placement during Semester 5 in Year 3. This provides students with an insight into the Architectural Technology world that they will be entering.

Is this course for you?

The idea of being part of a team that brings a building from design to reality will likely inspire you. You will have a mechanical aptitude, and the ability to think in three dimensions. You have an interest in buildings, how they are built, how they work and how they are used.

Career Opportunities

Graduates of this 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.

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

Exit Awards

• Higher Certificate in Science in Architectural Technology (NFQ Level 6) after Year 2.
• Bachelor of Science in Architectural Technology (NFQ Level 7) after Year 3.

Further Studies

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 or another third level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Studio 1
Building Technology, Materials & Structures 1
Revit, CAD and Information Technology 1
Building Performance & Services 1
Surveying & Recording I

Semester 2
Studio 1 (continued)
Building Technology, Materials & Structures 2I
BIM, CAD and Information Technology 2
Building Performance & Services 2
Surveying & Recording 2

YEAR 2 (Level 7 & 8)

Semester 3
Studio 2
Building Technology, Materials & Structures 3
BIM, CAD and Information Technology 3
Building Performance & Services 3
Practice & Legislation 1

Semester 4
Studio II (continued)
Building Technology, Materials & Structures 4
BIM, CAD and Information Technology 4
Building Performance & Services 4
Practice & Legislation 2

YEAR 3 (Level 7 & 8)

Semester 5
Work Placement

Semester 6
Studio 3
Building Technology, Materials & Structures 5
BIM, CAD and Information Technology 5
Building Performance & Services 5
Practice & Legislation 3

YEAR 4 (Level 8 only)

Semester 7
Studio 4
Conservation & Adaption
BIM & Representation 1
Environmental Building Design

Semester 8
Studio 4 (continued)
BIM & Representation 2
Design Dissertation
Project Management & Practice

SPECIAL FEATURES

- 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW468	Architectural Technology BSc (Honours) – NFQ Level 8	Common First Three Years	Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10
CW407	Architectural Technology BSc – NFQ Level 7		
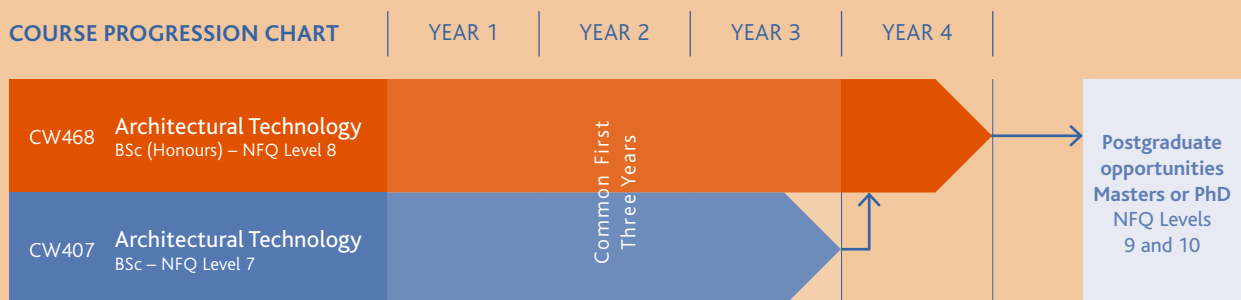
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW468** and **www.itcarlow.ie/CW407**

Construction Management

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	PROGRAMME DIRECTOR
CW438 NFQ LEVEL 8	**15**	**4 YEARS**	**Anthony Dempsey** BEng (Hons) CEng, MSc CPM, MIEI **E:** dempseya@itcarlow.ie
CW417 NFQ LEVEL 7	**14**	**3 YEARS**	**Yvonne Finn**, BSc Eng (Hons), PG Dip, MCIBSE, MIEI **E:** yvonne.finn@itcarlow.ie

What is Construction Management?

Construction Management is the planning, coordination and control of a construction project from concept to completion, ensuring the project is delivered on time and on budget while adhering to the necessary environmental and health and safety standards.

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.

Course Structure

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 will complete a 30-credit work placement during Semester 6 in Year 3. This will provide students with an insight into the Construction Management working world that they will be entering. It will also provide an opportunity to put all of their learning to date into practice.

Is this course for you?

You will likely have a practical and logical mind and a methodical way of thinking. You will also enjoy practical projects and working in teams. The construction industry is a vibrant, growing sector that needs self-driven problem solvers who are up to a challenge.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Science in Construction Technology (NFQ Level 6) after Year 2.
- Bachelor of Science in Construction Management (NFQ Level 7) after Year 3.

Further Studies

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 or another third level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Domestic Technology & Structural Appreciation 1
Land Surveying
AutoCAD, IT & Communications
Applied Mathematics
Introduction to the Construction Industry
Semester 2
Domestic Technology & Structural Appreciation 2
Materials, Building & Land Surveying
Building Services 1
Building Information Modeling 1
Construction Management Fundamentals

YEAR 2 (Level 7 & 8)
Semester 3
Measurement & Estimating
Commercial and Industrial Technology 1, Sustainable Technology 1
Earthworks Measurement
Construction Health, Safety & Risk Management
Building Services 2
Semester 4
Measurement
Construction Law Introduction
Commercial and Industrial Technology 2, Sustainable Technology 2
Contract Management & Planning 1
Accounting & Mathematics

YEAR 3 (Level 7 & 8)
Semester 5
Contract Management & Planning 2
Integrated Construction Technology Project
Research Methods
Professional Practice
Applied Site Management
Semester 6
Work Placement

YEAR 4 (Level 8 only)
Semester 7
Dissertation (Part 1 of 2)
Built Environment Law
Advanced Construction Technology
Construction Administration 1, Site Operations Management
BIM Management Process
Semester 8
Contract Law & Public Procurement
Management of Construction Projects
Construction Administration 2
Organisational Behaviour
Dissertation (Part 2 of 2)

CIOB
THE CHARTERED INSTITUTE OF BUILDING
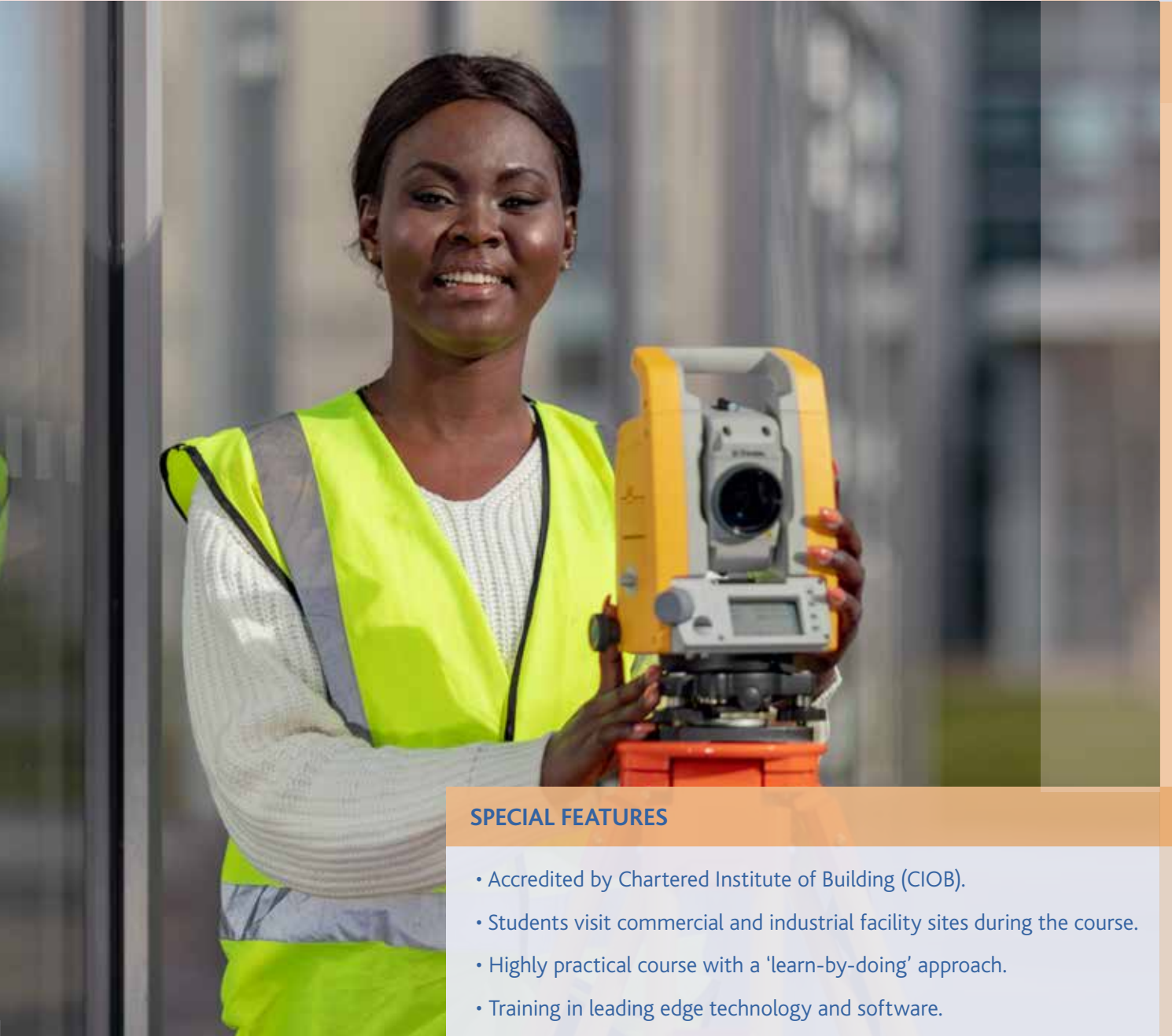
SPECIAL FEATURES

• Accredited by Chartered Institute of Building (CIOB).

• Students visit commercial and industrial facility sites during the course.

• Highly practical course with a 'learn-by-doing' approach.

• Training in leading edge technology and software.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

| CW438 | **Construction Management** BSc (Honours) – NFQ Level 8 | Common First Three Years | | | Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 |
| CW417 | **Construction Management** BSc – NFQ Level 7 | | | | |
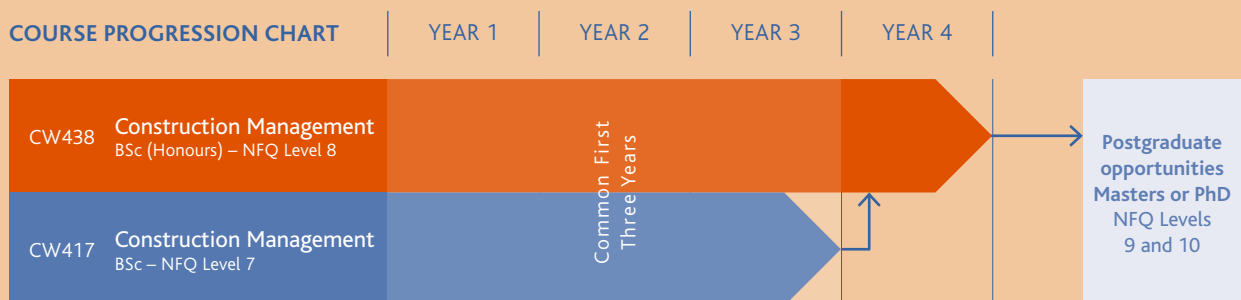
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW438** and **www.itcarlow.ie/CW417**

Quantity Surveying
Bachelor of Science (Honours)

CW488

NFQ LEVEL 8

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
18	4 YEARS	YES	**Fiona Dawson** BSc (Hons), MSCSI, MRICS **E:** fiona.dawson@itcarlow.ie

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.

Course Structure

Students will take part in visits to residential, commercial, pharmaceutical and industrial facility sites during the term of the course. They will also be involved in group coursework that will allow them to demonstrate economically and technically viable options on construction projects.

Students will complete a 30-credit work placement during Semester 6 in Year 3. This will provide students with an insight into the Quantity Surveying working world that they will be entering. It will also provide an opportunity to put all of their learning to date into practice.

Within Year 4, students will study core modules oriented towards the Quantity Surveying discipline. The course is accredited by the Society of Chartered Surveyors of Ireland (SCSI).

Is this course for you?

You will likely have a practical and logical mind and a methodical way of thinking. You will enjoy teamwork.

You will also possess a creative and innovative approach to problem solving. Finally, you will possess strong numeracy skills.

Career Opportunities

Graduates will be qualified to:
- Manage building design costs
- Manage contract and procurement procedures
- Administer financial construction contracts and budgets
- Manage projects.

Quantity Surveyors can find employment with consultancy firms, general and specialist building contractors, local authorities and government departments.

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

Exit Awards

- Higher Certificate in Science in Construction Technology (NFQ Level 6) after Year 2.
- Bachelor of Science in Construction Management (NFQ Level 7) after Year 3.

Further Studies

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

Semester 1
Land Surveying
AutoCAD, IT & IT Communications
Introduction to the Construction Industry
Domestic Technology & Structural Appreciation 1
Applied Mathematics

Semester 2
Materials, Building & Land Surveying
Quantity Surveying principles & Procedures
Domestic Technology & Structural Appreciation 2
Building Services 1
Building Information Modelling 1

YEAR 2

Semester 3
Measurement & Estimating
Commercial and Industrial Technology 1, Sustainable Technology 1
Earthworks measurement
Construction Health, Safety & Risk Management
Building Services 2

Semester 4
Measurement
Contract management & Planning 1
Accounting & Mathematics
Construction Law Introduction
Commercial and Industrial Technology 2, Sustainable Technology 2

YEAR 3

Semester 5
Contract management & Planning 2
Integrated Construction Technology Project
Research Methods
Professional Practice
Measurement & Costing

Semester 6
Work Placement

YEAR 4

Semester 7
Dissertation (Part 1 of 2)
Built Environment Law
Advanced Construction Technology
Design Economics
Measurement, Evaluation & Reporting

Semester 8
Dissertation (Part 2 of 2)
Contract Law & Public Procurement
Management of Construction Projects
Building Economics
Tendering, Estimating & Cost Control

GRADUATE FEEDBACK

Liam Cummins
BSc (Hons) in Quantity Surveying
Quantity Surveyor, Brennan Associates

I first commenced a Level 7 course in Construction in 2014 and then graduated in 2018 with an honours degree in Quantity Surveying. I found the course to be very well structured with lecturers being very understanding and helpful.

The course also offered a work placement opportunity which gave me great experience. I am currently working as a Quantity Surveyor on various projects around Ireland and in various industry sectors.

SPECIAL FEATURES

• Accredited by the Society of Chartered Surveyors Ireland (SCSI) and the Chartered Institute of Building (CIOB).

• 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.

COURSE PROGRESSION CHART

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5

CW488   Quantity Surveying
BSc – NFQ Level 8

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW488**

FACULTY OF **ENGINEERING**

Apprenticeship Courses

Electrician
Geo Drilling
Instrumentation
Electrical Instrumentation
Carpentry and Joinery

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 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.

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 Level 6 Advanced Certificate - Craft may be eligible for advanced entry to some of the Department of the Built Environment and Extended Campus courses.

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

PHASE 1
On-the-Job training while working with your employer

PHASE 2
Off-the-Job training in a SOLAS training centre

PHASE 3
On-the-Job training while working with your employer

PHASE 4
Off-the-Job training in an Institute of Technology

PHASE 5
On-the-Job training while working with your employer

PHASE 6
Off-the-Job training in an Institute of Technology

PHASE 7
On-the-Job training while working with your employer

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

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

ELECTRICIAN

The aim of this trade is to produce qualified electricians.

Electricians are typically employed in three main areas:

Electrical generation and distribution

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

Contracting

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

Electrical maintenance

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

ELECTRICAL INSTRUMENTATION

The aim of this trade is to produce qualified electrical instrumentation technicians who are typically employed in the following areas:

Electrical service maintenance

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

Calibration and maintenance

Responsible for the calibration and maintenance of process instrumentation equipment.

INSTRUMENTATION

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

Measurement and control

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

Environmental monitoring and control

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

Sales and installation

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

CARPENTER AND JOINER

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

Civil engineering

Assist in 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.

Higher Certificate in **Geo Drilling** (Apprenticeship) – NFQ Level 6

The apprenticeship in Geo Drilling is a 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

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Department of Built Environment
Eoin Homan
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Faculty of Engineering
Department of Built Environment
T: 059 9175403
E: **engineering@itcarlow.ie**

SOLAS
The Further Education and Training Authority Block 1
Castleforbes House, Castleforbes Road
Dublin 1, D01 A8N0
T: +353 (01) 5332500
E: **info@solas.ie**

Faculty of Engineering
Professional Bodies

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

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

Engineers Ireland
All Institute of Technology Carlow civil engineering courses are accredited by Engineers Ireland, as are the BEng in Mechanical Engineering, BEng in Electronic Engineering 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)
The 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.

Chartered Institute of Building (CIOB)
The Chartered Institute of Building (CIOB) is the world's largest and most influential professional body for construction management and leadership. The CIOB has a Royal Charter since 1834 to promote the science and practice of building and construction for the benefit of society. CIOB members work worldwide in the development, conservation and improvement of the built environment.

Faculty of Engineering
School Initiatives

ENGINEERING YOUR FUTURE PROGRAMME

This is a four-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.

COVID-19

The exact proportion of the Faculty of Engineering's on-campus versus online activities will be determined by the public health advice at any given time. The most up-to-date information is available on **itcarlow.ie.**

FACULTY OF **SCIENCE**

"IT Carlow has exceeded my expectations... it's brilliant".

Michael Rainsford Ryan
Games Development Student

Visit **itcarlow.ie** to see
our full story videos.

HEAD OF FACULTY   **Dr David Dowling**, BA Mod (Natural Sciences), PhD   E: david.dowling@itcarlow.ie

HEAD OF DEPARTMENT OF COMPUTING
Nigel Whyte
BSc (Hons), MSc, MIEEE
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HEAD OF DEPARTMENT OF APPLIED SCIENCES
Dr Paula Rankin
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Cybercrime and IT Security

Bachelor of Science (Honours) or Bachelor of Science

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
25	4 YEARS	YES	**Richard Butler** BSc (Hons), MSc, CISSP E: richard.butler@itcarlow.ie
25	3 YEARS	YES	

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. With growing dependence on technology and increased interconnectivity between personal, business, government devices and critical infrastructure, the requirement for security in the IT ecosystem is amplified. This course aims to provide industry with graduates who are knowledgeable in cybersecurity processes, practices, implementation and assessment of both IT infrastructure and software, enabling secure and scalable solutions.

Course Structure

The course structure incorporates three knowledge pillars: software development, networking and cybersecurity. Initially the learners obtain the skills in the design and build of computer networks and software applications. The security modules enable the learners to assess the security risk and posture of digital environments and perform remediation on identified security vulnerabilities.

Is this course for you?

Are you the type of person who enjoys taking things apart to see how they work?

Are you interested in understanding and probing what is really taking place behind any digital media?

Have you the attention and determination to complete challenges to the best of your ability?

Career Opportunities

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.

Exit Awards

- Higher Certificate in Science in Computing and Risk Management (NFQ Level 6) after Year 2.
- Bachelor of Science in Cybercrime and IT Security (NFQ Level 7) after Year 3.

Further Studies

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 (Level 7 & 8)
Semester 1
Programming 1
Mathematics 1
Computer Hardware 1
Networking 1
Applications and Interpersonal Communication
Semester 2
Programming 2
Mathematics 2
Operating Systems
Computer Hardware 2
Networking 2

YEAR 2 (Level 7 & 8)
Semester 3
Web Programming and Databases 1
Systems Administration
Networking 2-1
Scripting for Cybersecurity
Ethics
Semester 4
Web Programming and Databases 2
Systems Infrastructure and Security
Networking 2-2
Assembly/C
Project Incident Handling and Risk Analysis

YEAR 3 (Level 7 & 8)
Semester 5
Networking 3
Automating Security Practice
Cryptography
Penetration Testing
Cybercrime Legislation & Compliance
Semester 6
Electives
　Work Placement
　Project

YEAR 4 (Level 8)
Semester 7
Enterprise Network Security
Basic Malware Analysis
Digital Forensics
Project
Semester 8
Cloud Security
Reverse Engineering
Secure Application Development
Entrepreneurship
Project

SPECIAL FEATURES

- 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.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW258	Cybercrime & IT Security BSc (Honours) – NFQ Level 8
CW227	Cybercrime & IT Security BSc – NFQ Level 7
CW206	Computing Higher Certificate – NFQ Level 6

Common First Year

Common First Three Years

Postgraduate opportunities Masters or PhD

NFQ Levels 9 and 10

(please refer to www.itcarlow.ie)
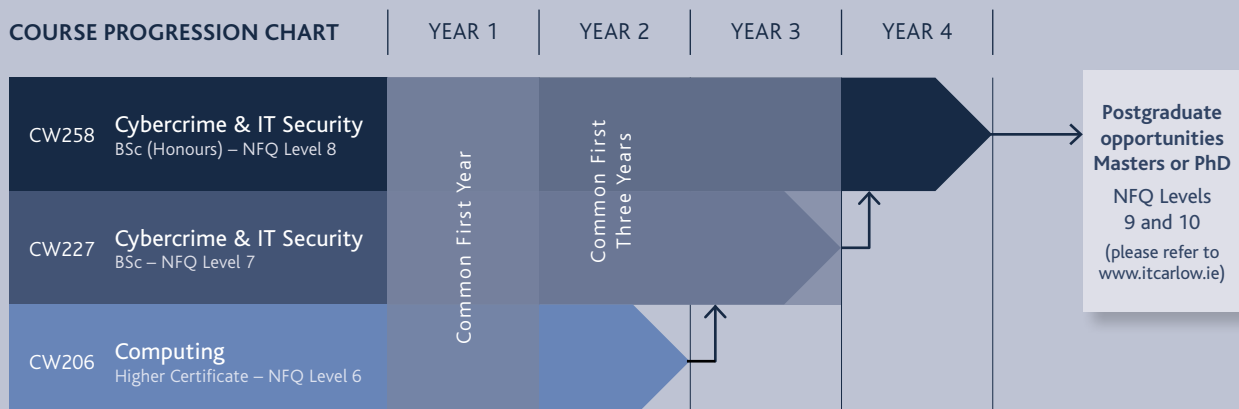
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW258** and **www.itcarlow.ie/CW227**

Computing in Interactive Digital Art and Design

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW268 NFQ LEVEL 8	**24**	**4 YEARS**	**YES**	**Philip Bourke** MSc, BSc (Hons) **E:** philip.bourke@itcarlow.ie
CW237 NFQ LEVEL 7	**24**	**3 YEARS**	**YES**	

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.

Course Structure

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.

Is this course for you?

Are you interested in creating interactive digital art for applications, games, film and media?

Students of this course will explore the world of design and digital art for technology applications used in technology and entertainment industries.

Design and Interactive Digital Art are pivotal to simplifying complex interfaces and enabling audience immersion.

Career Opportunities

As this course 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.

Exit Award

- Bachelor of Science in Computing in Interactive Digital Art and Design (NFQ Level 7) after Year 3.

Further Studies

Graduates have the option of progressing 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 pursue MSc or MA courses at Institute of Technology Carlow.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Introduction to 2D Digital Art
Communication Skills
Human Computer Interaction
Mathematics for Graphics
Introduction to Programming
Semester 2
Concept Art for Games
Game Design
Interaction Design
Introduction to Data Analytics
Introduction to Object Oriented Programming

YEAR 2 (Level 7 & 8)
Semester 3
Animation Principles
User Interface Testing
User Interface Programming
Project Management
Semester 4
Introduction to 3D Digital Art
Design Psychology
User Interface Prototyping
Web User Interface Design

YEAR 3 (Level 7 & 8)
Semester 5
Business Processes
User Experience Measurement
Creative Studio
Interactive Content Creation
Advanced User Interface Programming
Semester 6
Electives
   Work Placement
   Project
   Study abroad (international partnership)

YEAR 4 (Level 8)
Semester 7
Visual Effects Programming
Design Process & Methodology
2D & 3D Character Modelling
Project
Semester 8
Concept Design
2D & 3D Environmental Modelling
Emergent Human Computer Interaction
Entrepreneurship
Project
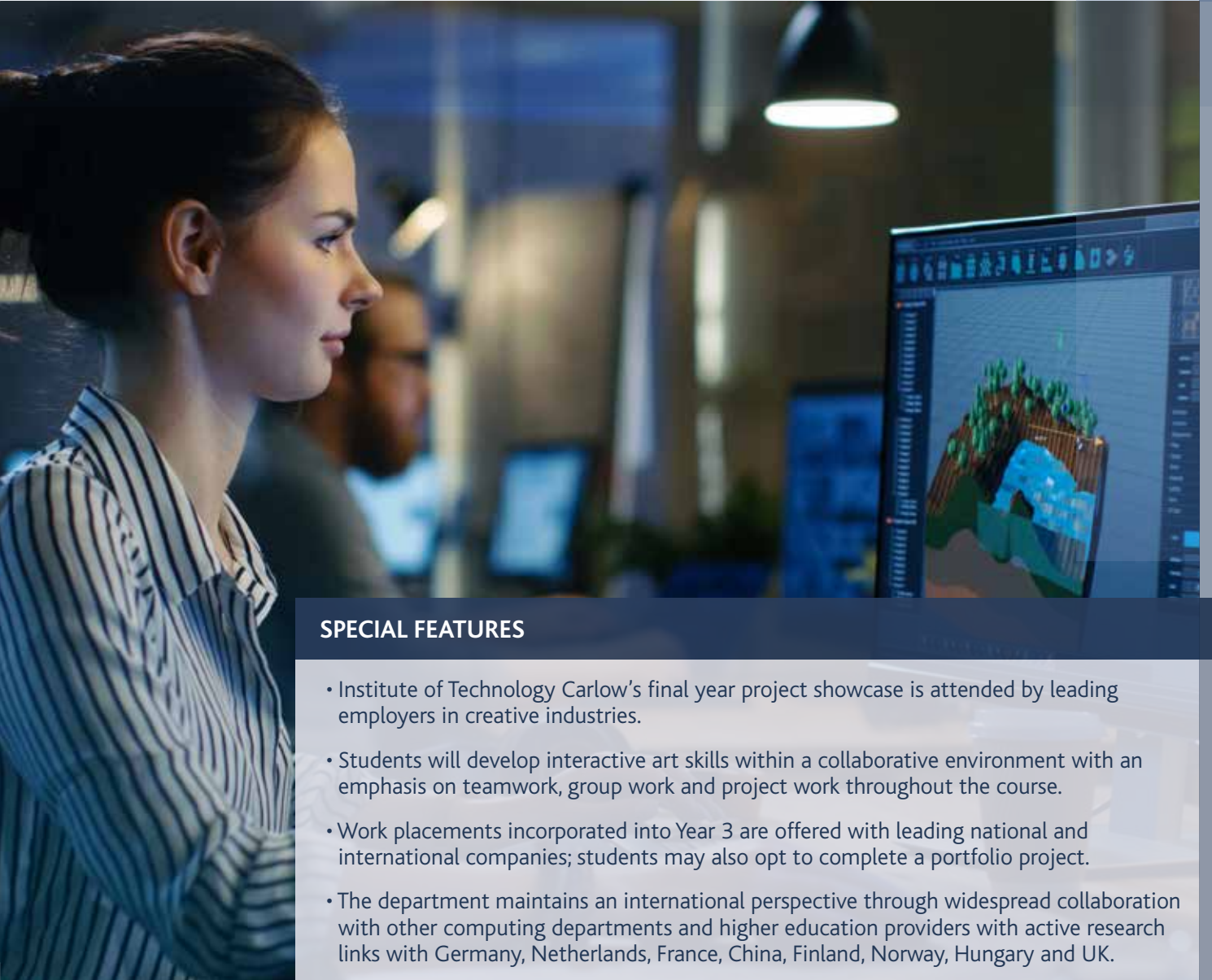
SPECIAL FEATURES

- Institute of Technology Carlow's final year project showcase is attended by leading employers in creative industries.

- Students will develop interactive art skills within a collaborative environment with an emphasis on teamwork, group work and project work throughout the course.

- Work placements incorporated into Year 3 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW208	**Computer Games Development** BSc (Honours) – NFQ Level 8	Common First Year		Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW268	**Computing in Interactive Digital Art and Design** BSc (Honours) – NFQ Level 8		Common First Three Years	
CW237	**Computing in Interactive Digital Art and Design** BSc – NFQ Level 7			
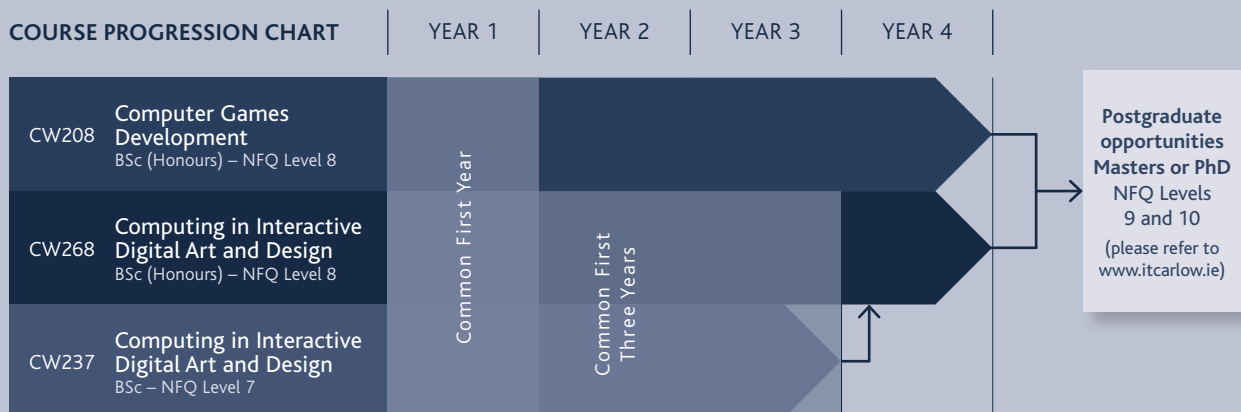
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW268** and **www.itcarlow.ie/CW237**

Computer Games Development

Bachelor of Science (Honours)

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
48	**4 YEARS**	**YES**	**Ross Palmer** BSc (Hons), MSc **E:** ross.palmer@itcarlow.ie

What is Computer Games Development?

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

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.

Course Structure

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).

Is this course for you?

Have you a deep interest in how things work? Have you the persistence to see a task through to completion? Are you creative and proud of your work, willing to go the extra mile to get it just right? Have you a passion for learning new things? You are not just a consumer of content but also a creator.

Career Opportunities

- Specialist software engineering role in games (Rendering / AI / Gameplay / UI / Networking).
- Engine developer (Unity3D / Unreal / Frostbite).
- Specialist software engineer in performance-related solutions to problems in all types of industry (Financial trading / Autonomous driving / Data analytics etc.).
- Mobile app developer.
- General software engineer in the commercial computing sector.

Exit Award

- Higher Certificate in Computer Games Design and Programming (NFQ Level 6) after Year 2.
- Bachelor of Science in Computer Games Programming (NFQ Level 7) after Year 3.

Further Studies

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 Data Science or MSc in IT Management at Institute of Technology Carlow.

What subjects will I study?

YEAR 1
Semester 1
Introduction to 2D Digital Art
Communication Skills
Human Computer Interaction
Mathematics for Graphics
Introduction to Programming
Semester 2
Concept Art for Games
Game Design
Interaction Design
Introduction to Data Analytics
Introduction to Object Oriented Programming

YEAR 2
Semester 3
Object Oriented Programming
User Interface Programming
Computer Architecture For Game Devices
Gameplay Programming
Agile Software Development
Semester 4
2D Game Programming
Motion Graphics
Assembly Programming
3D Gameplay Programming
Software Engineering for Games

YEAR 3
Semester 5
GamePlay programming for mobile devices
3D Graphics
Data Structure and Algorithms
Web Development and Databases
Semester 6
Electives
   Work Placement
   Project
   Study abroad (international partnership)

YEAR 4
Semester 7
Artificial Intelligence for Games
Games Engineering
Fundamentals of Game Networking
Real World Modelling and Simulation
Project
Semester 8
Machine Learning for Games
Concurrent Programming
Online Gaming Technologies
Game Analytics
Project

GRADUATE FEEDBACK

Darren Sweeney
Computer Games Development Graduate, 2018
Rendering Systems Engineer, DICE studios, Sweden

This course covers a lot of industry knowledge that you must know in order to get hired in the games 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 on which I build each day to improve and progress my career.
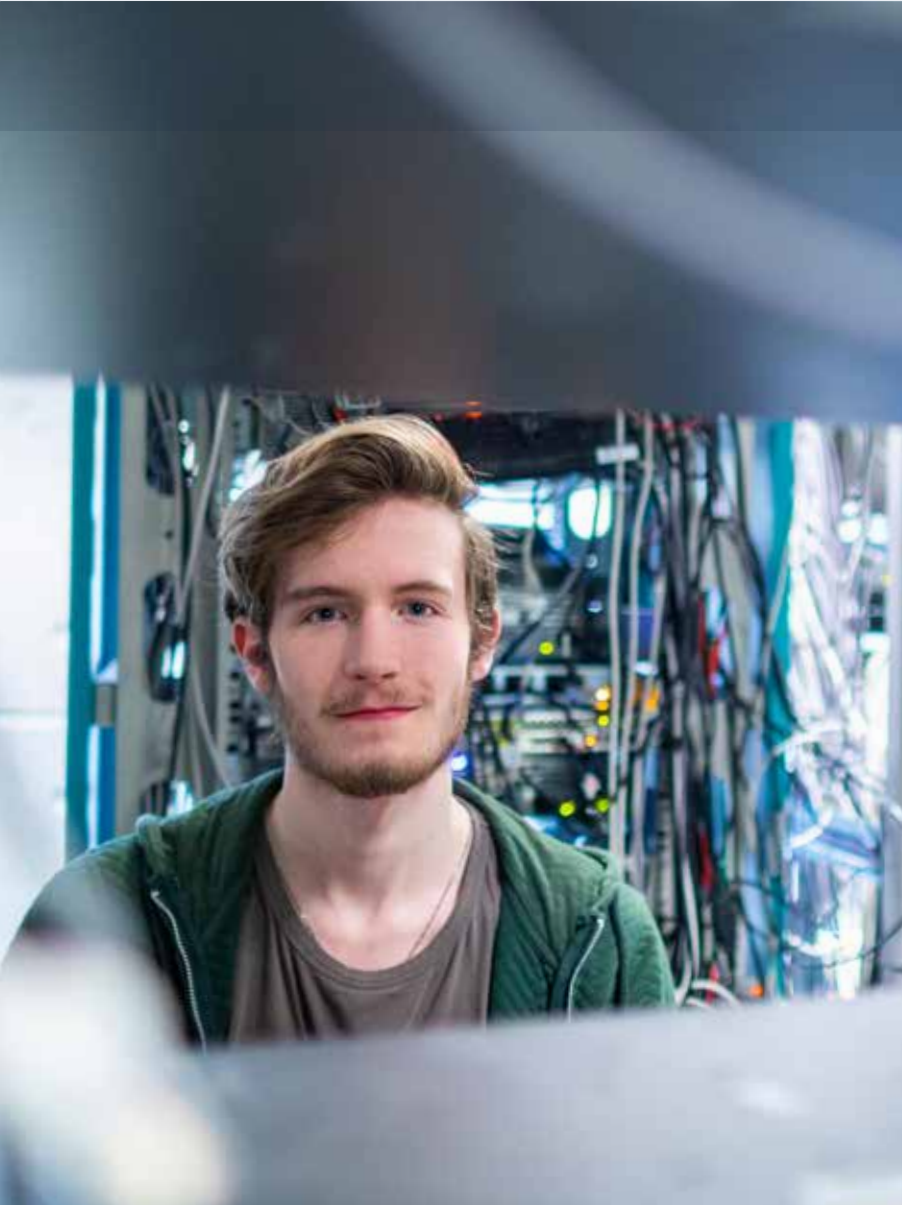
SPECIAL FEATURES

- 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.

- 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 Frostbite Studios, Aeria Games, Glu Mobile, Havok, Demonware, Immersive VR Education and Microsoft.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW208 **Computer Games Development** BSc (Honours) – NFQ Level 8	Common First Year	Common First Three Years			**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW268 **Computing in Interactive Digital Art and Design** BSc (Honours) – NFQ Level 8					
CW237 **Computing in Interactive Digital Art and Design** BSc – NFQ Level 7					
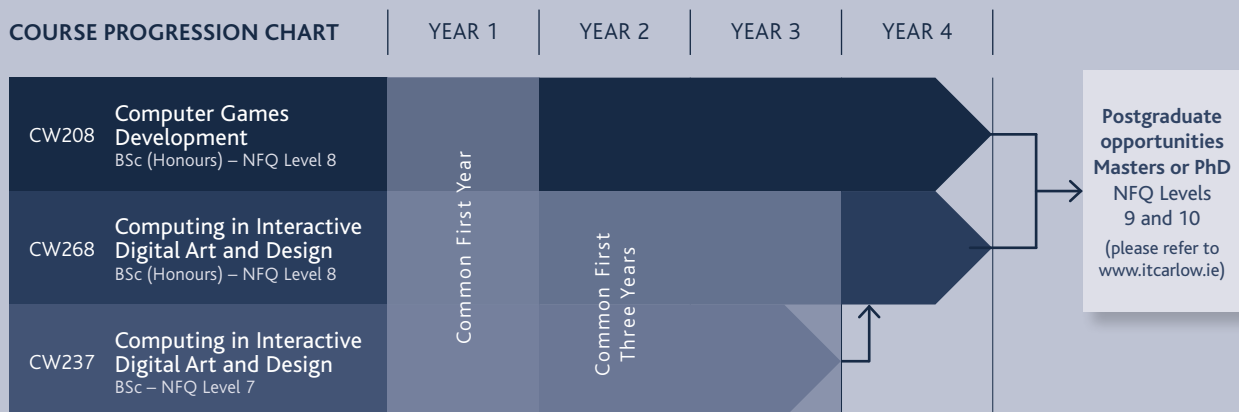
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW208**

Software Development

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW238 NFQ LEVEL 8	30	4 YEARS	YES	**Dr Joseph Kehoe** BSc (Hons), MSc, PhD E: joseph.kehoe@itcarlow.ie
CW207 NFQ LEVEL 7	25	3 YEARS	YES	**Dr Chris Meudec**, BSc (Hons), MA (TL), PhD, French Maitrise E: chris.meudec@itcarlow.ie

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 broader 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.

Course Structure

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.

Is this course for you?

Always on the cutting edge and working with new ideas and technology, software developers enjoy working in diverse teams and solving novel problems with practical solutions. If you are creative and have an open, logical and enquiring mind, then software development may be the profession for you.

Career Opportunities

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, Google, IBM, Microsoft, HP, AOL, DoneDeal, Symantec and Intel.

Exit Awards

- Higher Certificate in Computing (NFQ 6) after Year 2.
- Bachelor of Science in Software Development (NFQ Level 7) after Year 3.

Further Studies

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 are also eligible to undertake the MSc in Data Science or the MSc in IT Management at Institute of Technology Carlow.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Programming 1
Mathematics 1
Computer Hardware 1
Networking 1
Applications and Interpersonal Communication
Semester 2
Programming 2
Mathematics 2
Operating Systems
Computer Hardware 2
Networking 2

YEAR 2 (Level 7 & 8)
Semester 3
Web Programming and Databases 1
Digital Logic
Data Structures and Algorithms
Object Oriented Software Development 1
Systems Analysis D & T
Semester 4
Assembly/C
Math
Object Oriented Software Development 2
Web Programming and Databases 2
Project

YEAR 3 (Level 7 & 8)
Semester 5
Software Engineering, Web, Cloud and Apps
Advanced Programming
Operating Systems
Advanced Data Structures and Algorithms
Cloud Development
Semester 6
Electives
    Work Placement
    Project

YEAR 4 (Level 8)
Semester 7
Concurrent Development
Data Science and Machine Learning 1
Software Engineering
Software Verification
Project
Semester 8
Distributed Development
Data Science and Machine Learning 2
Secure Application Development
Entrepreneurship
Project

GRADUATE FEEDBACK

Ailish Kavanagh
Software Development Graduate, 2019
Associate Cloud Technical Solutions Engineer, Google

The BSc in Software Development in IT Carlow gave me all the skills I needed to become a successful engineer in Google. The course was well-rounded, and provided its students with a firm foundation of technical knowledge to build upon in the future. Perhaps more importantly, while doing my degree I was surrounded by a fantastic network of excellent lecturers who provided endless support and guidance.

unum®

SPECIAL FEATURES

- Dedicated software development laboratory for 3rd and 4th year students sponsored by UNUM.

- 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 widespread collaborations with international third-level computing departments and has active research links with the Netherlands, France, China, Norway, Hungary and the UK.

- The computing department continues to collaborate with may industry leaders in computing. For example Intel sponsored the use of the Galileo development board and Quark chip at the Institute and this leading edge technology was incorporated into several undergraduate and graduate research projects at Institute of Technology, Carlow..

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW238	**Software Development** BSc (Honours) – NFQ Level 8	
CW207	**Software Development** BSc – NFQ Level 7	Common First Year / Common First Three Years
CW206	**Computing** Higher Certificate – NFQ Level 6	

Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
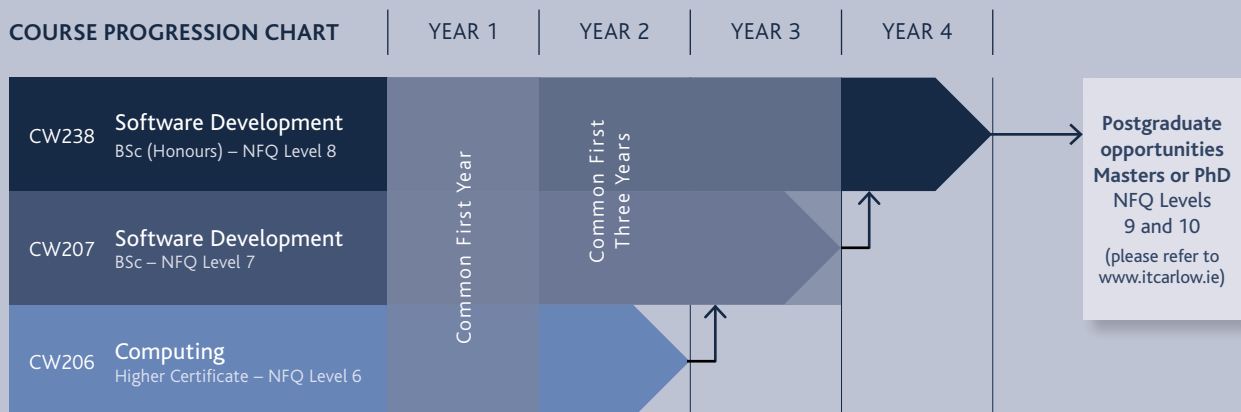
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW238** and **www.itcarlow.ie/CW207**

Information Technology Management

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW248 NFQ LEVEL 8	15	**4 YEARS**	**YES**	**Dr Enda Dunican** BSc (Hons), MSc, EdD **E**: enda.dunican@itcarlow.ie
CW217 NFQ LEVEL 7	20	**3 YEARS**	**YES**	**Aidan McManus** BSc (Hons) **E**: aidan.mcmanus@itcarlow.ie

What is IT Management?

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

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

Course Structure

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
- Team work and people management skills
- Financial information management
- Day-to-day IT department management.

Is this course for you?

Are you interested in working as an IT professional, but not necessarily as a software developer? Are you interested in a qualification that enables you to work in a vast array of organisations from small local companies to large multinationals? Are you interested in a course that gives you exposure to business and IT subjects much needed in industry?

Career Opportunities

Graduates are qualified to work across the IT spectrum in any industry sector. Some sample positions include:

- Business Analyst
- Systems Administrator
- IT Consultant
- Database Administrator
- Network Administrator
- Web Developer
- Deployment Engineer
- Data Management Analyst
- IT Manager
- Project Manager
- Self-employed.

Exit Awards

- Higher Certificate in Computing (NFQ 6) after Year 2.
- Bachelor of Science in Information Technology Management (NFQ Level 7) after Year 3.

Further Studies

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 are also eligible to undertake the MSc in IT Management and the MSc in Data Science.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Programming 1
Mathematics 1
Computer Hardware 1
Networking 1
Applications and Interpersonal Communication
Semester 2
Programming 2
Mathematics 2
Operating Systems
Computer Hardware 2
Networking 2

YEAR 2 (Level 7 & 8)
Semester 3
Web Programming and Databases 1
Systems Administration
Business Management
Networking 2-1
Introduction to Data Analytics
Semester 4
Web Programming and Databases 2
Systems Infrastructure and Security
Financial Maths
Networking 2-2
Project

YEAR 3 (Level 7 & 8)
Semester 5
Information Systems
Networking 3
Project Management
Secure System Administration
Web and Cloud Applications
Semester 6
Electives
   Work Placement
   Study abroad (international partnership)
   Project

YEAR 4 (Level 8)
Semester 7
Innovation & Technology Management
People Management Skills
Advanced Database Systems
Network System Management
Project
Semester 8
Information Systems & Digital Strategy
Emerging Technologies
Data Intensive Applications
Financial Techniques for IT Managers
Project

GRADUATE FEEDBACK

Ciara McMahon
IT Management Graduate
Cloud Support Associate (CSA), Amazon Web Services (AWS) Premium Support

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.

Final year students with industry representatives at the Industry Showcase.

SPECIAL FEATURES

• Work placements are offered as part of all undergraduate computing 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4
CW248 IT Management BSc (Honours) – NFQ Level 8	Common First Year	Common First Three Years		
CW217 IT Management BSc – NFQ Level 7				
CW206 Computing Higher Certificate – NFQ Level 6				

Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
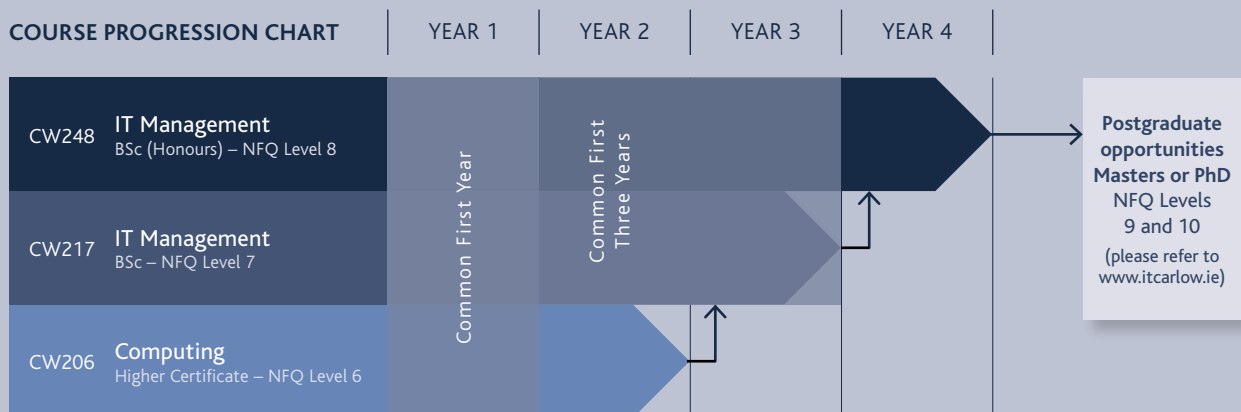
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW248** and **www.itcarlow.ie/CW217**

Computing (with Options in Applications or Programming)

Higher Certificate in Science

PLACES	DURATION	PROGRAMME DIRECTOR
20	2 YEARS	**Catherine Moloney** BSc (Hons) E: catherine.moloney@itcarlow.ie

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.

Course Structure

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.

Is this course for you?

Are you curious about all kinds of technology? Do you dream of being the superhero who keeps vital networks safe? Or the software expert who makes the world a better place?

Would you like to gain highly-prized skills that are in demand across the globe? Do you want to keep the widest possible range of career options open to you? If so, then this is the course for you.

Career Opportunities

After this course, you will have a very broad range of skills. You may decide to continue up the ranks of academic achievement.

Or you may start your career story in one of the following areas:
- Web Developer
- Network Engineer
- Software Developer
- Systems Analyst
- Technical Support

Further Studies

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.

What subjects will I study?

YEAR 1 (Level 6)

Semester 1
Programming 1
Mathematics 1
Computer Hardware 1
Networking 1
Applications and Interpersonal Communication

Semester 2
Programming 2
Mathematics 2
Operating Systems
Computer Hardware 2
Networking 2

YEAR 2 (Level 6)

Applications Option
Semester 3
Web Programming and Databases 1
Systems Administration
Business Management
Networking 2-1
Introduction to Data Analytics

Semester 4
Web Programming and Databases 2
Systems Infrastructure and Security
Financial Maths
Networking 2-2
Project

Programming Option
Semester 3
Web Programming and Databases 1
Digital Logic Data Structures and Algorithms
Object Orientated Software Development 1
Systems Analysis, Design and Testing

Semester 4
Assembly/C
Math
Object Orientated Software Development 2
Web Programming and Databases 2
Project

SPECIAL FEATURES

- Year 1 of the course is examined on a continuous assessment basis with no end-of-year exams.

- This course offers students the opportunity to study a broad range of computing subjects before they choose an area in which to specialise.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW238 Software Development
BSc (Honours) – NFQ Level 8

CW207 Software Development
BSc – NFQ Level 7

CW206 Computing
Higher Certificate – NFQ Level 6

CW217 IT Management
BSc – NFQ Level 7

CW248 IT Management
BSc (Honours) – NFQ Level 8

CW227 Cybercrime & IT Security
BSc – NFQ Level 7

CW258 Cybercrime & IT Security
BSc (Honours) – NFQ Level 8

Common First Year

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW206**

Sport and Exercise Science

Bachelor of Science (Honours)

CW138

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
36	4 YEARS	YES	**Dr Colin J Coyle** BSc (Hons), MSc, PhD **E**: colin.coyle@itcarlow.ie

What is Sport and Exercise Science?

Sport and Exercise Science is the application of scientific principles to the promotion and enhancement of sport, exercise, health and well-being.

Sport and Exercise Science develops an understanding of the human body's response to exercise, how to maximise performance in athletes, the benefits of physical activity for health, and the psychological and sociological factors influencing sport and exercise.

This course incorporates the core areas of biomechanics, physiology and psychology, and students are encouraged to develop an interdisciplinary approach to solving real-world problems in sport and exercise.

Course Structure

This four-year course immerses students in the three core areas of sport and exercise sciences through engaging lectures and practical classes. Initial years provide a foundation of knowledge for each core area with students encouraged to develop and apply knowledge and skills in a variety of sport and exercise settings in later years.

Is this course for you?

If you are interested in how the human body responds to exercise, human movement, how high-performance athletes achieve success, or physical activity for physical and mental health, this course offers an engaging and varied approach so that you can develop the skills and knowledge necessary to improve performance, health and wellbeing through sport and exercise.

Career Opportunities

• Sport and Exercise Physiologist
• Exercise Professional
• Biomechanist
• Performance Analyst
• Sport and Exercise Psychologist
• Sport and Fitness Coach
• Sport Development Officer.

Exit Award

Higher Certificate in Sport and Exercise Science (NFQ Level 6) after Year 2.

Further Studies

Graduates are eligible to apply for the taught MSc in Strength and Conditioning and MSc/PhD research courses at Institute of Technology 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

Semester 1
Anatomy of Human Movement 1
Physiology and Cell Biology 1
Strength and Conditioning: Applied Coaching 1
Maths and Physical Sciences for Health Science
Introduction to Sports and Exercise Psychology

Semester 2
Anatomy of Human Movement 2
Physiology and Cell Biology 2
Strength and Conditioning: Applied Coaching 2
Physical Sciences for Health Science
Exercise Physiology 1

YEAR 2

Semester 3
Pathophysiology
Research in Sport and Health
Nutritional Biochemistry
Motor Control
Health Psychology and Promotion 1

Semester 4
Sport and Exercise Biomechanics 1
Exercise Physiology 2 for Sport
Strength and Conditioning: Applied Coaching 3
Health Psychology and Promotion 2
Nutrition

YEAR 3

Semester 5
Applied Strength and Reconditioning
Sports Nutrition
Sports and Exercise Biomechanics 2
Sport and Physical Activity for Health and Wellbeing
Applied Research in Sport and Health

Semester 6
Work Placement

YEAR 4

Semester 7
Exercise Physiology 3
Human Performance and Athletic Assessment
Exercise as Medicine
Sports Coaching
Current Concepts in Sport Science

Semester 8
Sports Coaching and Performance Analysis
Sport Psychology
Management and Development in Sport and Physical Activity
Research Project and Dissertation

GRADUATE FEEDBACK

Kiran Chopra
Sport & Exercise Sciences, Graduated 2018
Clinical Exercise Specialist

IT Carlow has done an excellent job in developing both the foundational basics and the extensive knowledge of Sport Science through its series of modules such as: exercise physiology, sports nutrition, anatomy, etc. Being a multi-dimensional health and exercise practitioner is crucial to stand out in this competitive industry. What really separates the course is the application of that knowledge into a practical setting and the close professional relationships you develop with your lecturers. I highly recommend Sport and Exercise Science at IT Carlow, not only to be one step closer in becoming an influential sport scientist, but becoming a world-class health and exercise practitioner.
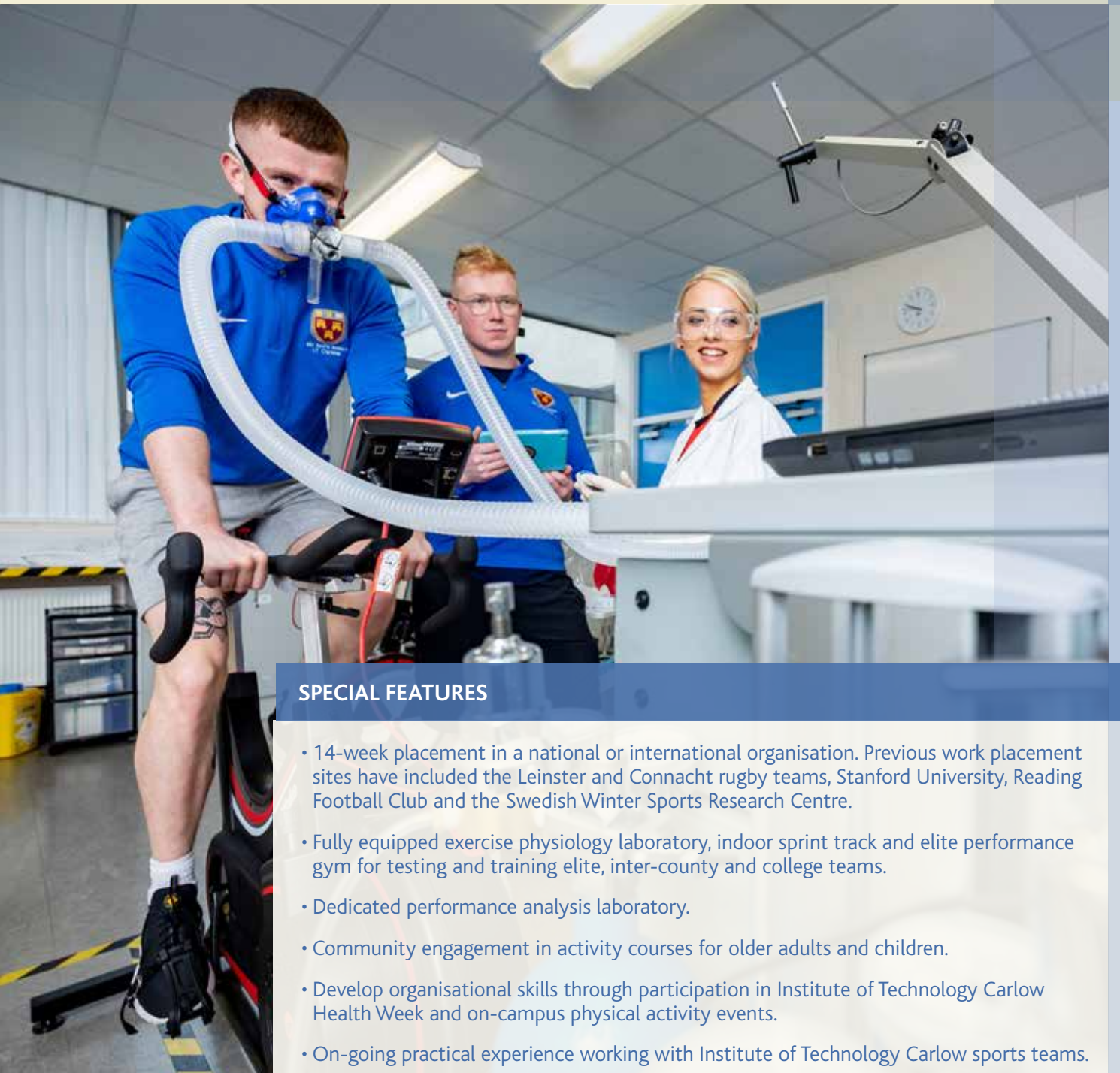
SPECIAL FEATURES

• 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 and the Swedish Winter Sports Research Centre.

• Fully equipped exercise physiology laboratory, indoor sprint track and elite performance gym for testing and training elite, inter-county and college teams.

• Dedicated performance analysis laboratory.

• Community engagement in activity courses for older adults and children.

• Develop organisational skills through participation in Institute of Technology Carlow Health Week and on-campus physical activity events.

• On-going practical experience working with Institute of Technology Carlow sports teams.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	Postgraduate opportunities MSc or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW138 **Sport and Exercise Science** BSc (Honours) – NFQ Level 8					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW138**

Strength and Conditioning
Bachelor of Science (Honours)

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
18	4 YEARS	YES	**Dr Paul Byrne** BA (Hons), MSc, PhD, CSCS **E**: paul.byrne@itcarlow.ie

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.

Course Structure

The course includes practical classes for the application of knowledge in an applied environment. Year 3 includes a 14-week work placement in a national or international sport organisation. An independent project is carried out in Year 4.

Is this course for you?

Graduates will be working as professional Strength and Conditioning practitioners. This will be due to the evidence-based approach to working with athletes from a broad range of age groups and sporting ability. If you have an interest in sport, and want to understand the underpinning scientific principles while gaining excellent practical skills, then this course is for you.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Science in Strength and Conditioning (NFQ Level 6), after Year 2.

Further Studies

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 the Institute or another third-level institution.

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.

What subjects will I study?

YEAR 1

Semester 1
Anatomy of Human Movement 1
Physiology and Cell Biology 1
Strength and Conditioning: Applied Coaching 1
Maths and Physical Sciences for Health Science
Introduction to Sports and Exercise Psychology

Semester 2
Anatomy of Human Movement 2
Physiology and Cell Biology 2
Strength and Conditioning: Applied Coaching 2
Physical Sciences for Health Science
Exercise Physiology 1

YEAR 2

Semester 3
Pathophysiology
Research in Sport and Health
Nutritional Biochemistry
Motor Control
Health Psychology and Promotion 1

Semester 4
Sport and Exercise Biomechanics 1
Exercise Physiology 2 for Sport
Strength and Conditioning: Applied Coaching 3
Health Psychology and Promotion 2
Nutrition

YEAR 3

Semester 5
Applied Strength and Reconditioning
Sports Nutrition
Sports and Exercise Biomechanics 2
Strength and Conditioning for Older Adults
Applied Research in Sport and Health

Semester 6
Work Placement

YEAR 4

Semester 7
Exercise Physiology 3
Periodisation 1
Paediatric Strength and Conditioning
Sports Coaching
Current Concepts in Strength and Conditioning

Semester 8
Sports Coaching and Performance Analysis
Sport Psychology
Periodisation 2
Research Project and Dissertation

GRADUATE FEEDBACK

David Cogley
Strength and Conditioning Graduate
Personal Trainer

When searching for undergraduate degree courses, the Bachelor of Science (Honours) in Strength and Conditioning from IT Carlow immediately stood out. Small class sizes provided an enhanced learning experience and opportunities to actively participate in lectures, while lecturers and staff with a diverse range of backgrounds and sporting interests opened different avenues for learning and exploring. Students are provided a mandatory work placement that allows them an opportunity to gain industry experience and apply the knowledge they've learned over the duration of the degree. A strong emphasis is placed on applied knowledge and learning throughout this course. This course enabled me to secure an academic scholarship for a master's degree course and full-time employment in a world-leading company and facility.

SPECIAL FEATURES

• 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.

• 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	

CW148 **Strength and Conditioning**
BSc (Honours) – NFQ Level 8

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW148**

Health Sciences

Bachelor of Science (Honours) and Higher Certificate in Science

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW188 NFQ LEVEL 8	Bachelor of Science (Honours) in **Sport Rehabilitation and Athletic Therapy**	36	4 YEARS	YES	**Dr Sharon Kinsella** BSc (Hons), MSc, PhD **E:** sharon.kinsella@itcarlow.ie
CW106 NFQ LEVEL 6	Higher Certificate in Science in **Physiology and Health Science**	18	2 YEARS	NO	**Brian O'Rourke** BSc (Hons), MSc **E:** brian.orourke2@itcarlow.ie

What is Sport Rehabilitation and Athletic Therapy?

This course focuses on the prevention, assessment and diagnosis, treatment, and rehabilitation of musculoskeletal injuries related to physical activities.

Course Structure

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

Is this course for you?

Are you interested in working in the management of sports injuries? If you are a conscientious individual, with good communication skills and would like to encourage and motivate people while studying and working in a sport and exercise setting, then this course is the perfect choice for you.

Career Opportunities

Graduates will be competent and effective practitioners in injury assessment, treatment and rehabilitation, as well as sports nutrition and exercise prescription skills.

They can secure employment with: sports persons; amateur sports clubs and organisations in third-level institutions, sports injury clinics or with amateur and professional sporting bodies.

Exit Award

- Higher Certificate in Science in Physiology and Health Science (NFQ Level 6) after Year 2.

Further Studies

Graduates of the NFQ Level 8 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, nationally and internationally. A number of graduates progress to Pre-Registration Masters in Physiotherapy in Ireland and the UK.

Graduates of the NFQ Level 8 are eligible to sit:

- The Athletic Rehabilitation Therapy Ireland (ARTI) examination, successful completion of which grants the title 'Certified Athletic Therapist'.
- The United States Board of Certification exam (BoC) and National Athletics Therapist Association (NATA) exam. Successful completion entitles the graduate to work in the USA as an Athletic Trainer (ATC).

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
Anatomy 1
Physiology and Cell Biology 1
Strength and Conditioning: Applied Coaching 1
Maths and Physical Sciences for Health Science
Introduction to Sports and Exercise Psychology

Semester 2
Anatomy 2
Physiology and Cell Biology 2
Strength and Conditioning: Applied Coaching 2
Physical Sciences for Health Science
Exercise Physiology 1

YEAR 2 (Level 7 & 8)

Semester 3
Pathophysiology
Research in Sport and Health
Pathology of Injury 1
Motor Control
Neuromusculoskeletal Assessment 1

Semester 4
Soft Tissue Manual Therapy
Exercise Physiology 2 for Health
Pathology of Injury 2
Strength and Conditioning for Performance
Neuromusculoskeletal Assessment 2

YEAR 3 (Level 8)

Semester 5
Articular Manual Therapy
Advanced Rehabilitation and Performance Programming 1
Electrophysical Agents
Sports Nutrition
Student-led Clinical Practice 1

Semester 6
Movement Dysfunction
Advanced Rehabilitation and Performance Programming 2
Pre-competition and Trauma Management
Applied Research in Sports and Health
Student-led Clinical Practice 2

YEAR 4 (Level 8)

Semester 7
Current Concepts in Athletic Therapy
Differential Diagnosis

Semester 8
Clinical Placement and professional practice
Research Project

GRADUATE FEEDBACK

Stephen Smith
Sport Rehabilitation and Athletic Therapy graduate
Chief Executive Officer of Kitman Labs

The structure, content and focus of the course was well-balanced and gave me a strong foundation of knowledge to begin my career. The quality of lecturers and practitioners were of the highest calibre and ensured that 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 I gained maximum value and was ready for life as a professional.

SPECIAL FEATURES

• 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.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW188	**Sport Rehabilitation and Athletic Therapy** BSc (Honours) – NFQ Level 8	Common First Two Years				Postgraduate opportunities MSc or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW106	**Physiology and Health Science** Higher Certificate in Science – NFQ Level 6					
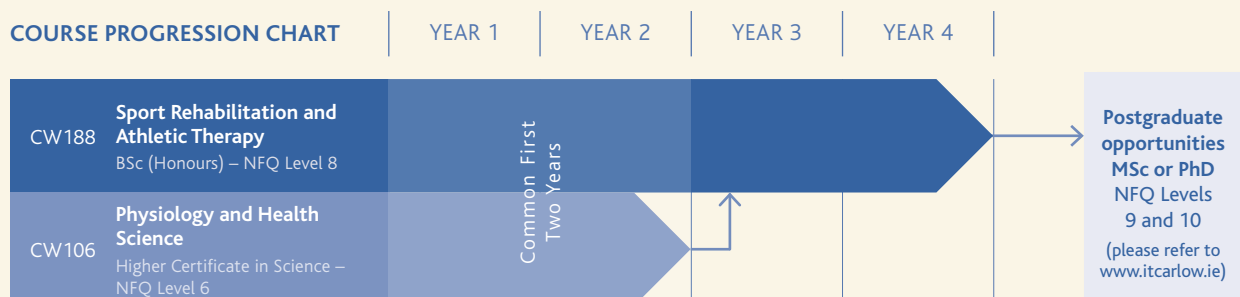
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW188** and **www.itcarlow.ie/CW106**

2,500+

Major Award
Graduates
Annually

Science

Bachelor of Science (Honours) or Bachelor of Science

Common Entry (CEY)

SPECIALIST AREAS: **Biosciences with Biopharmaceuticals** (BPH)
Brewing and Distilling (BRD)
Pharmaceutics and Drug Formulation (PDF)

What is a Common Entry course?

A Common Entry course is a popular choice for students who have an interest in a discipline but are unsure of what career path they would like to follow. Common Entry courses allow students to study a broad range of subjects initially and then choose their preferred specialist area. This allows students more time to discover what interests them most.

Course Structure

The first year of this course provides students with a foundation in science, and subjects are common for all students. After Year 1, students separate into their chosen specialist area from the following:

• Biosciences with Biopharmaceuticals
• Brewing and Distilling
• Pharmaceutics and Drug Formulation.

The course offers a blend of academic and practical skill development and a period of industrial work placement.

CAO Application Procedure

Applicants can select CEY Common Entry or one of the specific stream options at CAO Application stage:

Honours / Level 8	PAGE
CW108 CEY - Common Entry	
CW108 BPH - Biosciences with Biopharmaceuticals*	66
CW108 BRD - Brewing and Distilling*	68
CW108 PDF - Pharmaceutics and Drug Formulation*	70

Alternatively, students may opt to study an ordinary degree (Level 7) over three years in the following streams:

Ordinary / Level 7	
CW117 - Biosciences	66
CW107 - Analytical Science	70

* Applicants who select a specific degree option are guaranteed a place on that course subject to meeting the entry requirements and points.

COURSE PROGRESSION CHART

YEAR 1 YEAR 2 YEAR 3 YEAR 4

CW128 **Brewing and Distilling**
BSc (Honours) – NFQ Level 8

CW108 **Science**
BSc (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 1

Common First Year

Biosciences with Biopharmaceuticals (BPH)
Brewing and Distilling (BRD)
Pharmaceutics and Drug Formulation (PDF)

CW117 **Biosciences**
BSc – NFQ Level 7
(option to progress to CW108 **Biosciences with Biopharmaceuticals** (BPH) after Year 3)

CW126 **Applied Biology** or **Applied Chemistry**
Higher Certificate in Science – NFQ Level 6

Applied Biology Stream
Applied Chemistry Stream

CW107 **Analytical Science**
BSc – NFQ Level 7
(option to progress to CW108 **Pharmaceutics and Drug Formulation** (PDF) after Year 3)

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW108**

Bioscience

Bachelor of Science (Honours) or Bachelor of Science

Common Entry (CEY) — *Full common entry course application procedure is on page 65.*

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW108 BPH NFQ LEVEL 8	Bachelor of Science (Honours) in **Biosciences with Biopharmaceuticals**	**36**	**4 YEARS**	**YES**	**Dr Anne Marie Enright** BSc, PhD, PG Cert E: anne-marie.enright@itcarlow.ie
CW117 NFQ LEVEL 7	Bachelor of Science in **Biosciences**	**18**	**3 YEARS**	**NO**	**James G. Nolan** BSc (Hons), MApplSc E: jim.nolan@itcarlow.ie

What is Bioscience?

Bioscience is the branch of science concerned with living organisms and 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.

Course Structure

Years 1 and 2 provide students with a strong foundation in the biology and chemistry of living organisms. Years 3 and 4 provides more detailed and practical study of the production, monitoring and quality control of biologically-based processes and includes a practical industrial project. The course features extensive laboratory classes and varied project work.

Is this course for you?

If you are interested in biological sciences, and want to study a course that has extensive hands-on laboratory work, leading to fantastic job opportunities in a growing industry, then our BSc (Hons) Biosciences with Biopharmaceuticals is a great choice!

Career Opportunities

The four-year Biosciences with Biopharmaceuticals course is designed to produce highly employable graduates for the bioscience, biotechnology, biopharmaceutical science and food science industries. These sectors are rapidly evolving and offer excellent and varied employment options in quality control, quality assurance, technical, supervisory or management areas.

Exit Awards

- Higher Certificate in Science in Applied Biology (NFQ Level 6) after Year 2.
- Bachelor of Science in Biosciences (NFQ Level 7) after Year 3.

Further Studies

Many graduates undertake postgraduate opportunities at Institute of Technology Carlow and other national and international institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Fundamental Biology
Chemistry 1
Physics 1
Laboratory Science
Quantitative Methods 1
Semester 2
Animal and Plant Biology
Chemistry 2
Physics 2
Quantitative Methods 2
Current Concepts in Science

YEAR 2 (Level 7 & 8)
Semester 3
Molecular Biology 1
Fundamentals of Microbiology 1
Instrumentation
Biochemistry: Biomolecules
Quantitative Methods and Quality Control 1
Semester 4
Molecular Biology 2
Fundamentals of Microbiology 2
Biochemistry: Metabolism
Analytical Techniques/Pharmaceutical Science
Quantitative Methods and Quality Control 2

YEAR 3 (Level 7 & 8)
Semester 5
Molecular Biology/Immunology 1
Biochemistry 1
Manufacturing Technology
Food Microbiology
Quality Management, Experimental Design and Data Analysis
Semester 6
Molecular Biology/Immunology 2
Biochemistry 2
Microbial Cell Factory
Spectroscopy for Bioscience
Workplace Planning/Bioscience Project

YEAR 4 (Level 8)
Semester 7
Molecular Genetics and Immunology 1
Pharmaceutical Science
Industrial Bioprocessing
Environmental Occupational Health and Safety
Semester 8
Molecular Genetics and Immunology 2
Current Trends in Biopharmaceutical Technology
Research Project
Bioforensics
Work Placement

GRADUATE FEEDBACK

Richard Lally
Bioscience with Biopharmaceuticals Graduate
Research Scientist, Alltech

I pursued an honours degree in Biosciences with Biopharmaceuticals as I found science in secondary school both exciting and promising. Important skills such as reporting, communicating research, presenting findings, networking and key molecular biology skills were all part of the learning experience at IT Carlow. I enjoyed the 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 scientific instruments was a huge advantage in preparing me for the work I do now.

SPECIAL FEATURES

- More than 50% of the course is dedicated to laboratory practical work, enabling students to gain essential laboratory skills.

- Small groups for laboratory practicals.

- Extensive industry-relevant project in Year 4.

- Industry-based work placement.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW108 **Biosciences with Biopharmaceuticals (BPH)** BSc (Honours) – NFQ Level 8
Common Entry (CEY) with options after Year 1

CW117 **Biosciences** BSc – NFQ Level 7 (option to progress to CW108 **Biosciences with Biopharmaceuticals** (BPH) after Year 3)

Common First Three Years

Postgraduate opportunities MSc or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
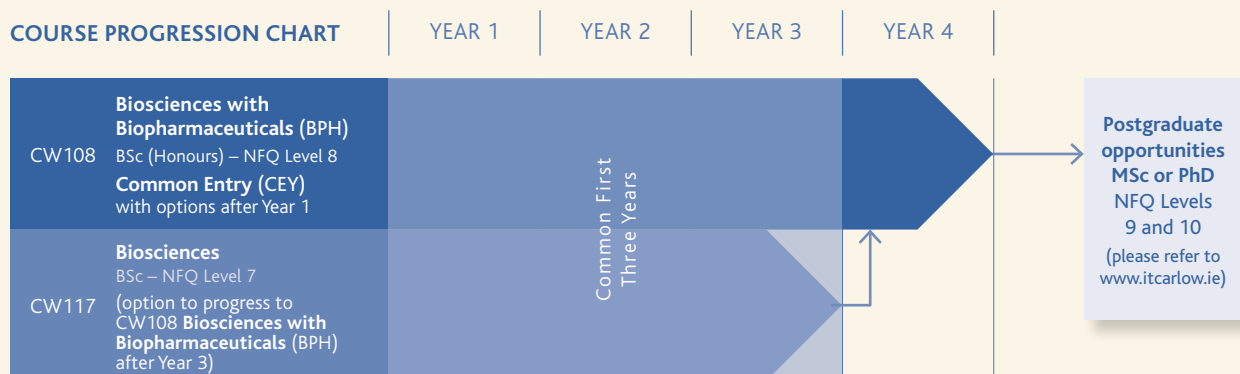
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW108** and **www.itcarlow.ie/CW117**

Brewing and Distilling

Bachelor of Science (Honours)

Common Entry (CEY) — *Full common entry course application procedure is on page 65.*

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW128 NFQ LEVEL 8	Bachelor of Science (Honours) in **Brewing and Distilling**	18	4 YEARS	YES	**Dr David Ryan** BSc (Hons), MSc, PhD **E**: david.ryan@itcarlow.ie
CW108 BRD NFQ LEVEL 8	Bachelor of Science (Honours) in **Brewing and Distilling**		4 YEARS	YES	

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.

Course Structure

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.

Is this course for you?

Would you like to work in one of Ireland's fastest growing, innovative and most exciting industries? Would you like to develop skills in science, engineering, business and entrepreneurship while enjoying a 'real world' focused, applied course? Are you passionate about a future career which can take you all over the world? If so, then Ireland's first honours degree in Brewing and Distilling is for you. With expert lecturers, leading-edge facilities, site visits, a six-month work placement and industry expert input from the first year, this unique course is for those who want to design their own way.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Science in Brewing Science (NFQ Level 6) at the end of Year 2.
- Bachelor of Science in Brewing Science (NFQ Level 7) at the end of Year 3.

Further Studies

Graduates can progress to MSc and PhD courses at Institute of Technology Carlow or another third-level institute or research centre.

What subjects will I study?

YEAR 1

Semester 1
Fundamental Biology
Chemistry 1
Physics 1
Laboratory Science
Quantitative Methods 1

Semester 2
Animal and Plant Biology
Chemistry 2
Physics 2
Quantitative Methods 2
Current Concepts in Brewing and Distilling

YEAR 2

Semester 3
Analytical Techniques for Brewing and Distilling
Fundamentals of Microbiology 1
Biochemistry: Biomolecules
Quantitative Methods and Quality Control 1
Mechanical and Electrical Technology in Brewing and Distilling

Semester 4
Fundamentals of Microbiology 2
Biochemistry: Metabolism
Malt, Water, Hops and Yeast - Brewing and Distilling Raw Materials
Quantitative Methods and Quality Control 2
Analytical Chromatographic Techniques for Brewing and Distilling

YEAR 3

Semester 5
The Brewing Process
Brewery and Distillery Engineering
Research Methods for Brewing and Distilling
Environmental Management

Semester 6
Work Placement

YEAR 4

Semester 7
Distilled Spirits and Distilled Spirits Production
Management in the Brewing and Distilling Industry
Law for Brewing and Distilling 1
Quality Management for Brewers and Distillers

Semester 8
Post-distillation Downstream Processing
Food Fermentation
Law for Brewing and Distilling 2
Marketing and New Product Development
Research Project in Brewing and Distilling

STUDENT FEEDBACK

Brian Gleeson
3rd Year Brewing and Distilling student

I find it really interesting learning about the scientific side of brewing; areas such as the biology of yeast cells and the metabolic pathways of flavour compounds. I love bringing the scientific knowledge gained in the lab back to my home brewing.

I hope to continue my studies for an MSc at IT Carlow and work in the Irish Whiskey industry, as it has been a major growth area.

IBD
Institute of Brewing & Distilling

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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW128 — **Brewing and Distilling**
BSc (Honours) – NFQ Level 8

CW108 — **Brewing and Distilling (BRD)**
BSc (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 1

Postgraduate opportunities MSc or PhD
NFQ Levels 9 and 10
(please refer to www.itcarlow.ie)
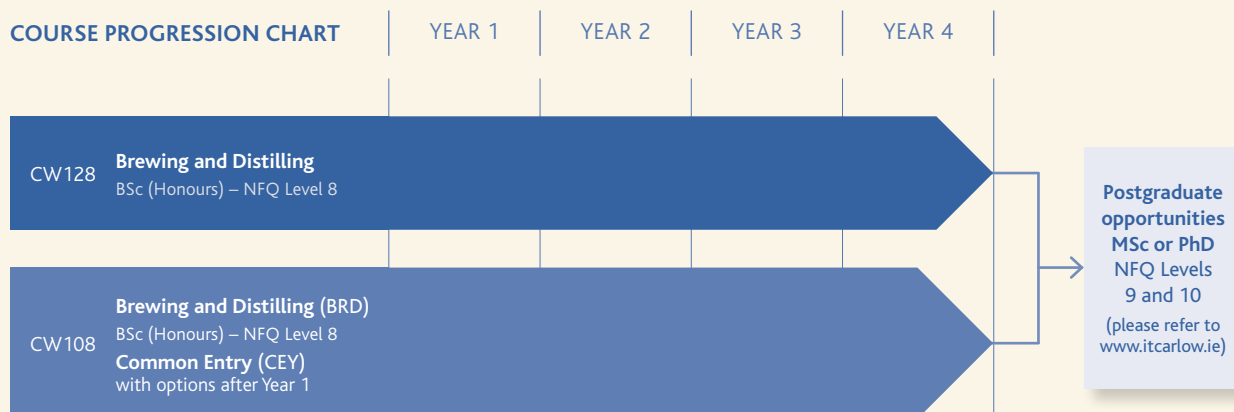
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW128** and **www.itcarlow.ie/CW108**

Pharmaceutics

Bachelor of Science (Honours) and Bachelor of Science

Common Entry (CEY) — *Full common entry course application procedure is on page 65.*

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW108 PDF NFQ LEVEL 8	Bachelor of Science (Honours) in **Pharmaceutics and Drug Formulation**	27	4 YEARS	YES	**Dr Ariane Perez-Gavilan** BSc, PhD **E:** ariane.perezgavilan@itcarlow.ie
CW107 NFQ LEVEL 7	Bachelor of Science in **Analytical Science**	9	3 YEARS	NO	**Dr John Cleary** BSc, PhD **E:** john.cleary@itcarlow.ie

What is Pharmaceutics & Drug Formulation (PDF)?

Pharmaceutics & Drug Formulation covers drug preparation in a series of bases: tablet, capsule, cream etc. - to ensure satisfactory delivery to the body. 'Assay' is the analytical determination of drug content in that base.

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.

Course Structure

Lectures and laboratory practical work cover aspects of modern pharmaceutical and formulation development such as the preparation and stress testing of products.

Is this course for you?

The purpose of this course is to produce graduates with the skills to make new pharmaceutical products,

trouble-shoot problems in the stability of existing products, and in production proper. This course is for you if you like science, enjoy analytical activities, problem solving and want to study a course with a high level of practical laboratory work.

Career Opportunities

- Primary and secondary pharmaceutical production.
- Pharmaceutical product development and manufacture.
- Quality control in high-volume mass-market manufacturing plant.
- Cleanroom and water-treatment facilities.

Exit Award

- Higher Certificate in Science in Applied Chemistry (NFQ Level 6) after Year 2.
- Bachelor of Science in Analytical Science (NFQ Level 7) after Year 3.

Further Studies

Graduates of the NFQ Level 8 can progress to MSc and PhD courses at Institute of Technology Carlow, or at third-level institutions and research centres.

What subjects will I study?

YEAR 1 (LEVEL 7 & 8)
Semester 1
Fundamental Biology
Chemistry 1
Physics 1
Laboratory Science
Quantitative Methods 1
Semester 2
Animal and Plant Biology
Chemistry 2
Physics 2
Quantitative Methods 2
Current Concepts in Science

YEAR 2 (LEVEL 7 & 8)
Semester 3
Instrumentation
Analytical/Inorganic Chemistry 1
Organic and Physical Chemistry 1
Quantitative Methods and Quality Control 1
Semester 4
Analytical/Inorganic Chemistry 2
Organic and Physical Chemistry 2
Biomolecules
Pharmaceutical Science
Quantitative Methods and Quality Control 2

YEAR 3 (LEVEL 7 & 8)
Semester 5
Physical Chemistry
Spectrochemical Methods
Sampling and Separation Science 1
Quality Management, Experimental Design and Data Analysis
Semester 6
Sampling and Separation Science 2
Microbiology for Pharmaceutics
Environmental Science
Pharmaceutical Processing and Process Analytical Technologies
Analytical Project and Workplace Planning

YEAR 4 (LEVEL 8)
Semester 7
Pharmaceutical Formulation
Drug Stability
Assay Development
Semester 8
Regulatory Affairs for Pharmaceutics
Advanced Data Analysis and Modelling
Research Project in Pharmaceutics
Work Placement
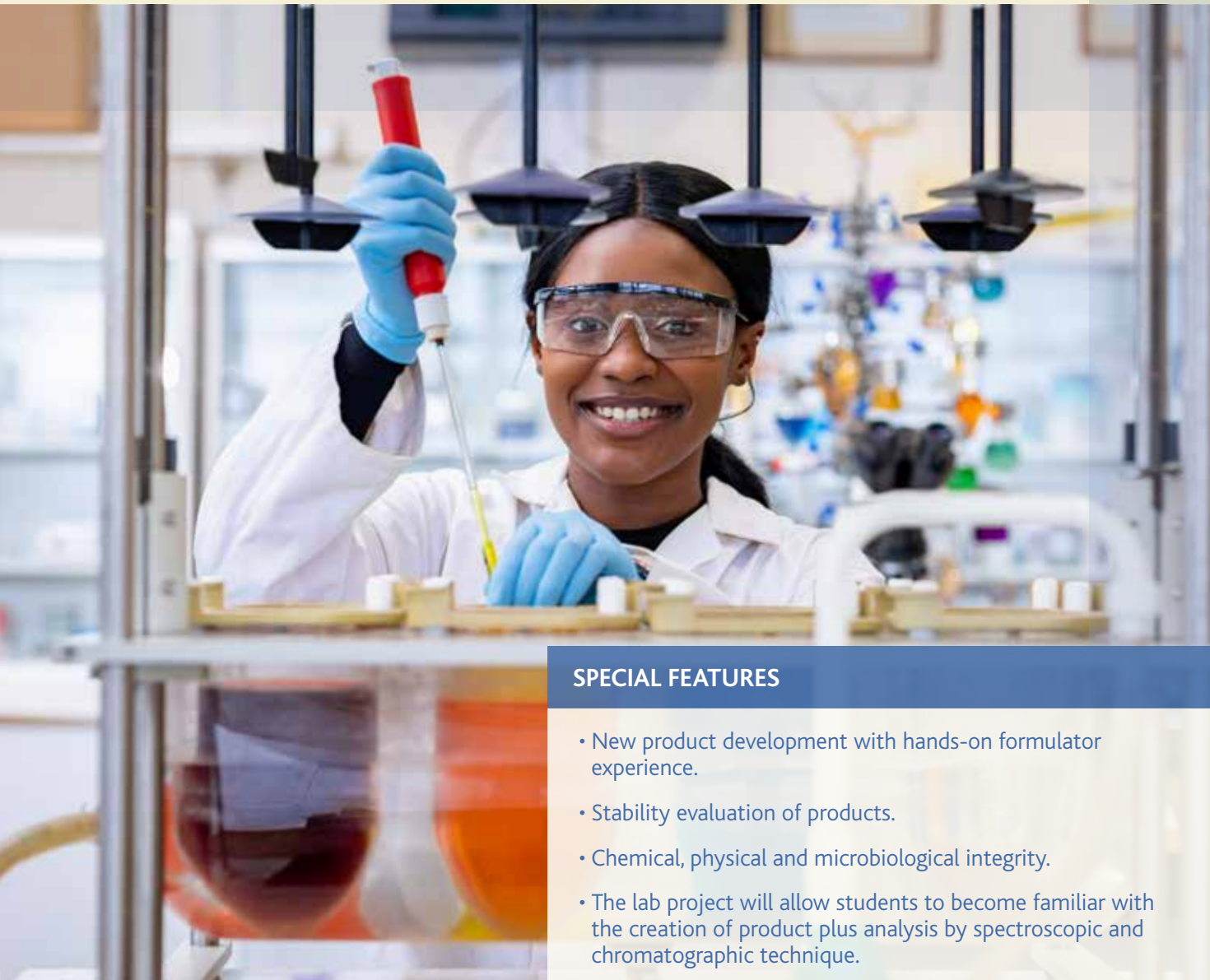
SPECIAL FEATURES

- New product development with hands-on formulator experience.

- Stability evaluation of products.

- Chemical, physical and microbiological integrity.

- The lab project will allow students to become familiar with the creation of product plus analysis by spectroscopic and chromatographic technique.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW108 — **Pharmaceutics and Drug Formulation (PDF)** BSc (Honours) – NFQ Level 8 **Common Entry (CEY)** with options after Year 1

CW107 — **Analytical Science** BSc – NFQ Level 7 (option to progress to CW108 **Pharmaceutics and Drug Formulation** (PDF) after Year 3)

Common First Three Years

Postgraduate opportunities MSc or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
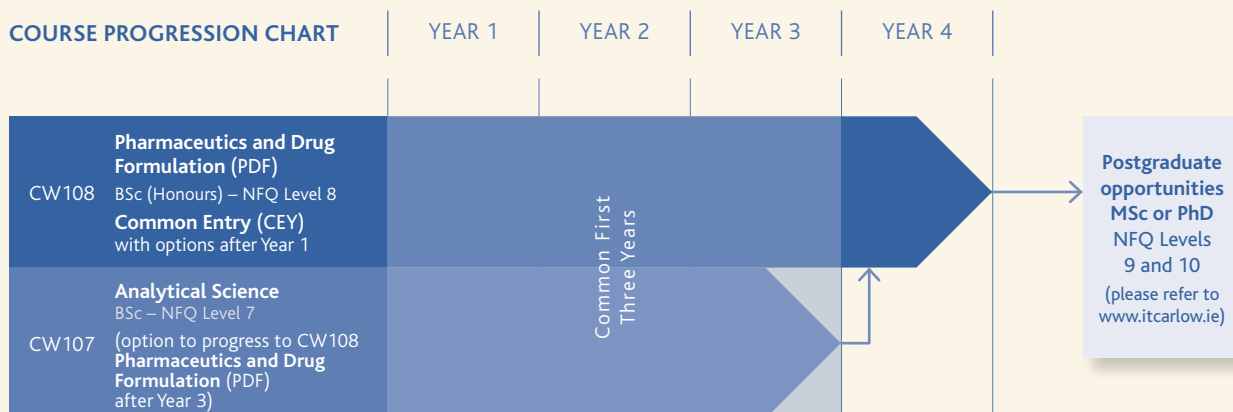
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW108** and **www.itcarlow.ie/CW107**

Applied Biology OR Applied Chemistry

Higher Certificate in Science

PLACES	DURATION
18	2 YEARS

PROGRAMME DIRECTOR

APPLIED BIOLOGY
Áine O'Neill
BSc, MSc
E: aine.oneilll@itcarlow.ie

APPLIED CHEMISTRY
Dr Gary Cahill
BSc, PhD, PGDip
E: gary.cahill@itcarlow.ie

What is this course about?

The Higher Certificate in Science provides students with a grounding in scientific knowledge and skills. More than 50% of the course is dedicated to practical laboratory work, enabling students to gain essential laboratory skills.

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

Course Structure

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.

Is this course for you?

If you have an interest in science but you are unsure of what area you want to study then this course will help you decide. Students study biology, chemistry and physics and have the option of continuing their study on any of our Level 7 and Level 8 courses.

Career opportunities

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.

Further studies

Many students choose to continue their studies at Institute of Technology Carlow to degree level, studying Biosciences, Analytical Science, Pharmaceutics and Drug Formulation.

What subjects will I study?

YEAR 1

Semester 1
Fundamental Biology
Chemistry 1
Physics 1
Laboratory Science
Quantitative Methods 1

Semester 2
Animal and Plant Biology
Chemistry 2
Physics 2
Quantitative Methods 2
Current Concepts in Science

YEAR 2 – APPLIED BIOLOGY STREAM

Semester 3
Molecular Biology 1
Fundamentals of Microbiology 1
Instrumentation
Biochemistry: Biomolecules
Quantitative Methods and Quality Control 1

Semester 4
Molecular Biology 2
Fundamentals of Microbiology 2
Biochemistry: Metabolism
Analytical Techniques/Pharmaceutical Science
Quantitative Methods and Quality Control 2

YEAR 2 – CHEMISTRY STREAM

Semester 3
Instrumentation
Analytical/Inorganic Chemistry 1
Organic and Physical Chemistry 1
Quantitative Methods and Quality Control 1

Semester 4
Analytical/Inorganic Chemistry 2
Organic and Physical Chemistry 2
Biomolecules
Pharmaceutical Science
Quantitative Methods and Quality Control 2

SPECIAL FEATURES

- 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.

COURSE PROGRESSION CHART

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW108	**Science** BSc (Honours) – NFQ Level 8 **Common Entry (CEY)** with options after Year 1	Common First Year	Biosciences with Biopharmaceuticals (BPH) / Pharmaceutics and Drug Formulation (PDF)			Postgraduate opportunities MSc or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW117	**Biosciences** BSc – NFQ Level 7 (option to progress to CW108 **Biosciences with Biopharmaceuticals** (BPH) after Year 3)					
CW126	**Applied Biology** or **Applied Chemistry** Higher Certificate in Science – NFQ Level 6		Applied Biology Stream / Applied Chemistry Stream			
CW107	**Analytical Science** BSc – NFQ Level 7 (option to progress to CW108 **Pharmaceutics and Drug Formulation** (PDF) after Year 3)					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW126**

Pharmacy Technician Studies

Higher Certificate in Science

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
36	2 YEARS	YES	**Dr Dina Brazil** BA Mod, MA (TL), PhD **E**: dina.brazil@itcarlow.ie

CW116

NFQ LEVEL 6

What is a Pharmacy Technician?

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

Course Structure

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.

Is this course for you??

If you have an interest in the health and well being of people, and would like to work in pharmacy services, then this course is an excellent choice. Good communication skills and attention to detail are necessary qualities.

Career Opportunities

Graduates are employed as pharmacy technicians in community and hospital settings.

Further Studies

Graduates of Pharmacy Technician Studies may go on to study a Level 7 BSc in Pharmacy Technician Studies at Institute of Technology Carlow or another third level institution.

What subjects will I study?

YEAR 1

Semester 1
Human Physiology
Drugs and How They Work 1
Pharmaceutical Chemistry
Over the Counter
Pharmacy Calculations and Computing

Semester 2
Regulations and Dispensing
Drugs and How They Work 2
Formulation and Compounding 1
Pharmacy Administration and Work Placement

YEAR 2

Semester 3
Work Placement

Semester 4
Formulation and Compounding 2
Aseptic Techniques
Pharmacy Practice
Drug Actions and Uses

GRADUATE FEEDBACK

Alan Franklin
Pharmacy Technician Graduate
Territory Manager, Uniphar

The pharmaceutical technician course structure and learnings provide an opportunity to progress into many areas including retail, hospital and industry. The quality and knowledge of the lecturers gave me the expertise to excel in my future career with some still advising me to this day. The balance of college/work experience is excellent as the role of a pharmacy technician is easier learned in practice. IT Carlow has a great community feel and my time there was the most enjoyable of my life.

SPECIAL FEATURES

• 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.

• Students can progress to an add-on year to complete the BSc Pharmacy Technician Studies at Institute of Technology Carlow. This Level 7 programme is delivered on both a full-time and a part-time basis.

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW116**

FACULTY OF **BUSINESS AND HUMANITIES**

"IT Carlow brightens my day every day".

Claudia Nevin
Design Student

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our full story videos.

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Bachelor of Business

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY)

SPECIALIST AREAS:

Business Management (BMT)

International Business (INT)

Marketing (MKT)

Human Resource Management (HRM)

Supply Chain Management (SCM)

Finance and Accounting (FAC) – Level 8 only

What is a Common Entry course?

A Common Entry course is a popular choice for students who have an interest in a discipline but are unsure of what career path they would like to follow. Common Entry courses allow students to study a broad range of subjects initially and then choose their preferred specialist area after 2 years. The advantage of this course type is that it allows students more time to discover the subjects in which they are most interested.

Course Structure

Bachelor of Business (Honours) and Bachelor of Business courses equip students with a broad business skill-base, ensuring graduates will have a wide range of career options. The first two years of this course provide students with a foundation in business, and subjects are common for all students. 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.

After two years, students choose their preferred stream of study. Those who have previously selected a specialty may also change their option at this stage.

CAO Application Procedure

Applicants can select CEY Common Entry or one of the specific stream options at CAO Application stage:

Applicants who select a specific degree option are guaranteed a place on that course, subject to meeting the entry requirements and points.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW908 **Business**
BB (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 2

Common First and Second Years

Marketing (MKT)

International Business (INT)

Supply Chain Management (SCM)

Business Management (BMT)

Human Resources Management (HRM)

Finance and Accounting (FAC)

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

CW917 Business
BB – NFQ Level 7
(with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)

CW906 **Business**
Higher Certificate – NFQ Level 6

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

Business Management

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY) — *Full common entry course application procedure is on page 78.*

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW908 BMT NFQ LEVEL 8	**15** approx.	**4 YEARS**	**YES**	**Dr Martin Meagher** BComm (Hons), MBA, MA, DHAE, FCA **E**: martin.meagher@itcarlow.ie
CW917 BMT NFQ LEVEL 7	**12** approx.	**3 YEARS**	**YES**	

What is Business Management?

Business touches almost every aspect of modern human society and careers in business are diverse and often highly paid.

Course Structure

In the Business Management (BMT) option, Year 3 students study specialist subjects in more detail, including: Business Research Methods; Organisational Behaviour; Operations Management; Business Finance and International Business. Additional specialist subjects can be chosen, depending on the student's area of interest.

Is this course for you?

If you are interested in getting a broad overview of the business environment and want to tailor a business degree to your own special requirements then this is the degree for you. With a wide variety of elective modules throughout the course, you can pursue your choice of specialisms.

Career Opportunities

Graduates will be equipped with the knowledge, skills and competencies demanded in a modern business environment. Career opportunities include: the creative world of advertising and design; the commercial world of sales and building market share; the technological side of web design, SEO & SEM, and the analytical use of data to devise successful marketing strategies.

Exit Awards

- Higher Certificate in Business (NFQ Level 6) after Year 2.
- Bachelor of Business (NFQ Level 7) after Year 3.

Further Studies

Bachelor of Business graduates (CW917) can progress into Year 4 of the Bachelor of Business (Honours), (CW908). Bachelor of Business (Honours) graduates (CW908) 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 1 (Level 7 & 8)
Semester 1
IT for Business
Financial Accounting
Quantitative Techniques
Microeconomics
Elective*

Semester 2
Management
Financial Accounting
Quantitative Techniques
Macroeconomics
Elective*

YEAR 2 (Level 7 & 8)
Semester 3
Business Law
Introduction to Marketing
Business Applications
Introduction to Human Resource Management
Elective*

Semester 4
Management Accounting
Introduction to Supply Chain Management
Macroeconomy of Ireland
Contemporary Marketing Practice
Elective*

YEAR 3 (Level 7 & 8)
Semester 5
Business Finance
Operational Management
Organisational Behaviour 1
Elective*

Semester 6
Work Placement

YEAR 4 (Level 8)
Semester 7
International Business
Strategic Analysis
The Global Economy 1
Strategic Financial Management
Dissertation/Research Methods
Elective*

Semester 8
Dissertation/Research Methods
Strategic Positioning
Corporate Governance
Elective*

* The full list of each semester's elective subject options is available on the relevant course page of our website.

SPECIAL FEATURES

• Work Placement is an integral part of the course in Year 3.

• Maximum flexibility enabling students to choose a speciality after Year 2.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW908
Business
BB (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 2

CW917
Business
BB – NFQ Level 7
(with options to progress to CW908
BB Business (Honours), NFQ Level 8
of same course stream)

CW906
Business
Higher Certificate – NFQ Level 6

Common First and Second Years

Marketing (MKT)

International Business (INT)

Supply Chain Management (SCM)

Business Management (BMT)

Human Resources Management (HRM)

Finance and Accounting (FAC)

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

Human Resource Management

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY) — *Full common entry course application procedure is on page 78.*

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW908 HRM NFQ LEVEL 8	**15** approx.	**4 YEARS**	**YES**	**Dr John Trehy** Dip CIMA, BComm, MScComm, PhD **E**: john.trehy@itcarlow.ie
CW917 HRM NFQ LEVEL 7	**12** approx.	**3 YEARS**	**YES**	

What is Human Resource Management?

Human Resource Management (HRM) is the function within an organisation that focuses on managing people. The objective is having the right people in the right place at the right time. The HRM function deals with recruiting and selecting employees, appraising their performance, deciding what rewards are appropriate, providing suitable training and development opportunities, and providing mechanisms for reducing and avoiding conflicts. Managing people is challenging and the course assists with building a work environment where employees are more motivated.

Course Structure

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

Is this course for you?

If you like working with people, this course should be of interest to you. If you would like to know how to bring together and motivate a team of people who want to achieve something together, this course provides you with the skillset and knowledge on how to do this.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Business (NFQ Level 6) after Year 2.
- Bachelor of Business (NFQ Level 7) after Year 3.

Graduates of the course can apply for Associate Membership of the Chartered Institute of Personnel and Development (CIPD).

Further Studies

Bachelor of Business graduates (CW917) can progress into Year 4 of the Bachelor of Business (Honours), (CW908).

Bachelor of Business (Honours) graduates (CW908) may apply to undertake a research or taught masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
IT for Business
Financial Accounting
Quantitative Techniques
Microeconomics
Plus One Elective*

Semester 2
Management
Financial Accounting
Quantitative Techniques
Macroeconomics
Plus One Elective*

YEAR 2 (Level 7 & 8)
Semester 3
Business Law
Introduction to Marketing
Business Applications
Introduction to Human Resource Management
Plus One Elective*

Semester 4
Management Accounting
Introduction to Supply Chain Management
Macroeconomy of Ireland
Contemporary Marketing Practice
Plus One Elective*

YEAR 3 (Level 7 & 8)
Semester 5
People Management Functions
Contemporary Developments in HRM
Employment Law
Organisational Behaviour 1
Plus One Elective*

Semester 6
Work Placement

YEAR 4 (Level 8)
Semester 7
Applied HRM 1
Strategic Human Resource Management (SHRM)
Industrial Relations 1
Strategic Analysis
Organisational Behaviour 2
Dissertation

Semester 8
Strategic Positioning
Dissertation
Industrial Relations 2
People Analytics
Applied HRM 2

* The full list of each semester's elective subject options is available on the relevant course page of our website.

GRADUATE FEEDBACK

Eddie Reilly
Human Resource Management Graduate
Operations Manager at Big Bus Tours

The course content and the work undertaken by the lecturers showed me how to reshape how I think about and approach situations. This significantly helped me early in my career and helped me progress to management level.

CIPD
Approved centre

SPECIAL FEATURES

- Work Placement is an integral part of the course in Year 3.

- Maximum flexibility enabling students to choose a speciality after Year 2.

- The course is accredited by the Chartered Institute of Personnel and Development (CIPD).

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	

CW908
Business
BB (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 2

Common First and Second Years

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

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

CW917
Business
BB – NFQ Level 7
(with options to progress to CW908
BB Business (Honours), NFQ Level 8
of same course stream)

CW906
Business
Higher Certificate – NFQ Level 6

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

International Business

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY) — *Full common entry course application procedure is on page 78.*

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW908 INT NFQ LEVEL 8	**15** approx.	**4 YEARS**	**YES**	**Dr Sharon Harris-Byrne** BA (Hons), MBS, MA (TL), PhD **E**: sharon.harrisbyrne@itcarlow.ie
CW917 INT NFQ LEVEL 7	**12** approx.	**3 YEARS**	**YES**	

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.

Course Structure

Students who choose the International Business (INT) option at Year 3 study specialist subjects in more detail including: International Marketing; International Business Culture; Business Research Methods; and International Business. Additional specialist subjects can be chosen from the elective list, depending on the student's area of interest.

Is this course for you?

Are you interested in living, working and traveling to other countries? Would you like to work in a multinational company with people from all over the world? Or maybe work with Irish companies in expanding internationally?

If you have you an outward perspective and an interest in international affairs, then this might be the course for you.

Career Opportunities

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 the domestic operations of an organisation and then progress to managing and co-ordinating their global operations.

Exit Awards

- Higher Certificate in Business (NFQ Level 6) after Year 2.
- Bachelor of Business (NFQ Level 7) after Year 3.

Further Studies

Graduates who achieve a minimum of a second-class honours degree are eligible to apply to undertake a research or taught masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
IT for Business
Financial Accounting
Quantitative Techniques
Microeconomics
Plus One Elective*
Semester 2
Management
Financial Accounting
Quantitative Techniques
Macroeconomics
Plus One Elective*

YEAR 2 (Level 7 & 8)
Semester 3
Business Law
Introduction to Marketing
Business Applications
Introduction to Human Resource Management
Plus One Elective*
Semester 4
Management Accounting
Introduction to Supply Chain Management
Economics 2
Contemporary Marketing Practice
Plus One Elective*

YEAR 3 (Level 7 & 8)
Semester 5
International Business Culture
Global Market Assess & Selection
Organisation Behaviour 1
Business Finance 1
Plus One Elective*
Semester 6
Irish Students
    Work Placement
EU/International Students
    Internship Project
    Organisation Behaviour 2
    Global Marketing Strategy

YEAR 4 (Level 8)
Semester 7
International Business
The Global Economy 1
Strategic Analysis
Strategic Financial Management
Plus One Elective
Semester 8
Applied Business Solutions
Strategic Positioning
The Global Economy 2
Plus Two Electives*

* The full list of each semester's elective subject options is available on the relevant course page of our website.

GRADUATE FEEDBACK

Rhea Kinsella
International Business Graduate

Completing the International Business course was an incredibly rewarding experience. In a world that is increasingly becoming globalised it was great to learn about how this effects the way we do business. The course has given me a broad range of skills and knowledge and I was given the opportunity to take on a practical research project to investigate new international markets for an entrepreneur's new technology service. Having also had the opportunity to complete an Erasmus year abroad, I was able to engage in a new culture and understand new perspectives in relation to business. I would highly recommend this course to anyone.

SPECIAL FEATURES

- Work Placement is an integral part of the course in Year 3.

- Maximum flexibility enabling students to choose a speciality after Year 2.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW908
Business
BB (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 2

Common First and Second Years

Marketing (MKT)

International Business (INT)

Supply Chain Management (SCM)

Business Management (BMT)

Human Resources Management (HRM)

Finance and Accounting (FAC)

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

CW917
Business
BB – NFQ Level 7
(with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)

CW906
Business
Higher Certificate – NFQ Level 6

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

Supply Chain Management

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY) — *Full common entry course application procedure is on page 78.*

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW908 SCM NFQ LEVEL 8	**15** approx.	**4 YEARS**	**YES**	**Larry Banville** BComm, HDip Ed, FCCA, CMILT, MIITD **E:** larry.banville@itcarlow.ie
CW917 SCM NFQ LEVEL 7	**12** approx.	**3 YEARS**	**YES**	

What is Supply Chain Management?

Supply Chain is the management of any combination of processes, functions, activities, relationships, and pathways along which products, services, information, and financial transactions move in and between enterprises. It also involves any, and all, movement of these from original producer to the ultimate end-user or consumer. Doing all of the above in a sustainable and environmentally friendly way is now a key supply chain consideration.

Course Structure

Students who choose the Supply Chain Management (SCM) option at Year 3 will study a range of specialist subjects in more detail. In Year 4, one additional specialist subject can be chosen from the elective list, depending on the student's area of interest.

Is this course for you?

If you are a team player, have strong communications skills, have an interest in how business is transacted and feel you would like to make an impact in the work you do, then a career in supply chain management might be for you.

Career Opportunities

Graduates of this course may find employment in many sectors in a variety of roles, including: Supply Chain Manager; Operations Manager; Retail Manager, Distribution Manager; Procurement Manager, Logistics Manager and Consultancy to name a few. Supply Chain is at the forefront of the Internet of Things and therefore presents many opportunities for those with an interest in technology. Interacting and negotiating with suppliers and customers and contributing to project management as members of cross-functional teams are also key areas of career opportunity.

Exit Awards

- Higher Certificate in Business (NFQ Level 6) after Year 2.
- Bachelor of Business (NFQ Level 7) after Year 3.

Further Studies

Bachelor of Business graduates (CW917) can progress into Year 4 of the Bachelor of Business (Honours), (CW908). Bachelor of Business (Honours) graduates (CW908) who achieve a minimum of a second-class honours degree are eligible to apply to undertake a research or taught masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
IT for Business
Financial Accounting
Quantitative Techniques
Microeconomics
Plus One Elective*

Semester 2
Management
Financial Accounting
Quantitative Techniques
Macroeconomics
Plus One Elective*

YEAR 2 (Level 7 & 8)

Semester 3
Business Law
Introduction to Marketing
Business Applications
Introduction to Human Resource Management
Plus One Elective*

Semester 4
Management Accounting
Introduction to Supply Chain Management
Macroeconomy of Ireland
Contemporary Marketing Practice
Plus One Elective*

YEAR 3 (Level 7 & 8)

Semester 5
Operations Management
Business Finance
Inventory and Material Management
ERP System Skills
Purchasing and Supplier Management

Semester 6
Work Placement
Group Elective*

YEAR 4 (Level 8)

Semester 7
Strategic Procurement
Global Logistics
Strategic Analysis
Strategic Financial Management
Dissertation

Semester 8
Supply Chain Planning and Control
Strategic Positioning
Global Supply Chain Management
Dissertation
Plus One Elective*

* The full list of each semester's elective subject options is available on the relevant course page of our website.

GRADUATE FEEDBACK

Daniel O'Sullivan
Supply Chain Management Graduate, 2019
Graduate Program, Ace Express Freight

The course gave me the skillset I needed going into the working world. The range of modules gave me an in-depth understanding of the supply chain as a whole and an indication of what to expect on leaving college. Doing team assignments and projects helped me to understand what it means to be a part of a team, and also further developed my communication and people skills. I carried this trait into my current job as I'm currently moving to different departments every six months, each of which each have their own teams.

SPECIAL FEATURES

- Work Placement is an integral part of the course in Year 3.

- Maximum flexibility enabling students to choose a speciality after Year 2.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW908
Business
BB (Honours) – NFQ Level 8
Common Entry (CEY)
with options after Year 2

Common First and Second Years

Marketing (MKT)

International Business (INT)

Supply Chain Management (SCM)

Business Management (BMT)

Human Resources Management (HRM)

Finance and Accounting (FAC)

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

CW917
Business
BB – NFQ Level 7
(with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)

CW906
Business
Higher Certificate – NFQ Level 6

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

Finance and Accounting

Bachelor of Business (Honours)

Common Entry (CEY) — *Full common entry course application procedure is on page 78.*

PLACES	DURATION	PROGRAMME DIRECTOR
15 approx.	**4 YEARS**	**Tracy Byrne** ACMA, CGMA, MSc E: tracy.byrne@itcarlow.ie

CW908 FAC

NFQ LEVEL 8

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.

Course Structure

This is a four-year Level 8 course with 60 ECTS per annum, with the final two years concentrating on exemptions for the professional accounting bodies. There are ten modules in each of Years 1, 2 and 3, and twelve modules in Year 4. Your final overall classification will be based on a combination of your Year 3 (1/3) and Year 4 (2/3) results.

Is this course for you?

Mathematics and English are good indicator subjects for a career in accounting. Mathematics is useful as Accounting is a mathematical subject. English is important as you will need to explain complex accounting concepts to non-accountants in simple language. The course will start your journey to a professional accounting qualification which will open local, national and international career opportunities.

Career Opportunities

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
- Certified Public Accountant
- Investment Banker
- Retail Banker
- Tax Adviser.

Exit Awards

- Higher Certificate in Business (NFQ Level 6) after Year 2.
- Bachelor of Business (NFQ Level 7) after Year 3.

Further Studies

Graduates who achieve a minimum of a second-class honours degree are eligible to apply to undertake a research or taught masters at Institute of Technology Carlow or other institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)

Semester 1
IT for Business
Business Financial Accounting 1
Quantitative Techniques 1
Microeconomics
Plus One Elective*

Semester 2
Management
Business Financial Accounting 2
Quantitative Techniques 2
Macroeconomics
Plus One Elective*

YEAR 2 (Level 7 & 8)

Semester 3
Business Law
Introduction to Marketing
Business Applications
Human Resource Management 1
Intermediate Financial Accounting 1

Semester 4
Business Management Accounting
Supply Chain Management
Macroeconomy of Ireland
Contemporary Marketing Practice
Plus One Elective*

YEAR 3 (Level 8)

Semester 5
Financial Reporting 1
Cost Accounting
Income Tax
Information Systems
Plus One Elective*

Semester 6
Financial Reporting 2
Management Accounting 1
Business Tax for Self Employed & VAT
Commercial/Corporate Law For Accountants
Corporate Finance in Accounting

YEAR 4 (Level 8)

Semester 7
Advanced Financial Reporting 1
Management Accounting 2
Corporation Tax
Advanced Corporate Finance 1
Audit & Assurance 1
Strategic Analysis

Semester 8
Advanced Financial Reporting 2
Advanced Management Accounting
Capital Taxes & Succession
Advanced Corporate Finance 2
Audit & Assurance 2
Strategic Positioning

* *The full list of each semester's elective subject options is available on the relevant course page of our website.*

GRADUATE FEEDBACK

Surbhi Mohan
Accounting and Finance Graduate 2020
Audit Associate, EY

This degree prepares you for the working world giving you a wide variety of skills and knowledge so you can work in any area of accounting or finance in any size firm. The lecturers are excellent and ensure that each student understands the coursework and are always happy to help with queries. IT Carlow helped me build professional connections which helped me in getting my job. I was able to secure the maximum exemptions available and get a head start on the syllabus as I have a strong foundation from the subjects I completed at IT Carlow. The college offers great student support and resources for academic and social life. I would highly recommend studying the BA (Hons) in Accounting and Finance if you want to pursue a career in accounting or finance.

SPECIAL FEATURES

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

Institute of Certified Public Accountants in Ireland (CPA)
- Foundation and Professional Levels – all subjects

Chartered Accountants in Ireland (CAI)
- CA Proficiency 1 (CAP 1) – all subjects

The Association of Certified Chartered Accountants (ACCA)
- Applied Knowledge and Applied Skills Level - all subjects

The Chartered Institute of Management Accountants (CIMA)
- Certificate and Operational Levels – all subjects
- Operational Case Study

The Irish Tax Institute (ITI)
- Chartered Tax Adviser (Part 1) – 3 subjects

- Strong emphasis on IT and communications equips graduates with real-world skills required by employers.

COURSE PROGRESSION CHART

		YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW908 — **Business** BB (Honours) – NFQ Level 8 **Common Entry (CEY)** with options after Year 2

CW917 — **Business** BB – NFQ Level 7 (with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)

CW906 — **Business** Higher Certificate – NFQ Level 6

Common First and Second Years

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

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

Marketing

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY) — *Full common entry course application procedure is on page 78.*

	PLACES	DURATION	PROGRAMME DIRECTOR
CW908 MKT NFQ LEVEL 8	**15** approx.	**4 YEARS**	**Dr Deirdre Fleming** BA (Hons), MA, PhD, MCIM **E:** deirdre.fleming@itcarlow.ie
CW917 MKT NFQ LEVEL 7	**12** approx.	**3 YEARS**	

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. Students will also undertake work placement to help them in their careers.

Course Structure

Students complete the first two years in general business. This gives them the opportunity to learn about the wider business context and to see where their area of interest lies. They then choose a specialist discipline at the end of Year 2 such as Marketing. Years 3 and 4 are then focussed on that specific discipline with a marketing related work placement undertaken during the second semester of Year 3.

Is this course for you?

If you are interested in analytical thinking, innovation, creativity, problem solving, teamwork, presenting, time management and communication skills, marketing is a great career choice for you. It is full of variety and there are plenty of opportunities to progress from junior executive to senior management.

Career Opportunities

A marketing degree equips graduates with the skill set to pursue a variety of careers in: new product innovation; digital marketing; brand management; market research; consumer behaviour; services marketing; international marketing and sales.

Exit Awards

- Higher Certificate (NFQ Level 6) after Year 2.
- Bachelor of Business (NFQ Level 7) after Year 3.

Further Studies

Graduates who achieve a minimum second-class honours degree are eligible to apply to a range of masters and postgraduate 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?

YEAR 1 (Level 7 & 8)
Semester 1
IT for Business
Financial Accounting
Quantitative Techniques
Microeconomics
Plus One Elective*

Semester 2
Management
Financial Accounting
Quantitative Techniques
Macroeconomics
Plus One Elective*

YEAR 2 (Level 7 & 8)
Semester 3
Business Law
Introduction to Marketing
Business Applications
Introduction to Human Resource Management
Plus One Elective*

Semester 4
Management Accounting
Introduction to Supply Chain Management
Economics 2
Contemporary Marketing Practice
Plus One Elective*

YEAR 3 (Level 7 & 8)
Semester 5
Business Finance
Market and Customer Insights
Consumer Psychology and Behaviour
Integrated Marketing Communications
Electives*
Semester 6
Work Placement

YEAR 4 (Level 8)
Semester 7
Marketing Management
Digital Marketing
International Marketing Strategy
Strategic Analysis
Plus One Elective*

Semester 8
Brand Management
Digital Marketing Planning
Strategic Positioning
Electives*

* The full list of each semester's elective subject options is available on the relevant course page of our website.
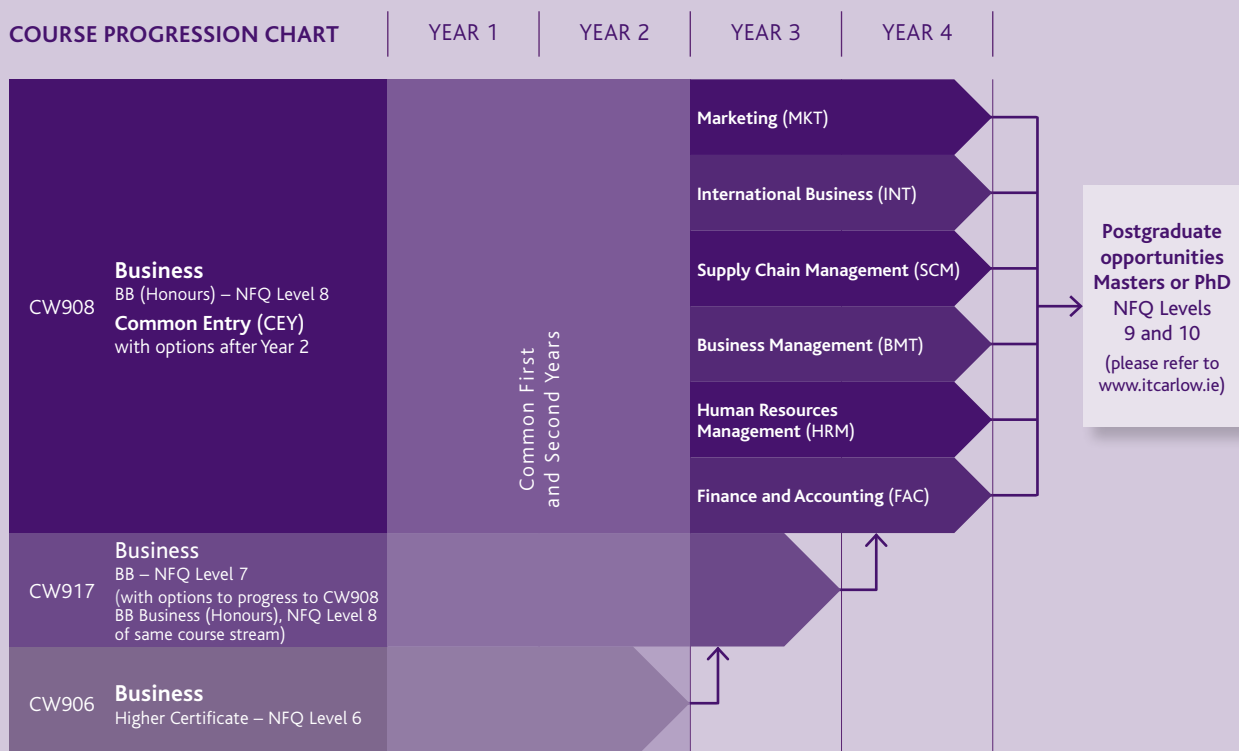
Awards Night for Institute of Technology Carlow Marketing students hosted by Carlow County Council, following a six-month collaborative project focusing on recycling in the County.

SPECIAL FEATURES

- Emphasis on professional practice throughout the course, 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 choice, will be permitted to change their selection at the end of Year 2 and confirm their specialism for Years 3 and 4.

- Recognised by employers as developing career-focused marketers.

COURSE PROGRESSION CHART

	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW908 — **Business** BB (Honours) – NFQ Level 8 **Common Entry (CEY)** with options after Year 2

Common First and Second Years

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

CW917 — **Business** BB – NFQ Level 7 (with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)

CW906 — **Business** Higher Certificate – NFQ Level 6

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW908** and **www.itcarlow.ie/CW917**

Business with Law

Bachelor of Business (Honours) or Higher Certificate

	PLACES	DURATION	PROGRAMME DIRECTOR
CW938 NFQ LEVEL 8	**30**	**4 YEARS**	**Dr Martin Meagher** BComm (Hons), MBA, MA, DHAE, FCA E: martin.meagher@itcarlow.ie
CW926 NFQ LEVEL 6	**30**	**2 YEARS**	

What is Business with Law?

Historically, the disciplines of business and law have been closely associated. In the global economy, businesses deal with 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.

Course Structure

Years 1 and 2 introduce students to essential business areas and fundamental legal subjects relevant to business. 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. This course provides maximum flexibility to students.

Is this course for you?

Are you are interested in both the business and law areas and cannot make up your mind which specialism you wish to secure? Or are you looking for a course in business with a strong legal emphasis? Then, this is the course for you as you can continue on the course for four years or transfer to a business or law specialism after Year 2.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Business and Law (NFQ Level 6) after Year 2.
- Bachelor of Business and Law (NFQ Level 7) after Year 3.

Further Studies

Level 8 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 another third-level institution.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Business Applications
Financial Accounting 1
Quantitative Techniques
Microeconomics
Irish Legal Systems

Semester 2
Intro to Law and Legal methods
Financial Accounting 2
Quantitative Techniques
Macroeconomics
Irish Legal Systems

YEAR 2 (Level 7 & 8)
Semester 3
Introduction to Management Theory
Contract Law 1
Tort Law 1
Introduction to Marketing
Financial Accounting 3
Plus One Elective*

Semester 4
Management in Action
Contract Law 2
Tort Law 2
Plus Two Electives (5 ECTs per subject) OR One Elective (10 ECTs per subject)*

YEAR 3 (Level 7 & 8)
Semester 5
Employment Law
People Management Functions
Business Finance
Capital Taxes
Plus Two Electives*

Semester 6
Work Placement

YEAR 4 (Level 8)
Semester 7
Company Law 1
Strategic Analysis
International Business
Plus One Elective*

Semester 8
Company Law 2
Strategic Positioning
Plus Two Electives (5 ECTs per subject) OR One Elective (10 ECTs per subject)*
Plus Two Electives*

* The full list of each semester's elective subject options is available on the relevant course page of our website.

GRADUATE FEEDBACK

Eoin Kelly
Business with Law Graduate
AIFMD Regulatory Reporting - ANNEX IV, European Market Infrastructure Regulation (EMIR), SFTR and Form PF at Carne Group

This is my second time to attend Institute of Technology Carlow, I decided to take up the course to further enhance my knowledge. The course is taught by industry experts and provided me with a blended mix of learning techniques and modules that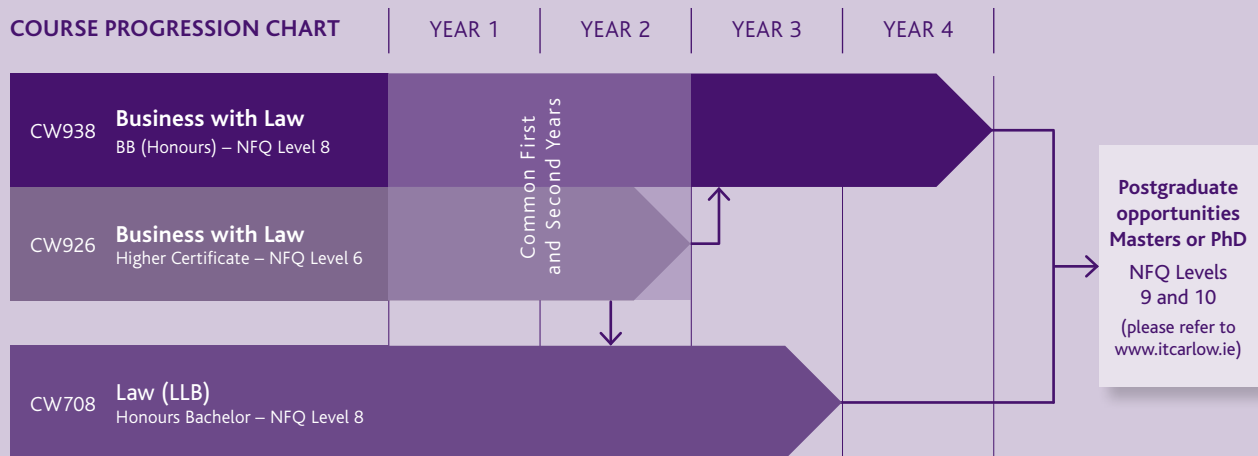 really support the live environment. My experience was fun, challenging, yet so fulfilling. The Financial Services Sector is really expanding in the region and this course is complementing the growth and those who complete the course are going to be highly employable to prospective companies.

SPECIAL FEATURES

- 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 78 or CW708 on page 114).

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4
CW938 **Business with Law** BB (Honours) – NFQ Level 8	Common First and Second Years			
CW926 **Business with Law** Higher Certificate – NFQ Level 6				
CW708 **Law (LLB)** Honours Bachelor – NFQ Level 8				

Postgraduate opportunities Masters or PhD

NFQ Levels 9 and 10

(please refer to www.itcarlow.ie)

Students who successfully complete a Higher Certificate in Business and Law (NFQ Level 6) and/or a Degree in Business and Law (NFQ Level 7) may transfer into other honours degree courses in Business (see CW908 on page 78 or CW708 on page 114).

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW938** and **www.itcarlow.ie/CW926**

Accounting
Bachelor of Arts (Honours)

CW948

NFQ LEVEL 8

PLACES	DURATION		PROGRAMME DIRECTOR
30	**3 YEARS**		**Tracy Byrne**

ACMA, CGMA, MSc

E: tracy.byrne@itcarlow.ie

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, tax, finance, information technology and management skills.

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.

Course Structure

This is a three-year Level 8 course with 60 ECTS per annum.

There are ten modules in Years 1 and 2 and twelve modules in Year 3. All modules are mandatory.

Final overall classification will be based on a combination of Year 2 (1/3) and Year 3 (2/3) results.

Is this course for you?

Mathematics and English are good indicator subjects for a career in accounting.

Mathematics is useful as Accounting is a mathematical subject. English is important as you will need to explain complex accounting concepts to non-accountants in simple language.

The course will start your journey to a professional accounting qualification which will open local, national and international career opportunities.

Career Opportunities

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

Further Studies

Graduates are eligible to progress to a research or taught masters degree at Institute of Technology Carlow and other institutions. Graduates may also take professional accountancy exams to further their qualifications.

What subjects will I study?

YEAR 1
Semester 1
Fundamental Financial Accounting 1
Microeconomics
Quantitative Techniques 1
Management & Communications
Computer Applications
Semester 2
Fundamental Financial Accounting 2
Macroeconomics
Quantitative Techniques 2
Business Law for Accountants
Management 2

YEAR 2
Semester 3
Financial Reporting 1
Cost Accounting
Income Tax
Information Systems
Marketing
Semester 4
Financial Reporting 2
Management Accounting 1
Business Tax for Self Employed & VAT
Commercial/Corporate Law For Accountants
Corporate Finance in Accounting

YEAR 3
Semester 5
Advanced Financial Reporting 1
Management Accounting 2
Corporation Tax
Advanced Corporate Finance 1
Audit & Assurance 1
Strategic Analysis
Semester 6
Advanced Financial Reporting 2
Advanced Management Accounting
Capital Taxes & Succession
Advanced Corporate Finance 2
Audit & Assurance 2
Strategic Positioning

GRADUATE FEEDBACK

Chandani Singh
Accounting Graduate 2021
Trainee Accountant, Lalor O'Shea McQuillan

I highly recommend Institute of Technology Carlow to anyone interested in enrolling in one of their programmes. I found BA (Hons) in Accounting to be an excellent programme offering a multitude of career options. The lecturers are immensely dedicated and thoroughly 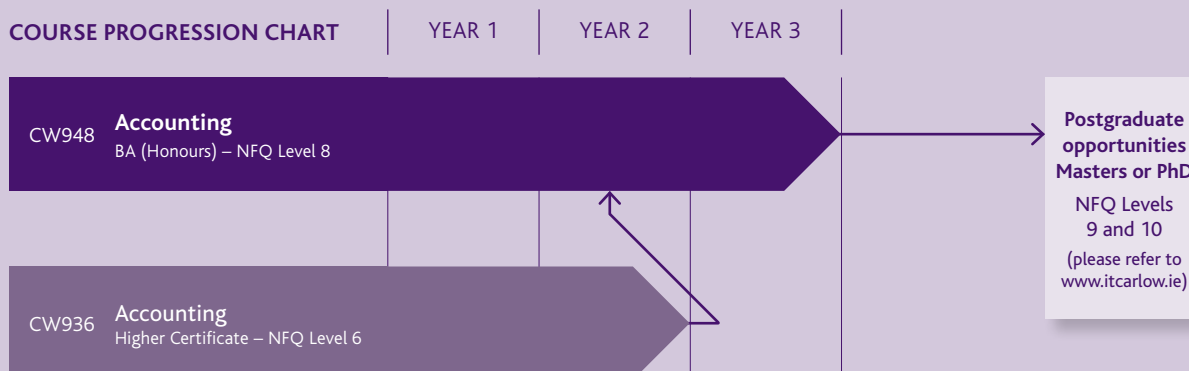knowledgeable in their subjects, approaching them was never an issue for me. An attractive and important feature of the programme is exemptions given towards professional exams in achieving Chartered Accountant status. I am excited to have now begun that journey with Lalor O'Shea McQuillan as a Trainee Accountant.

SPECIAL FEATURES

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

  Institute of Certified Public Accountants in Ireland (CPA)
  - Foundation and Professional Levels – all subjects

  Chartered Accountants in Ireland (CAI)
  - CA Proficiency 1 (CAP 1) – all subjects

  The Association of Certified Chartered Accountants (ACCA)
  - Applied Knowledge and Applied Skills Level - all subjects

  The Chartered Institute of Management Accountants (CIMA)
  - Certificate and Operational Levels – all subjects
  - Operational Case Study

  The Irish Tax Institute (ITI)
  - Chartered Tax Adviser (Part 1) – 3 subjects

- Strong emphasis on IT and communications equips graduates with real-world skills required by employers.

COURSE PROGRESSION CHART

	YEAR 1	YEAR 2	YEAR 3

CW948 Accounting
BA (Honours) – NFQ Level 8

CW936 Accounting
Higher Certificate – NFQ Level 6

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW948** and **www.itcarlow.ie/CW936**

Accounting
Higher Certificate

PLACES	DURATION	PROGRAMME DIRECTOR
30	2 YEARS	**Mairead Bohan**, BComm (Hons), FCA, MSc Finance **E**: mairead.bohan@itcarlow.ie

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.

Course Structure

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, Information Technology, Economics, Management, Business Law, Taxation and Financial Management. The broad foundation base also enables students to pursue further studies in business or accounting.

Is this course for you?

Are you interested in pursuing an accounting career or a business career with a strong accounting flavour?

Are you comfortable with Mathematics and English as subjects in your academic career so far?

If the answer to the above is yes and you have yet to make up your mind whether you would like to continue your studies beyond two years, then this is the course for you.

Career Opportunities

At certificate level, graduates can expect to work in accounting positions in a variety of sectors including manufacturing, financial services and the public sector.

Further Studies

Graduates can progress to Year 3 of Bachelor of Business (Honours) in Finance and Accounting (CW908). Graduates can also choose to take further studies in business and progress to Year 3 of the Bachelor of Business (Honours) (CW908) and choose a specialist area from one of the following options:

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

What subjects will I study?

YEAR 1
Semester 1
Essential Financial Accounting 1
Microeconomics
Quantitative Techniques 1
Introduction to Management Theory
IT for Business

Semester 2
Essential Financial Accounting 2
Macroeconomics
Quantitative Techniques 2
Management in Action
Business Law for Accountants

YEAR 2
Semester 3
Intermediate Financial Accounting 1
Cost & Management Accounting 1
Capital Taxes
IT in Accounting
Introduction to Marketing

Semester 4
Intermediate Financial Accounting 2
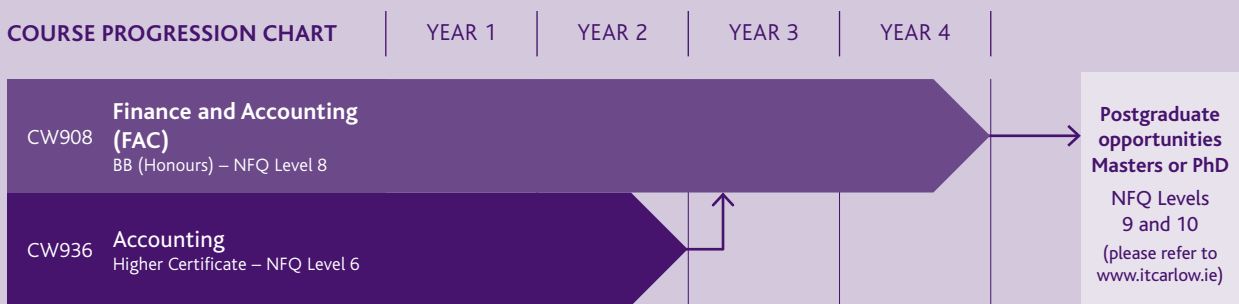Cost & Management Accounting 2
Income Tax & Corporation Tax
Financial Management
Contemporary Marketing Practice
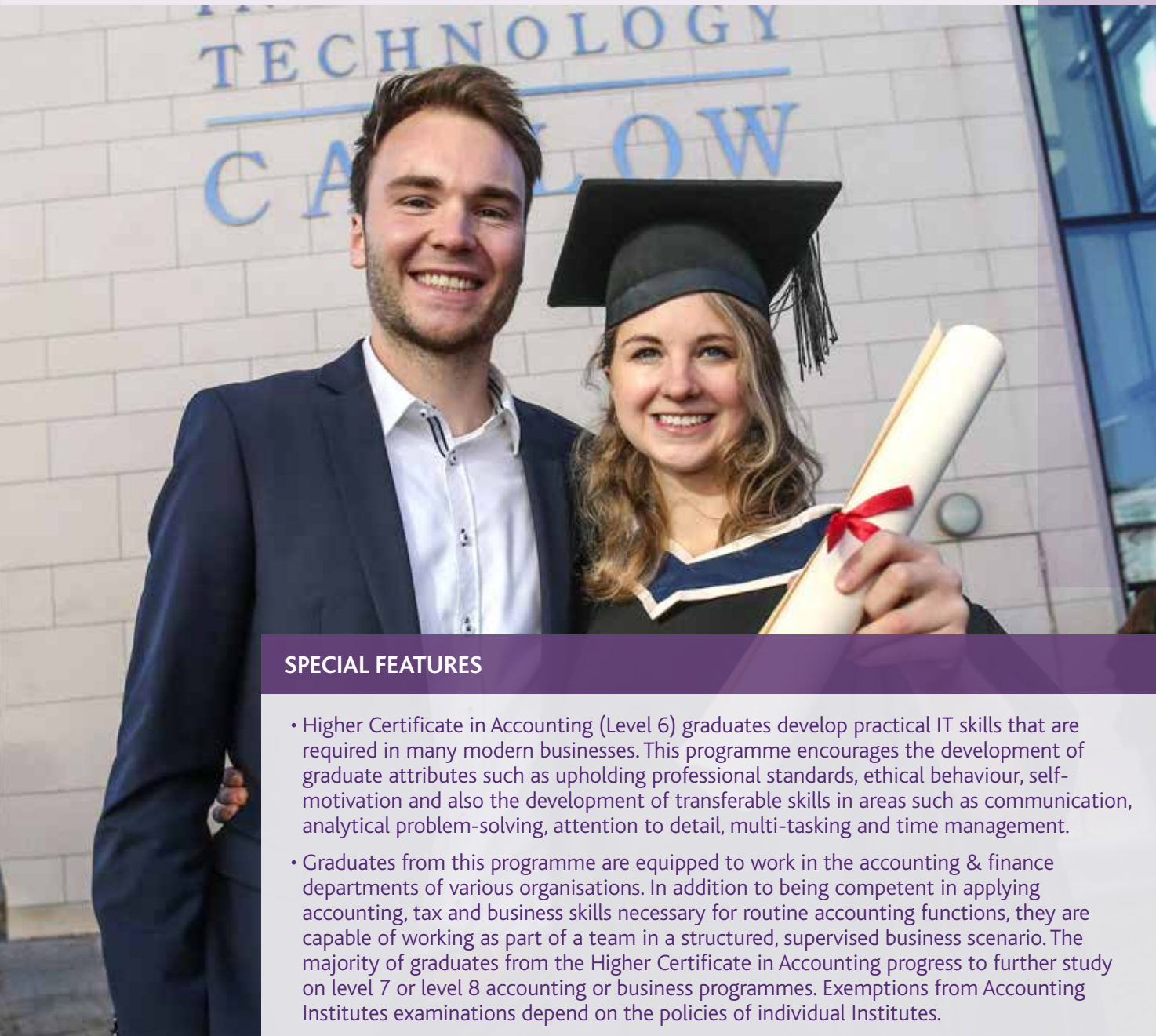
SPECIAL FEATURES

• Higher Certificate in Accounting (Level 6) graduates develop practical IT skills that are required in many modern businesses. This programme encourages the development of graduate attributes such as upholding professional standards, ethical behaviour, self-motivation and also the development of transferable skills in areas such as communication, analytical problem-solving, attention to detail, multi-tasking and time management.

• Graduates from this programme are equipped to work in the accounting & finance departments of various organisations. In addition to being competent in applying accounting, tax and business skills necessary for routine accounting functions, they are capable of working as part of a team in a structured, supervised business scenario. The majority of graduates from the Higher Certificate in Accounting progress to further study on level 7 or level 8 accounting or business programmes. Exemptions from Accounting Institutes examinations depend on the policies of individual Institutes.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW908 — Finance and Accounting (FAC)
BB (Honours) – NFQ Level 8

CW936 — Accounting
Higher Certificate – NFQ Level 6

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW936**

Business

Higher Certificate

PLACES	DURATION	PROGRAMME DIRECTOR
30	2 YEARS	**Sharon McDonald** BA (Hons), MA, HDip Math **E**: sharon.mcdonald@itcarlow.ie

What is Business?

This course provides an academic qualification for anyone interested in a career in business and management.

Course Structure

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.

Is this course for you?

If you have an interest in the business area and want an overview of the main aspects of business, as indicated in the course outline, this course is for you. If you then decide that you want to progress to study a degree, this course will help you make the choice within our wide range of specialisms.

Career Opportunities

At certificate level, graduates can expect to work in a variety of sectors including manufacturing, financial services and the public sector.

Further Studies

Graduates of this certificate course will be eligible to progress to Year 3 of the Bachelor of Business course (CW917) and can choose a speciality from one of the following:
• Marketing (MKT)
• International Business (INT)
• Supply Chain Management (SCM)
• Business Management (BMT) or
• Human Resource Management (HRM).

Graduates can also enter Year 3 of the Bachelor of Business, Wexford (CW037) or progress to Year 2 of the Bachelor of Arts (Honours) in Accounting (CW948).

What subjects will I study?

YEAR 1

Semester 1
IT for Business
Financial Accounting
Quantitative Techniques
Microeconomics
Plus One Elective
    Communications & Academic Writing
    French *
    German *

Semester 2
Management
Financial Accounting
Quantitative Techniques
Macroeconomics
Plus One Elective
    Business Psychology 1
    French *
    German *

YEAR 2

Semester 3
Business Law
Introduction to Marketing
Business Applications
Introduction to Human Resource Management
Plus One Elective
    Business Psychology 2
    Financial Accounting
    French *
    German *

Semester 4
Management Accounting
Introduction to Supply Chain Management
Macroeconomy of Ireland
Contemporary Marketing Practice
Plus One Elective
    Financial Accounting
    HRM
    Business Applications
    French *
    German *

* subject to demand

GRADUATE FEEDBACK

Róisín Foley, Graduate
Higher Certificate, Business
HR Department, Daffodil Care Services

The Higher Certificate in Business gave me so many amazing opportunities. On the successful completion of my Level 6 in business, I decided to continue at IT Carlow and do Human Resource Management. It was the best decision I ever made. I immediately starte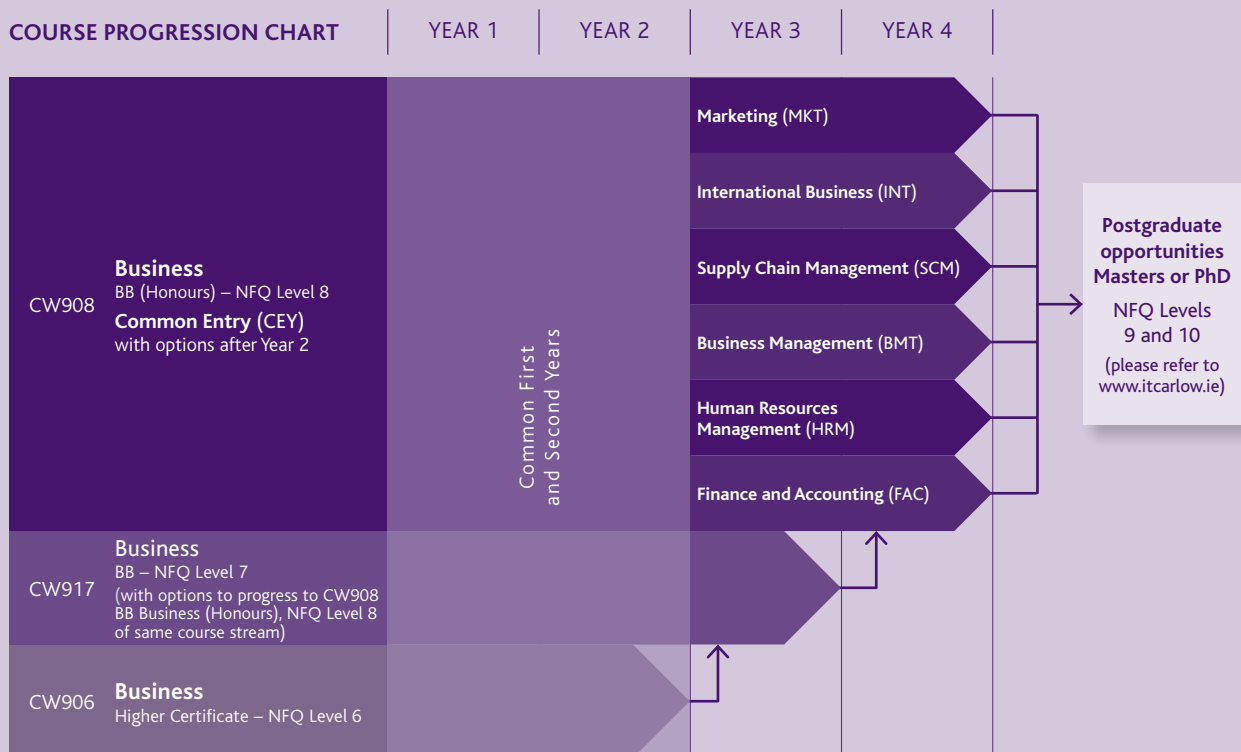d working in HR as soon as I got my degree, and I am now a HR Manager for one of Ireland's leading residential service providers. I love what I do, and none of it would have been possible without the amazing support and encouragement from all of my lecturers and the variety and opportunities that my course in IT Carlow provided me with.

SPECIAL FEATURES

• The Higher Certificate in Business provides students with the flexibility to choose a business career or progress to further study.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW908 **Business** BB (Honours) – NFQ Level 8 **Common Entry (CEY)** with options after Year 2

Common First and Second Years

Marketing (MKT)

International Business (INT)

Supply Chain Management (SCM)

Business Management (BMT)

Human Resources Management (HRM)

Finance and Accounting (FAC)

Postgraduate opportunities Masters or PhD

NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)

CW917 Business BB – NFQ Level 7 (with options to progress to CW908 BB Business (Honours), NFQ Level 8 of same course stream)

CW906 **Business** Higher Certificate – NFQ Level 6

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW906**

Public Relations and Media
Bachelor of Arts (Honours) or Bachelor of Arts

	PLACES	DURATION	PROGRAMME DIRECTOR
CW808 NFQ LEVEL 8	**30**	**4 YEARS**	**Dr Eleanor O'Leary** MA, PhD **E**: eleanor.oleary@itcarlow.ie
CW857 NFQ LEVEL 7	**30**	**3 YEARS**	

What is Public Relations and Media?

Public Relations (PR) helps maintain lines of communications between an organisation and its publics. The BA (Hons) Public Relations and Media shows students how to work as thoughtful professionals, using personal skills and media technologies to influence and persuade audiences and publics. 'Media' is a collective term for the platforms used to send messages to mass audiences. Media is recognised as a powerful messenger in all our lives that tells us what and how to think about local and global events. We need and use media to help us communicate who we are to the world.

Course Structure

The course runs over a four-year period and contains a mix of practical and theoretical media and PR subjects.

Is this course for you?

Do you have the following skills and interests?

- Great interpersonal skills
- An ability to write and tell stories
- An interest in media and business – celebrities, influencers, current affairs, investigations, crises, local and global events

- A hands-on approach to creating content - photography, video editing, media writing, digital design, podcasting and journalism
- Excellent communication and presentation skills
- Experience working with social media – Instagram, Facebook, TikTok, Twitter etc.

Career Opportunities

Given the growing influence of the PR and media 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.

Further Studies

Graduates of the Public Relations and Media Level 8 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?

YEAR 1 (Level 7 & 8)
Semester 1
Information Technology
Introduction to Media Studies 1
Professional Writing and Research in the Digital Age
An Introduction and History of Public Relations
Introduction to Digital Marketing
Semester 2
Social Psychology ADF 2021
Introduction to Media Studies 2
Management
Theories and Best Ethical Practice in Public Relations
Social Media Marketing

YEAR 2 (Level 7 & 8)
Semester 3
Fundamentals of Media and PR Law 1
Fundamentals of Marketing
Creative Video
PR Research and Evaluation
Visual Language and Communications
Semester 4
Fundamentals of Media and PR Law 2
IT and New Media
Contemporary Marketing Practice
Creative Radio and Storytelling
Specialist Areas in Public Relations

YEAR 3 (Level 7 & 8)
Semester 5
New Media Ethics
Networking in Public Relations
Contemporary Communication Design
Content Writing
Journalism
Semester 6
Work Placement

YEAR 4 (Level 8)
Semester 7
Contemporary Irish Literature
Podcasting and Multi-Screen Production
PR Campaign Project
Event Management
Digital Marketing
Semester 8
Ireland on Screen
Lead Portfolio
Media & Society
Digital Marketing Planning
Dissertation

* The full list of each semester's elective subject options is available on the relevant course page of our website.

GRADUATE FEEDBACK

Amanda O'Neill
Public Relations and Media Graduate
Digital Marketer at Dakota Irish

The Public Relations and Media degree is a great starting point for anyone considering a career in the media industry or in public relations. A thoroughly enjoyable course, it covers multiple areas of Media and PR including film, design, law, digital media and marketing.
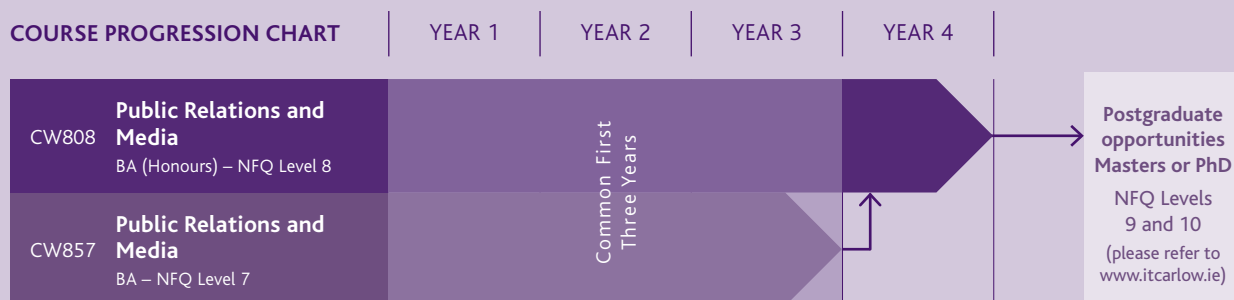
It's a well-balanced degree with a great atmosphere and supportive lecturers who help students to reach their full potential and develop the knowledge and essential skills beneficial for their professional career.

SPECIAL FEATURES

• Industry level skills to work in media or public relations.

• Modern television and radio studios.

• Highly qualified and experienced lecturers and staff.

• Excellent employment opportunities in media, public relations and creative industries.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW808	**Public Relations and Media** BA (Honours) – NFQ Level 8	Common First Three Years				**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW857	**Public Relations and Media** BA – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW808** and **www.itcarlow.ie/CW857**

Digital Marketing with Analytics

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW848 NFQ LEVEL 8	**30**	**4 YEARS**	**YES**	**Dr Denise Earle** BA (Hons), MA, PhD **E**: denise.earle@itcarlow.ie
CW837 NFQ LEVEL 7	**30**	**3 YEARS**	**YES**	

What is Marketing?

Examining how digital, web and social media technologies are used to deliver innovative business solutions, and how data analysis is at the heart of all successful marketing, this cutting edge degree provides an ideal space to explore the customer and commercial focus of marketing, the creativity of design and digital technology, and the analytical world of data.

An emphasis on professional practice, client company projects and a semester-long work placement or study abroad option provides a stimulating learning environment.

Course Structure

This three/four year degree focuses on continuous assessment methods and practical client-based projects that build your knowledge and skills each year. Along with a work placement or study abroad semester in Year 3, emphasis is placed on problem solving and teamwork and developing career-ready graduates.

Is this course for you?

If you have a curious mind and want to know how successful marketing campaigns are created; have an interest in design, web, and social media; want a degree that allows you develop your creative and problem solving skills, and a career where no two days are the same, then digital marketing with analytics is the degree for you.

Career Opportunities

Digital Marketing is essential in: entrepreneurial start-ups and high-tech multinationals; sporting governing bodies and charitable not-for-profits; private industry and public services.

Career opportunities include: the creative world of advertising and design; the commercial world of sales and building market share; the technological side of web design, SEO and SEM, and the analytical use of data to devise successful marketing strategies.

Exit Awards

- Higher Certificate in Science - Digital Marketing with Analytics (NFQ Level 6) after Year 2.
- Bachelor of Science – Digital Marketing with Analytics (NFQ Level 7) after Year 3.

Further Studies

Graduates of the BSc (Hons) in Digital Marketing with Analytics can apply to the Master of Science in Digital Marketing and Analytics, and the Masters in Interaction Design at Institute of Technology Carlow. Graduates can also consider research masters options at Institute of Technology Carlow, along with other postgraduate opportunities in Ireland and abroad.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Information Technology
Professional Writing and Research in the Digital Age
Introduction to Digital Marketing
Fundamentals of Marketing
Introduction to Digital Media Design
Semester 2
Introduction to Data Analysis for Digital Marketing
Introduction to Finance for Marketing
Social Media Marketing
Contemporary Marketing Practice
Creative Digital Media

YEAR 2 (Level 7 & 8)
Semester 3
Web Design & UX
Consumer Psychology and Behaviour
SEO & Search Engine Marketing
Content Writing
Integrated Marketing Communications
Semester 4
Law and Regulation in the Digital Economy
Finance for Marketing
Marketing Research
Digital Analytics & CRM

YEAR 3 (Level 7 & 8)
Semester 5
Business Finance
Data Reporting for Digital Marketing
Professional Selling
Marketing for Services
Electives*
Semester 6
Work Placement or Study Abroad or Alternative Electives*

YEAR 4 (Level 8)
Semester 7
Contemporary Issues in Digital Marketing
Marketing Management
ECommerce
International Marketing Strategy
Electives*
Semester 8
Advanced Data Analysis for Digital Marketing
Digital Marketing Planning
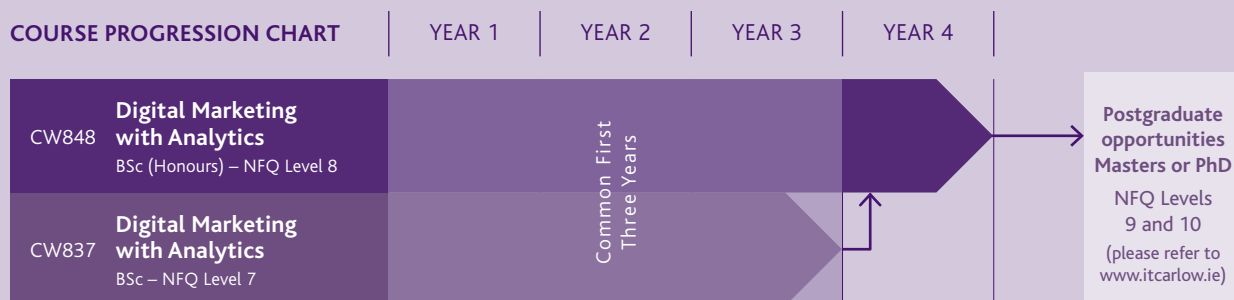Brand Management
B2B Marketing
Electives*

* The full list of each semester's elective subject options is available on the relevant course page of our website.

SPECIAL FEATURES

- A semester-long work placement or study abroad option in Year 3 promoting work-based learning.

- Working with client organisations to devise creative marketing solutions.

- Wide range of elective subjects allows students to customise Years 3 & 4 of their studies.

- Industry guest speakers bring the experience of marketing professionals and latest developments right into the classroom.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW848 **Digital Marketing with Analytics** BSc (Honours) – NFQ Level 8

CW837 **Digital Marketing with Analytics** BSc – NFQ Level 7

Common First Three Years

Postgraduate opportunities Masters or PhD

NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW848** and **www.itcarlow.ie/CW837**

Sports Management and Coaching

Bachelor of Arts (Honours)   (with options in: **GAA**, **Rugby** or **Football**)

PLACES	DURATION	PROGRAMME DIRECTOR
30	**4 YEARS**	**Denis O'Brien** BA (Hons), MBA, ACMA E: denis.obrien@itcarlow.ie

What is Sports Management and Coaching?

Sports management and coaching is an area of study that combines the techniques of sports management and coaching with the principles of business and enterprise.

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
• Sport finance
• Sport media and marketing.

Students will also have the opportunity to take elective modules in key areas such as:
• Performance Analysis
• Sport Psychology
• Adapted Physical Activity.

Course Structure

This is a four-year course and has three key content areas delivered in each year of the course:
• Coaching and Player Development
• Business and Management of Sport
• Sports Science

Classes are delivered in a range of settings including pitch, classroom and gym.

Is this course for you?

This course will be of interest to those who are passionate about playing or coaching sport. It will also be of interest to someone who would like a career in the business and administration of sport. It is open to students of all abilities and not just those in an elite category.

Career Opportunities

Graduates will be qualified to work in a variety of sports-related careers including: sports development officers; sports management; club development; club administration; sport coaching and fitness instruction, governing body management and administration.

Exit Awards

• Higher Certificate in Sport Coaching and Business Management (NFQ Level 6) after Year 2.
• Bachelor of Arts (NFQ Level 7) Sport Coaching and Business Management (GAA, Football, Rugby) after Year 3.

Further Studies

Graduates of this course may be eligible to progress to masters level in the areas of performance analysis, strength and conditioning and business.

What subjects will I study?

YEAR 1
Semester 1
Player Development 1
Applied Anatomy and Sports Physiology 1
Introduction to Coaching Pedagogy
Professional Writing and Research in the Digital Age
Information Technology

Semester 2
Player Development 2
Applied Anatomy and Sports Physiology 1
Coach Education 1
Introduction to Accounting for Sport
Foundations of Sport Management

YEAR 2
Semester 3
Player Development 3
Coach Education 2
Injury Prevention and Recovery Strategies in Sport
Accounting for Sport
Sport Marketing

Semester 4
Player Development 4
Coach Education 3
Strength and Conditioning
Finance for Sport 1
Sports Economics

YEAR 3
Semester 5
Fitness Testing and Load Monitoring in Sport
Finance for Sport 2
Sponsorship in Sport
People Management Skills
*Electives**

Semester 6
Work Placement

YEAR 4
Semester 7
Strategy, Governance & Leadership
Equality, Diversity and Inclusion in Sport
Periodisation
*Electives**

Semester 8
Sports Research Project
Contemporary Issues in Sport
Coach Development & Mentoring
*Electives**

* The full list of each semester's elective subject options is available on the relevant course page of our website.

GRADUATE FEEDBACK

Rachel Graham
Sports Management and Coaching Graduate
Women's Football Administrator, Football Association of Ireland (FAI)

Studying Sports Management and Coaching at IT Carlow enabled me to improve as a player and a coach. I trained in an elite environment and had access to top-class facilities and great coaches.
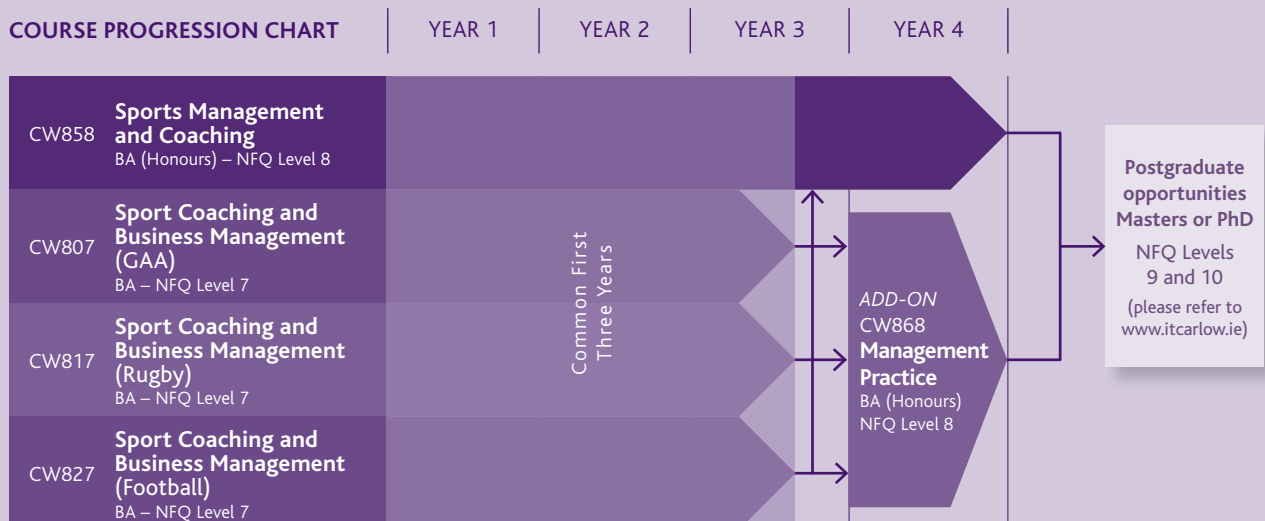I chose IT Carlow as it is the only institution that offers this unique course.

I am currently working in the Football Association of Ireland as the Women's Football Administrator, a job I would not have received without my degree.

SPECIAL FEATURES

- 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 Football with recent achievements as follows: Fitzgibbon Cup and Sigerson Cup Finalists 19/20; Women's Soccer Intervarsity Kelly Cup and Premier League winners 2018; 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 2020 and league winners in 19/20.

- Premium sporting facilities including elite sports gym, general student gym, GAA and rugby pitches with full changing facilities and viewing stands.

- Our South Sports Campus includes six full-size playing pitches, comprising one all-weather 4G GAA pitch, one grass GAA pitch, two grass football pitches and two grass rugby pitches.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	

CW858	Sports Management and Coaching BA (Honours) – NFQ Level 8
CW807	Sport Coaching and Business Management (GAA) BA – NFQ Level 7
CW817	Sport Coaching and Business Management (Rugby) BA – NFQ Level 7
CW827	Sport Coaching and Business Management (Football) BA – NFQ Level 7

Common First Three Years

ADD-ON CW868 **Management Practice** BA (Honours) NFQ Level 8

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW858**

Sport Coaching and Business Management (GAA)

Bachelor of Arts

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
20	3 YEARS	YES	**Brian Dunne** BSc (Hons), MSc, MISCP E: brian.dunne@itcarlow.ie

What is Sport Coaching and Business Management?

Sports bodies require their management and coaching staff to have a well-rounded understanding and knowledge of business and management, as well as their chosen sport. A Sport 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 the BA (Honours) Sports Management and Coaching (CW858 - NFQ Level 8) or Sport Coaching and Business Management (GAA) (CW807 - NFQ Level 7) on the CAO application. Both courses run concurrently for the first three years.

Course Structure

The course runs over a three-year period and contains modules in the following key areas:
- Sports Coaching and Player Development
- Sports Science
- Business and Management of Sport.

Is this course for you?

This course is suitable for anyone who has an interest in sports, both playing and coaching, or in the business and administration side of sport. It is open to students of all playing and coaching abilities - not just elite athletes and coaches.

Career Opportunities

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.

Exit Award

- Higher Certificate in Sport Coaching and Business Management (GAA) (NFQ Level 6) after Year 2.

Further Studies

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).

Previous graduates have gone on to complete masters programmes in the areas of strength and conditioning, performance analysis, business and marketing.

What subjects will I study?

YEAR 1
Semester 1
Player Development 1 (GAA)
Applied Anatomy and Sports Physiology 1
Introduction to Coaching Pedagogy
Professional Writing and Research in the Digital Age
Information Technology
Semester 2
Player Development 2 GAA
Applied Anatomy and Sports Physiology 2
Coach Education GAA 1
Introduction to Accounting for Sport
Foundations of Sport Management

YEAR 2
Semester 3
Player Development 3 GAA
Coach Education GAA 2
Injury Prevention and Recovery Strategies in Sport
Accounting for Sport
Sports Marketing
Semester 4
Player Development GAA 4
GAA Club Development
Strength and Conditioning
Finance for Sport 1
Sports Economics

YEAR 3
Semester 5
Fitness Testing and Load Monitoring in Sport
Finance for Sport 2
Sponsorship in Sport
People Management
Electives
Coach Education (GAA) 3
Player Development 5
Community Sport & Social Inclusion
Performance Analysis
Semester 6
Work Placement

Emma Byrne
Sport Coaching and Business Management (GAA) Graduate
Games Promotion Officer - Dublin GAA
Performance Analyst with Kilkenny Senior Hurling team

Sport and coaching is a passion of mine and this 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. I got the opportunity to develop both as a player, coach and person.
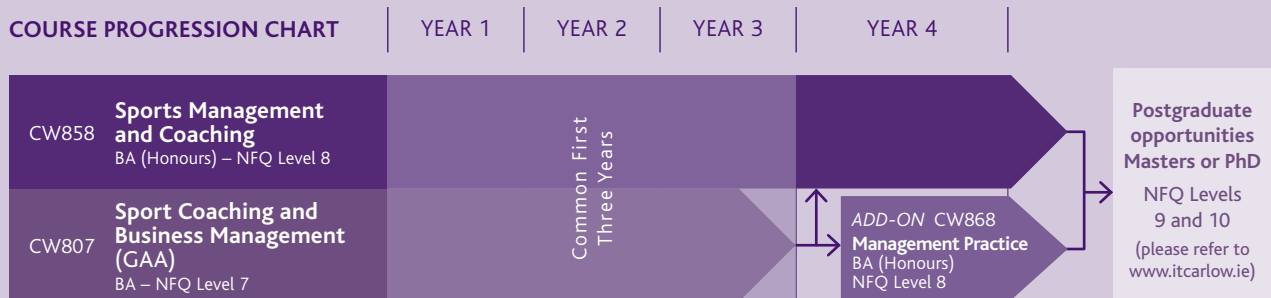
SPECIAL FEATURES

- This course is unique to Ireland as it is delivered in association with the GAA and only available at Institute of Technology Carlow.

- Institute of Technology Carlow GAA teams compete in the Sigerson Cup, Fitzgibbon Cup, Purcell Cup & Giles Cup competitions. Last year our senior hurlers reached the Fitzgibbon Cup final while our senior footballers also reached the Sigerson Cup final. Our Giles Cup team lost out in the Division 2 league semi final. Our camogie team won the Division 2 league final.

- 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 our new South Sports Campus with new 4G astroturf and grass pitch, elite sports gym, general student gym, GAA pitch with full changing facilities and viewing stands.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW858 **Sports Management and Coaching** BA (Honours) – NFQ Level 8	Common First Three Years				Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW807 **Sport Coaching and Business Management (GAA)** BA – NFQ Level 7				*ADD-ON* CW868 **Management Practice** BA (Honours) NFQ Level 8	

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW807**

Sport Coaching and Business Management (Rugby)

Bachelor of Arts

CW817

PLACES	DURATION	PROGRAMME DIRECTOR
25	**3 YEARS**	**Denis O'Brien** BA (Hons), MBA, ACMA **E**: denis.obrien@itcarlow.ie

What is Sport Coaching and Business Management?

Sports bodies require their management and coaching staff to have a well-rounded understanding and knowledge about business and management, as well as their chosen sport. 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) Sports 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.

Course Structure

The course runs over a three-year period and contains modules in the following key areas:
- Sports Coaching and Player Development
- Sports Science
- Business and Management of Sport.

Is this course for you?

This course is suitable for anyone who has an interest in rugby, both playing and coaching, or in the business and administration side of sport. It is open to students of all playing and coaching abilities - not just elite athletes and coaches.

Career Opportunities

Graduates will be qualified to work in a variety of sport-related areas including: rugby development officers; community rugby officers; professional athletes; coaches; performance analysts; sports management; club development and/or administration: sports coaching and fitness instruction.

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

Exit Award

- Higher Certificate in Sport Coaching and Business Management (Rugby) (NFQ Level 6) after Year 2.

Further Studies

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).

Previous graduates have gone on to complete masters programmes in the areas of strength and conditioning, performance analysis, business and marketing.

What subjects will I study?

YEAR 1
Semester 1
Player Development 1 Rugby
Applied Anatomy and Sports Physiology 1
Introduction to Coaching Pedagogy
Professional Writing and Research in the Digital Age
Information Technology
Semester 2
Player Development 2 Rugby
Applied Anatomy and Sports Physiology 2
Coach Education Rugby 1
Introduction to Accounting for Sport
Foundations of Sport Management

YEAR 2
Semester 3
Player Development 3 Rugby
Coach Education Rugby 2
Injury Prevention and Recovery Strategies in Sport
Accounting for Sport
Sport Marketing
Semester 4
Player Development Rugby 4
Coach Education Rugby 3
Strength and Conditioning
Finance for Sport 1
Sports Economics

YEAR 3
Semester 5
Fitness Testing and Load Monitoring in Sport
Finance for Sport 2
Sponsorship in Sport
People Management
Electives
Coach Education (Rugby) 4
Player Development (Rugby) 5
Community Sport & Social Inclusion
Performance Analysis
Semester 6
Work Placement

GRADUATE FEEDBACK

Corey Carthy
Sport Management and Coaching (Rugby) Graduate
Community Rugby Officer. South East

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.

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. Institute of Technology
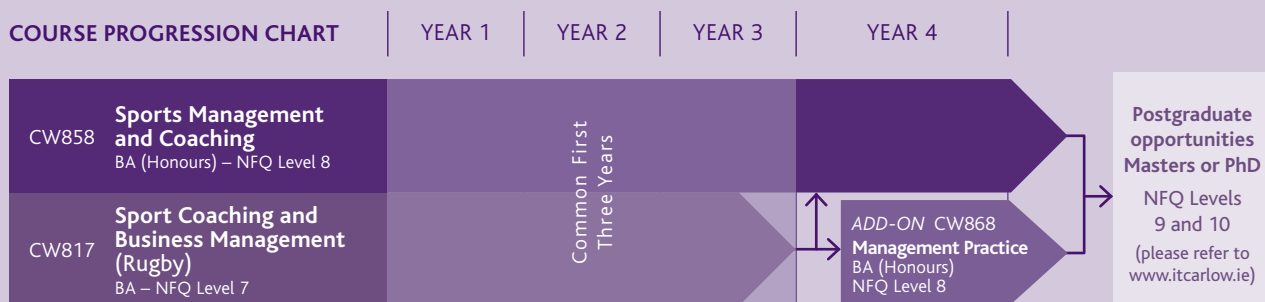
Carlow gave me both the knowledge and the experience to start coaching at an elite level and I firmly believe I would not be in the position I am today without my degree.

SPECIAL FEATURES

- This course is unique to Ireland as it is delivered in association with Leinster Rugby and the IRFU and is only available at Institute of Technology Carlow.

- Institute of Technology Carlow rugby teams compete at the top level of college rugby in Ireland. Our men's team reached the Brendan Johnston Cup Final in the 2019/20 season and won the league.

- Experienced coaches and coach educators from Leinster Rugby deliver the player development and coach education modules of the course with the opportunity to attain IRFU coaching qualifications and practical experience in each of the three years of the course.

- Premium sporting facilities including our new South Sports Campus with six new pitches, elite sports gym, general student gym, rugby pitch with full changing facilities and viewing stands.

COURSE PROGRESSION CHART

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	

| CW858 | **Sports Management and Coaching** BA (Honours) – NFQ Level 8 | Common First Three Years | | *ADD-ON* CW868 **Management Practice** BA (Honours) NFQ Level 8 | **Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie) |
| CW817 | **Sport Coaching and Business Management (Rugby)** BA – NFQ Level 7 | | | | |

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW817**

Sport Coaching and Business Management (Football)

Bachelor of Arts

PLACES	DURATION	FAI PROGRAMME LEADER
20	3 YEARS	**Paul O'Reilly** BSc (Hons) E: paul.oreilly@itcarlow.ie

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 as well as 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.

Course Structure

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.

Is this course for you??

This course is suitable for anyone who has an interest in football, both playing and coaching or in the business and administration side of sport. It is open to students of all playing and coaching abilities - not just elite athletes and coaches.

Career Opportunities

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.

Exit Award

- Higher Certificate in Arts in Sport Coaching and Business Management (Football) (NFQ Level 6) after Year 2.

Further Studies

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).

What subjects will I study?

YEAR 1
Semester 1
Player Development (Football) 1
Applied Anatomy and Sports Physiology 1
Introduction to Coaching Pedagogy
Professional Writing and Research in the Digital Age
Information Technology
Semester 2
Player Development (Football) 2
Applied Anatomy and Sports Physiology 2
Coach Education (Football) 1
Introduction to Accounting for Sport
Foundations of Sport Management

YEAR 2
Semester 3
Player Development (Football) 3
Coach Education (Football) 2
Injury Prevention and Recovery Strategies in Sport
Accounting for Sport
Sport Marketing
Semester 4
Player Development (Football) 4
Coach Education (Football) 3
Strength and Conditioning
Finance for Sport 1
Sports Economics

YEAR 3
Semester 5
Fitness Testing and Load Monitoring in Sport
Finance for Sport 2
Sponsorship in Sport
People Management
Electives
  Coach Education (Football) 4
  Player Development (Football) 5
  Community Sport & Social Inclusion
  Performance Analysis
Semester 6
Work Placement

GRADUATE FEEDBACK

Gary Sweeney
Sport Management and Coaching (Football) Graduate
Performance Analyst at Manchester United

The course provided a good balance between sport and academic work while giving me an insight into what it takes to work in a professional sports environment. Upon graduating from Institute of Technology Carlow, I was able to gain employment immediately. I went to Reading FC and now I am working 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.

SPECIAL FEATURES

- 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.

- Competitive Institute of Technology Carlow team environment in football. Men's CUFL Premier Winners 2015/16 and Women's Intervarsity Kelly Cup Winners 2017/18 and 2015/16. CUFL Premier Winners 2018/2019 and CFAI Cup winners 2020.

- 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 our new South Sports Campus with six new pitches, elite sports gym, general student gym, rugby pitch with full changing facilities and viewing stands.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW858 **Sports Management and Coaching** BA (Honours) – NFQ Level 8		Common First Three Years			Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW827 **Sport Coaching and Business Management (Football)** BA – NFQ Level 7			*ADD-ON* CW868 **Management Practice** BA (Honours) NFQ Level 8		
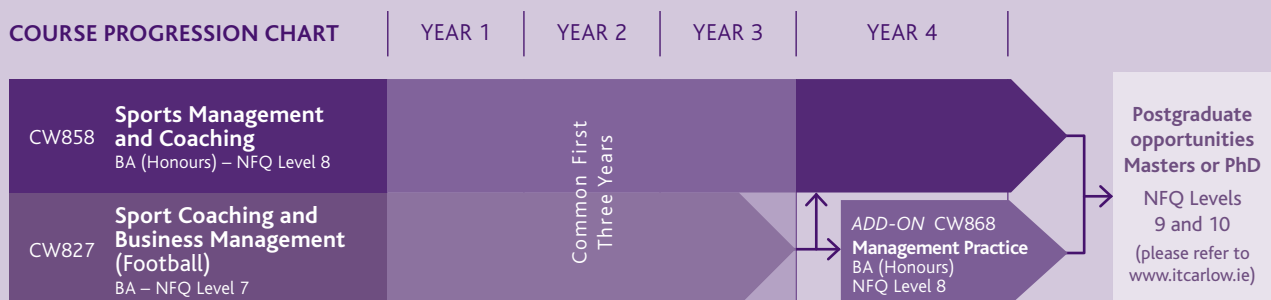
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW827**

Sport, Business and Coaching

Bachelor of Business (Honours) or Bachelor of Business

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTORS
CW878 NFQ LEVEL 8	30	4 YEARS	YES	**Denis O'Brien** BA (Hons), MBA, ACMA **E**: denis.obrien@itcarlow.ie
CW847 NFQ LEVEL 7	30	3 YEARS	YES	**Brian Dunne** BSc (Hons), MSc, MISCP **E**: brian.dunne@itcarlow.ie

What is Sport, Business and Coaching?

This new honours degree combines the techniques of sports management and coaching with the principles of business and management.

The field of sports management and coaching is changing rapidly. All sporting bodies require management and coaching staff to have an excellent understanding of their chosen sport, as well as strong business and organisational and administrative skills.

On completion of the course, students will have a detailed understanding of:
- Athletic development
- Coach education
- Strength and conditioning
- Sport finance
- Sport media and marketing.

Students will also have the opportunity to take elective modules in key areas such as:
- Performance Analysis
- Sports Psychology
- Adapted Physical Activity.

Course Structure

This three/four-year degree has three key content areas delivered in each year of the course:
- Coaching Pedagogy
- Business and Management of Sport
- Sports Science.

Classes are delivered in a range of settings including pitch, classroom and gym.

Is this course for you?

This course is open to students from any sporting background who are passionate about playing and/or coaching their sport. It will also be of interest to someone who would like a career in the business and administration of sport. The course prepares you for the workplace with work placement in semester 2 of Year 3. This is further enhanced by engagement with commercial and not for profit sporting bodies in planning events and examining the strategic direction of the organisation. This gives the student experience of organisations which they may be employed by in the future.

It is open to students of all abilities and not just those in an elite category.

This course is based on CAO points only and is not a portfolio entry.

Career Opportunities

Graduates will be qualified to work in a variety of sports-related careers including: sports development officers; sports management; club development; club administration; sport coaching and fitness instruction; governing body management and administration. Graduates will also be qualified to work in business management and administration roles.

Exit Awards

- Higher Certificate in Sport, Business and Coaching (NFQ Level 6) after Year 2.
- Bachelor of Arts (NFQ Level 7) Sport, Business and Coaching after Year 3.

Further Studies

Graduates of this course may be eligible to progress to masters level in the areas of performance analysis, strength and conditioning or business.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Applied Athletic Development 1
Introduction to Coaching Pedagogy
Applied Anatomy and Sports Physiology 1
Professional Writing and Research in the Digital Age
Information Technology
Semester 2
Applied Athletic Development 2
Introduction to the Coaching Environment
Applied Anatomy and Sports Physiology 2
Introduction to Accounting for Sport
Foundations of Sport Management

YEAR 2 (Level 7 & 8)
Semester 3
Nutrition & Doping Regulation in Sport
Coach Education & Practice 1
Injury Prevention and Recovery Strategies in Sport
Accounting for Sport
Sport Marketing
Semester 4
Physical Activity & Health
Coach Education & Practice 2
Strength and Conditioning
Finance for Sport 1
Sports Economics

YEAR 3 (Level 7 & 8)
Semester 5
Fitness Testing and Load Monitoring in Sport
Finance for Sport 2
Sponsorship in Sport
People Management
Electives
Semester 6
Work Placement

YEAR 4 (Level 8)
Semester 7
Strategy, Governance & Leadership
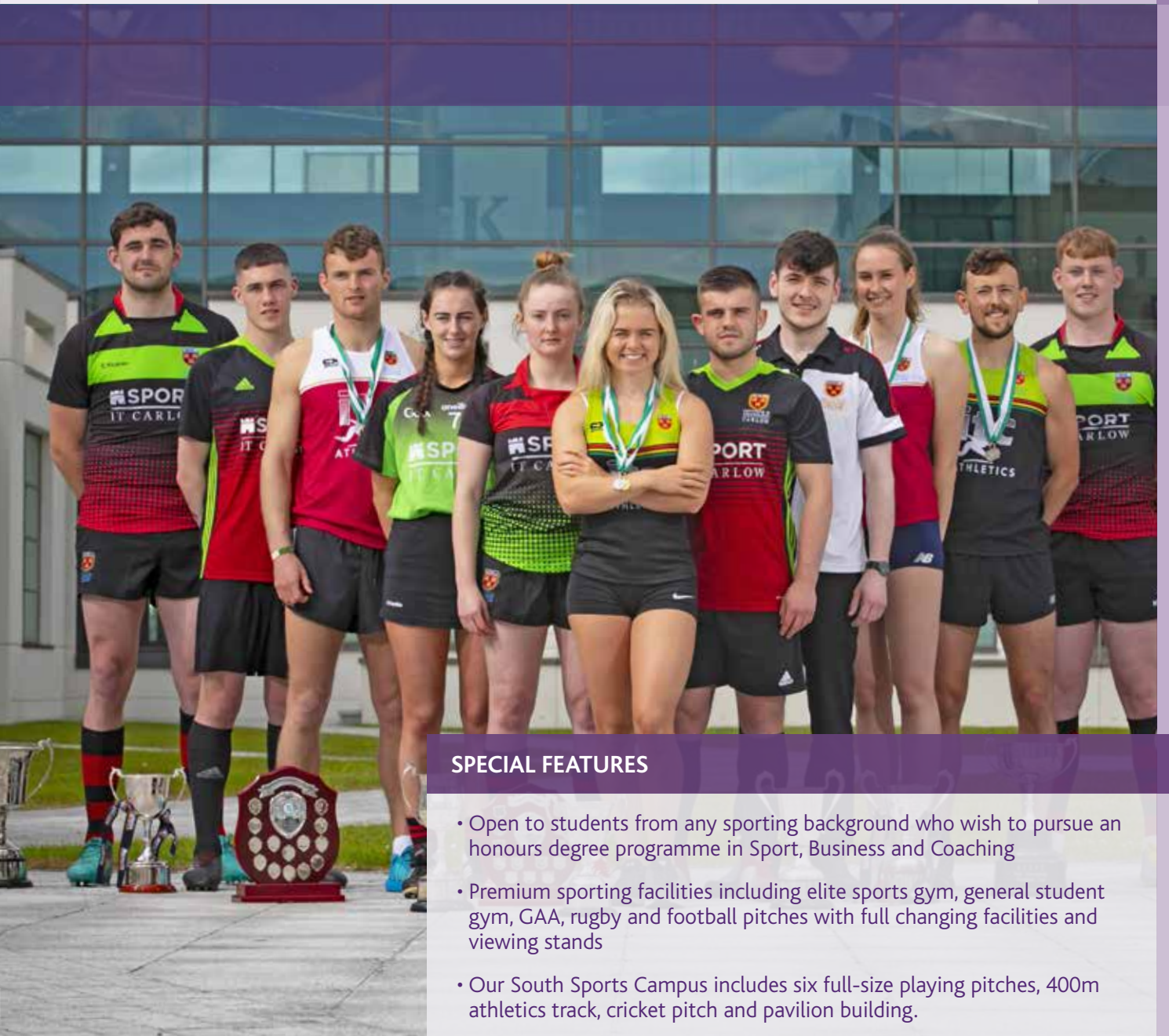Equality, Diversity and Inclusion in Sport
Periodisation
Electives
Semester 8
Sports Research Project
Contemporary Issues in Sport
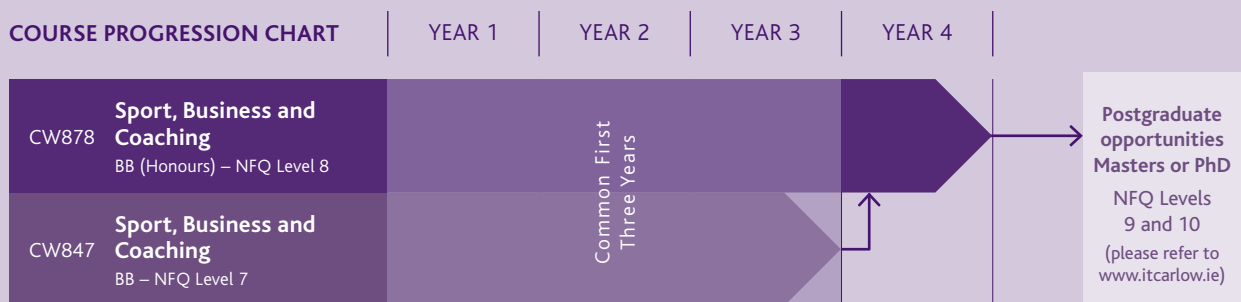Coach Development & Mentoring
Dissertation
Electives

* The full list of each semester's elective subject options is available on the relevant course page of our website.

SPECIAL FEATURES

- Open to students from any sporting background who wish to pursue an honours degree programme in Sport, Business and Coaching

- Premium sporting facilities including elite sports gym, general student gym, GAA, rugby and football pitches with full changing facilities and viewing stands

- Our South Sports Campus includes six full-size playing pitches, 400m athletics track, cricket pitch and pavilion building.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW878 **Sport, Business and Coaching** BB (Honours) – NFQ Level 8		Common First Three Years			**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW847 **Sport, Business and Coaching** BB – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW878** and **www.itcarlow.ie/CW847**

Law (LLB)
Honours Bachelor

PLACES	DURATION	PROGRAMME DIRECTOR
25	**3 YEARS**	**John Tully**, LLB (Hons), LLM (NUI), PG Cert Ed, Barrister (Middle Temple) E: john.tully@itcarlow.ie

What is Law (LLB)?

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 both written and verbal 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.

Course Structure

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.

Is this course for you?

If you are interested in the art of analysis, research, logical reasoning, and finding creative and imaginative ways to solve problems, then a degree in law might be for you. Your legal studies should also provide you with a sound understanding of the foundations of the legal system, the constitutional framework of the state, and the political and economic influences on the development of the law.

Career Opportunities

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.

Further Studies

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

Semester 1
Tort Law 1
The Irish Legal System 1
Criminal Law 1
Legal Research & Communications
Constitutional Law 1
Semester 2
Tort Law 2
The Irish Legal System 2
Criminal Law 2
Legal Practice & Procedure
Constitutional Law 2

YEAR 2

Semester 3
Contract Law 1
Land Law and Succession 1
Electives
   Employment Law 1
   Evidence 1
   Media Law and the Digital Environment 1
   Jurisprudence 1
   Administrative Law 1
Semester 4
Contract Law 2
Land Law and Succession 2
Electives
   Media Law and the Digital Environment 2
   Jurisprudence 2
   Evidence 2
   Employment Law 2
   Administrative Law 2

YEAR 3

Semester 5
European Union Law 1
Company Law 1
Equity and Trusts 1
Electives
   Consumer Protection Law 1
   Family and Child Law 1
   Jurisprudence 1
Semester 6
European Union Law 2
Equity and Trusts 2
Company Law 2
Electives
   Jurisprudence 2
   Consumer Protection Law 2
   Family and Child Law 2

GRADUATE FEEDBACK

Jason Meagher
Barrister and Law Graduate
Barrister in Commercial Law and Litigation

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. IT Carlow built the foundations – and strong foundations – necessary to prepare 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.
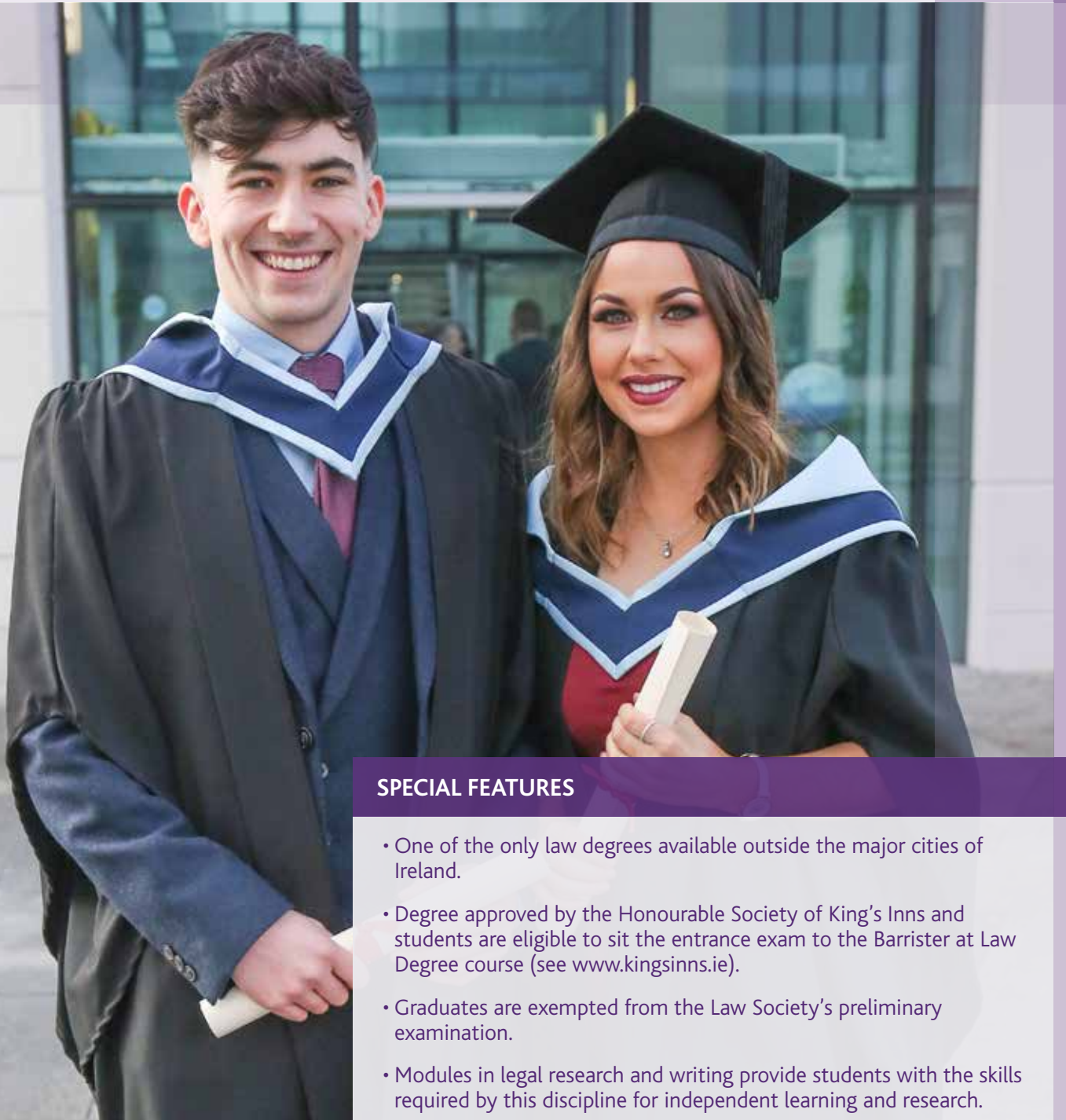
SPECIAL FEATURES

- One of the only law degrees available outside the major cities of Ireland.

- Degree approved by the Honourable Society of King's 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3		Postgraduate opportunities Masters or PhD
CW708 **Law (LLB)** Honours Bachelor – NFQ Level 8					NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
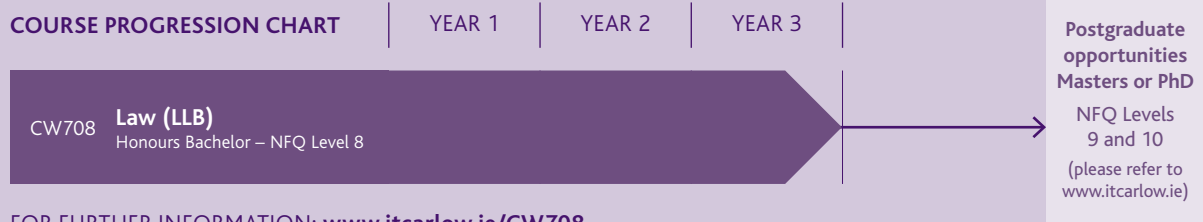
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW708**

Legal Studies

Higher Certificate

PLACES	DURATION	PROGRAMME DIRECTOR
20	2 YEARS	**Eimear Lane**, BComm (Hons), Dip LS, PD T & EP, PG Dip, Solicitor **E**: eimear.lane@itcarlow.ie

What is Legal Studies?

Knowledge of the law and legal systems is important for people in many walks of life. Many professionals need to understand what the legal system is, how it works and how it assists people in asserting their rights. Legal studies provides the professional and scholarly skills necessary for a general understanding of the law, as well as for law-related careers, public service or further graduate level study.

Course Structure

There are two broad themes running through the course - law and business skills.

The legal studies course equips students with a broad knowledge of the Irish legal system and of the fundamental legal principles and subjects.

Students take modules on the core law subjects of: constitutional law; criminal law; the law of torts; contract law; land law; and legal research and communications. The course also provides some non-law subjects designed to improve students' IT, communications and office management skills. These business modules include: Information Technology; Management; Accounting; Marketing and Human Resources Management.

Is this course for you?

If you have an interest in the Irish legal system and fundamental legal principles, while also interested in developing your IT, business, communications and office management skills, then Legal Studies might be the course for you!

Career Opportunities

Graduates of the Higher Certificate course have many diverse career options available to them including legal roles such as: legal executive, law clerk or legal secretary. There are also a range of diverse careers available in many sectors such as: the Gardaí; Defence Forces; government agencies; banking; property management; insurance, taxation; accounting; retail management and many others.

Further Studies

Graduates who obtain an overall pass can apply to progress to Year 2 of the Honours LLB (CW708).

What subjects will I study?

YEAR 1
Semester 1
Business Financial Accounting 1
The Irish Legal System 1
IT for Business
Business Law 1
Legal Research & Communications
Semester 2
Business Financial Accounting 2
The Irish Legal System 2
Business Law 2
Management
Legal Office Fundamentals

YEAR 2
Semester 3
Criminal Law 1
Tort Law 1
Principles of Property Law
Electives
   Human Resource Management 1
   Constitutional Law 1
   Intermediate Financial Accounting 1
Semester 4
Criminal Law 2
Tort Law 2
Legal Practice & Procedure
Electives
   Human Resource Management 2
   Constitutional Law 2
   Intermediate Financial Accounting 2
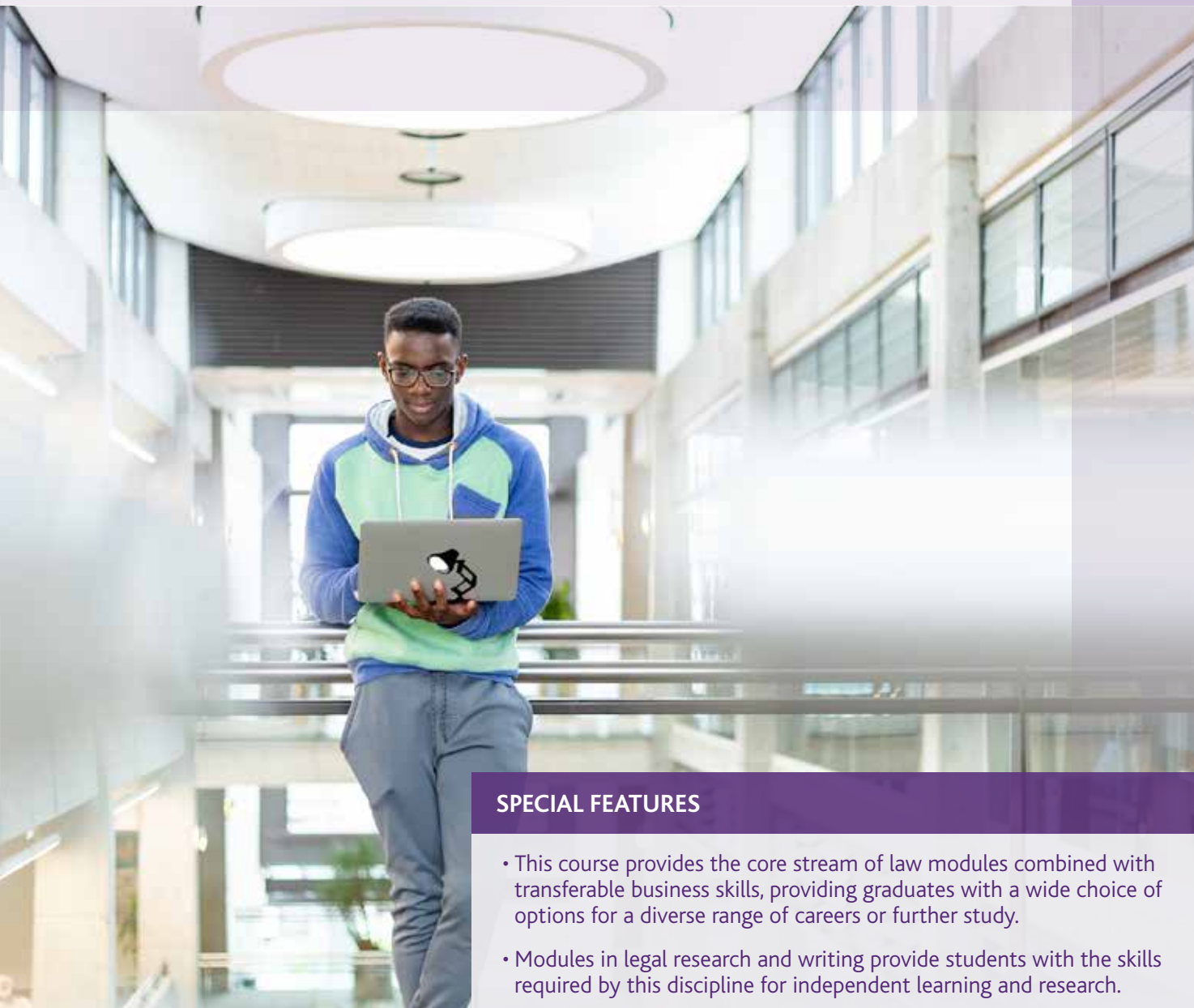
SPECIAL FEATURES

• 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.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3

CW708 **Law (LLB)**
Honours Bachelor – NFQ Level 8

CW706 **Legal Studies**
Higher Certificate – NFQ Level 6

Postgraduate opportunities Masters or PhD
NFQ Levels 9 and 10
(please refer to www.itcarlow.ie)
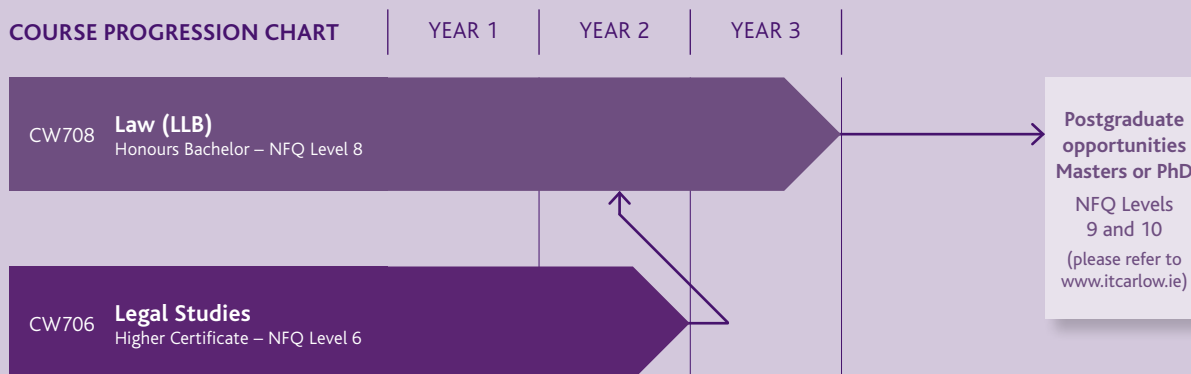
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW706** and **www.itcarlow.ie/CW708**

Design

Bachelor of Arts (Honours) and Bachelor of Arts

		PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW728 NFQ LEVEL 8	Bachelor of Arts (Honours) in **Product Design Innovation**	**20**	**4 YEARS**	**YES**	**Colin Deevy** BDes (Hons) **E**: colin.deevy@itcarlow.ie
CW707 NFQ LEVEL 7	Bachelor of Arts in **Design**	**15**	**3 YEARS**	**YES**	**Emmet Sexton** BA (Hons) **E**: emmett.sexton@itcarlow.ie

What is Product Design Innovation | Industrial Design

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.

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.

Course Structure

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.

Is this course for you?

If you are interested in creative problem solving tasks that focus on the development of products and services that address real-world, human-centered problems then Product Design Innovation might be the course for you!

Career Opportunities

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).

Exit Awards

- Higher Certificate of Arts in Design (NFQ Level 6) after Year 2.
- Bachelor of Arts in Design (NFQ Level 7) after Year 3.

Further Studies

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?

YEAR 1 (Level 7 & 8)
Semester 1
Digital Presentation
Digital Modelling and Materials
Workshop Practice
Design Discourse
Semester 2
Design Studio 1 (Skills and Process)
Digital Communications
Digital Modelling and Process
Ergonomics & Model Making
Design Trends

YEAR 2 (Level 7 & 8)
Semester 3
Brand Realisation
3D Modelling
Working Prototypes
International Design Movements
Elective*
Semester 4
Design Studio 2 (Design For Industry)
Personal & Commercial Visualisation
Design Specification
Modelling for user validation
Design Theory, Methods & Application
Elective*

YEAR 3 (Level 7 & 8)
Semester 5
Data Visualisation
Modelling Design Features
3D Rapid Prototyping
Design, Culture & Society
Electives*
Semester 6
Design Studio 3 (Industrial Design)
Digital Publication
Form and Specification
Surface Finishing and Detailing
Academic Research Writing
Elective*

YEAR 4 (Level 8)
Semester 7
User Behaviour Research
Project Management
Semester 8
Design Studio 4 (Product Design)
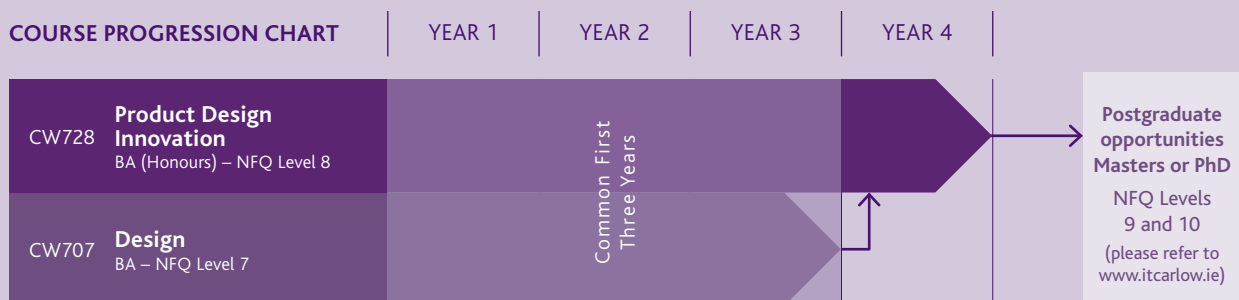Dissertation
Branding and Exhibition
Enterprise Development

* The full list of each semester's elective subject options is available on the relevant course page of our website.

Mike McLoughlin
Product Design Innovation Graduate
Design and Development Engineer

I found the course very interesting as it challenged common preconceptions on the world around us and how everyday problems can be solved. We were always pushed to challenge the norm and the informal studio environment aided creative thinking greatly. It is not easy to prepare future design professionals for the tough world of design but I feel the team at IT Carlow did this in a very unique, fun and professional manner.

SPECIAL FEATURES

- 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.

- 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 3.

- SHOWCASE and exhibition of work occurs throughout the course allowing students to present their work to industry, commercial partners, agencies and the community.

COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

CW728 **Product Design Innovation** BA (Honours) – NFQ Level 8

CW707 **Design** BA – NFQ Level 7

Common First Three Years

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW728** and **www.itcarlow.ie/CW707**

Early Childhood Education and Practice

Bachelor of Education (Honours) or Bachelor of Education

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW748 NFQ LEVEL 8	30	**4 YEARS**	**YES**	**Mary Beare Aust** BEd (Hons), MA (Ed), AdvMontDip, FHEA **E**: mary.aust@itcarlow.ie
CW727 NFQ LEVEL 7	20	**3 YEARS**	**YES**	

What is Early Childhood Education and Practice?

Early childhood education and practice involves supporting babies and young children to become competent and confident learners through loving relationships with others. Children require high-quality education 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 and the children's experiences in it.

Course Structure

This honours degree in Early Childhood Education and Practice 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. Students develop a knowledge and understanding of Aistear, the Early Childhood Curriculum Framework and Síolta, the National Quality Framework for Early Childhood Education, essential for professional work in this area of practice.

Is this course for you?

Are you interested in supporting the learning, development and well-being of babies and young children and their families? Would you like to learn how to provide a positive and enriching learning environment while promoting children's play, creative and critical thinking skills?

Career Opportunities

Graduates 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 National Early Years Quality Development or inspectors with the Department of Education and Skills.

Further Studies

Graduates have gone on to pursue masters qualifications in speech and language therapy; primary school teaching; play therapy; Montessori education; applied behaviour analysis; child, family and youth studies; 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 (Level 7 & 8)
Semester 1
Academic Writing and Enquiry in Higher Education
Introduction to Sociology
Creative Arts Practice in Early Childhood
Introduction to Psychology
Early Childhood Education and Practice
Semester 2
Play-based Pedagogy
Introduction to Children's Social Policy
Children's health, care and wellbeing
Child Development
Supervised Professional Practice 1

YEAR 2 (Level 7 & 8)
Semester 3
Supervised Professional Practice 2
Semester 4
Language and Multilingualism in Early Childhood Practice
Diversity and Inclusion
School Age Childcare Practice
Creative Arts Practice for School Aged Children
The Psychology and Sociology of Children & Childhoods

YEAR 3 (Level 7 & 8)
Semester 5
Critical Perspectives on Children's Health and Wellbeing
Regulation and Inspection in Early Childhood Education
STEM Curriculum for Early Childhood and Afterschool Education
Law for Early Childhood Practice
Advanced Pedagogical Practices
Educational Needs
Semester 6
Supervised Professional Practice 3

GRADUATE FEEDBACK

Helena O'Brien
Early Childhood Eduction and Care Graduate
Senior Behaviour Support Specialist and Board Certified Behaviour Analyst Lecturer, Institute of Technology Carlow

I loved the mix of theory and the practical side of work experience. 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. This has allowed me to reflect on my strengths and lay the foundations and ethical ethos of my practice.

YEAR 4 (Level 8)

Semester 7

Leadership in Early Childhood Education

Supervision and Mentorship

Emerging Issues in Early Childhood Education: Theory and Practice

Supporting Families & Communities

Semester 8

Research Methods and Project
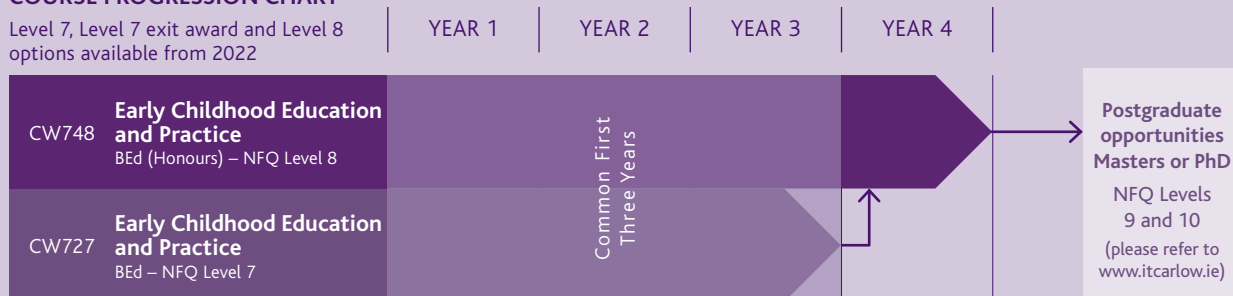
Alternatives in Professional Practice

SPECIAL FEATURES

• Professional work placement is an integral part of the course, supported by preparation and on-going workshops.

• The Department of Education and Skills has determined that our degree programme meets the requirements of their "*Professional Award Criteria and Guidelines for Initial Professional Education Degree Programmes for the Early Learning and Care (ELC) Sector in Ireland.*"

COURSE PROGRESSION CHART

Level 7, Level 7 exit award and Level 8 options available from 2022

		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW748	**Early Childhood Education and Practice** BEd (Honours) – NFQ Level 8		Common First Three Years			**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW727	**Early Childhood Education and Practice** BEd – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW748** and **www.itcarlow.ie/CW727**

Professional Social Care Practice

Bachelor of Arts (Honours) or Bachelor of Arts

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW758 NFQ LEVEL 8	30	**4 YEARS**	**YES**	**Eileen Farrell**, Dip App Soc Studies/Care, BSocSc, MSocSc, NQSW, PGDip T&L **E:** eileen.farrell@itcarlow.ie
CW717 NFQ LEVEL 7	30	**3 YEARS**	**YES**	**Vicki Anderson** BA (Hons), MA **E:** vicky.anderson@itcarlow.ie

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.

Course Structure

Institute of Technology Carlow's strong links to practice facilitates students in professional practice placements throughout the course, further developing their professional skills 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.

Is this course for you?

If you are interested in advocacy, human rights, social justice and want to understand more about the factors influencing human behaviour and therapeutic interventions with at risk groups and communities, then Professional Social Care Practice might be the course for you!

Career Opportunities

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
• Community-based services.

Exit Award

• Higher Certificate in Arts in Applied Social Studies (NFQ Level 6) after Year 2.

• Bachelor of Arts in Professional Social Care Practice (NFQ Level 7) after Year 3.

Further Studies

Graduates can complete postgraduate studies to masters or doctoral level within the social care or associated social science field.

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.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Introduction to Sociology for Social Care Practice
Introduction to Psychology
Health and Safety in Social Care Practice
Professional Social Care Theory and Practice
Communications, Research and Study Skills
Semester 2
Introduction to Social Policy for Social Care Practice
Safeguarding Children and Vulnerable Persons
Lifespan Development and Individual Difference
Professional Social Care Practice Contexts Models and Legal System
Creative Skills 1

YEAR 2 (Level 7 & 8)
Semester 3
Supervised Professional Practice 1
Semester 4
Disability and Positive Ageing
Health and Wellbeing in Social Care Practice
Community-based Social Care Services
Psychology of Social Cognition
Legal Studies 1
Sociological Perspectives on Contemporary Social Care Policy and Practice

YEAR 3 (Level 7 & 8)
Semester 5
Creative Skills 2
Children and Families
Alternative to Home Care
Psychology of Mental Health and Neurodiversity
Legal Studies 2
Social Research Studies
Semester 6
Supervised Professional Practice 2

YEAR 4 (Level 8)
Semester 7
Global Issues for Social Care Practice
Advanced Social Care Practice 1
Contemporary Approaches to Leadership and Change Management
Ethics and Human Rights
Psychology and Positive Change
Semester 8
Connecting Social Care Practice to a Globalized World
Advanced Social Care Practice 2
Leading Self and Others
Psychology, Adjustment and Alternative Views
Research Methods and Dissertation in Social Care Practice

SPECIAL FEATURES

• 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 Institute of Technology 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

CW758 — **Professional Social Care Practice** — BA (Honours) – NFQ Level 8

CW717 — **Professional Social Care Practice** — BA – NFQ Level 7

Common First Three Years

Postgraduate opportunities Masters or PhD
NFQ Levels 9 and 10
(please refer to www.itcarlow.ie)
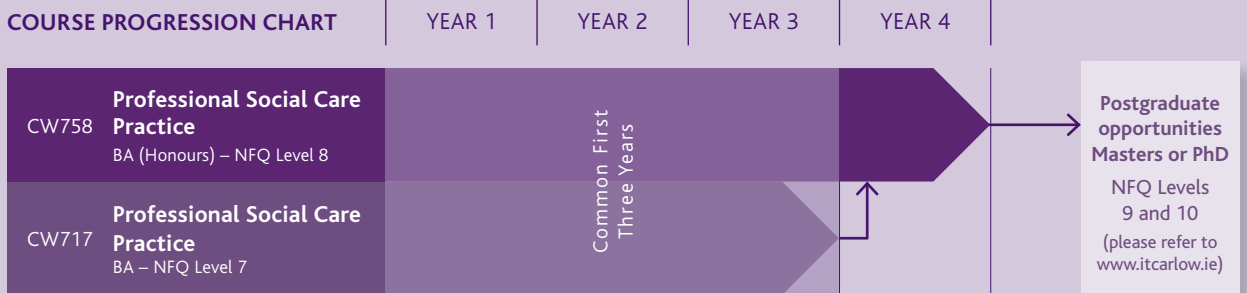
FOR FURTHER INFORMATION: **www.itcarlow.ie/CW758** and **www.itcarlow.ie/CW717**

WEXFORD CAMPUS

> " *You make real friends for life*".

Katherine O'Rourke
Business Graduate, Wexford

Visit **itcarlow.ie** to see
our full story videos.

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WEXFORD CAMPUS
INSTITUTE OF TECHNOLOGY CARLOW

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 School 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) – see NFQ on page 168. Full-time honours and ordinary degree courses are offered in Business, Digital Marketing, Tourism and Event Management, Art, Applied Social Studies, Early Childhood Education and Practice, Visual Communications and Design, and Sustainable Farm Management and Agribusiness.

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 the following areas: International Financial Services, Supply Chain Management, Leadership in Early Years, Digital Media and Business Analytics, Applied Humanities, Visual Communications and Design, Fisheries and Aquaculture, Business and Early Childhood Education and Practice.

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 Campus, 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

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 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.

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I Graduated! #ITCarlow

Sustainable Farm Management and Agribusiness

Bachelor of Science (Honours) or Bachelor of Science

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW078 NFQ LEVEL 8	20	4 YEARS	YES	**Dr Stephen Whelan** BAgrSc (Hons), PhD E: stephen.whelan@itcarlow.ie
CW027 NFQ LEVEL 7	20	3 YEARS	YES	

What is Sustainable Farm Management and Agribusiness?

Agribusiness is one of Ireland's most important indigenous industries and continues to evolve to be more sustainable in the production of clean, safe food 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.

Course Structure

The Bachelor of Science (Hons) in Sustainable Farm Management and Agribusiness is run over four years, during which time students will learn in the classroom, the laboratory and in the field. Modules for 'Young Trained Farmer' status are delivered in the first two years while professional work placement takes place in Year 3.

Is this course for you?

If you are interested in the science that drives food production from 'farm to fork', then the BSc in Sustainable Farm Management and Agribusiness will help you cultivate these interests so that you can reap the rewards of the agri-food industry.

Career Opportunities

The course equips students with both practical and academic skills that can be applied in the agricultural industry, from managing a farm to managing customers and clients in agribusinesses.

Potential employment areas include:
- Private or State Farm Advisory services
- Agribusiness Graduate Programmes
- Farm Management.

Exit Awards

- Higher Certificate in Sustainable Farm Management and Agribusiness (NFQ Level 6) after Year 2.
- Bachelor of Science in Sustainable Farm Management and Agribusiness (NFQ Level 7) after Year 3.

Further Studies

There are also opportunities for further studies in a range of master's and PhD positions in agricultural research being undertaken at Institute of Technology Carlow in conjunction with our research partners.

What subjects will I study?

YEAR 1 (LEVEL 7 & 8)
Semester 1
Applied Physics and Chemistry
Basic Mathematics
Principals of Crop Production
Farm Health and Safety
Academic and Personal Skills Development
Semester 2
Agribusiness Management
Animal and Plant Biology
Ruminant Animal Production
Introduction to ICT for Agriculture
Farm Mechanisation and Regulations

YEAR 2 (LEVEL 7 & 8)
Semester 3
Farm Financial Accounting
Agricultural Microbiology
Concepts in Soil Science
Genetics and Breeding
Applied ICT in Agriculture
Semester 4
Animal Nutrition
Agricultural Marketing 1
Sustainable Cropping Systems
Agri-Economics: Micro
Concepts in Sustainable Agriculture

YEAR 3 (LEVEL 7 & 8)
Semester 5
Applied Soil Science
Agricultural Marketing 2
Farm Buildings and Regulations
Agri-Economics: Macro
Research Skills
Alternative Food Systems
Semester 6
Work Placement: Preparation and Practice

YEAR 4 (LEVEL 8)
Semester 7
Farm Business and Agrifood Law
Farm Animal Health and Welfare
Crop Protection Science
Agribusiness- Strategic Management: Analysis
Rural Entrepreneurship
Semester 8
Dissertation
Advanced Agronomy
Environmentally Sustainable Food Systems
Agribusiness- Strategic Management: Advantage
Electives
Animal Product Quality
Arable Fodder Crops

STUDENT FEEDBACK

Philip Hendy
Third Year, Sustainable Farm Management and Agribusiness student

I chose Wexford Campus as a place to study because of the new agricultural course which offered a combination of both science and business subjects which I think are both equ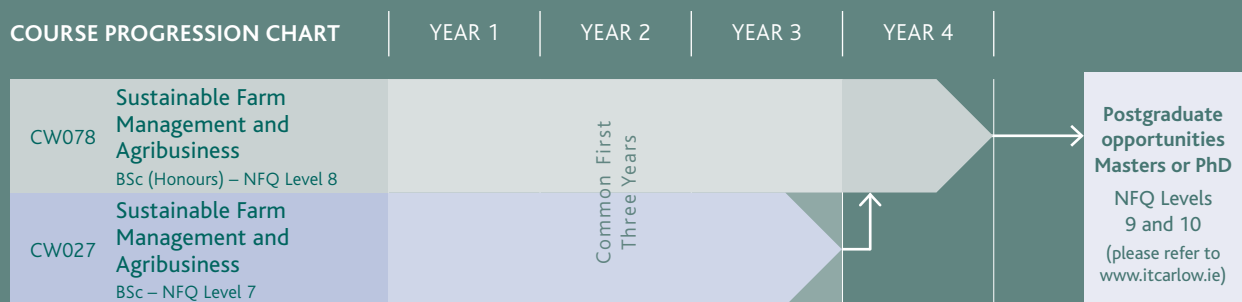ally important in the agribusiness sector. I think the best thing about studying at Wexford Campus is the smaller class size which means that you can get to know everyone in your class very well and it feels almost like having another family.
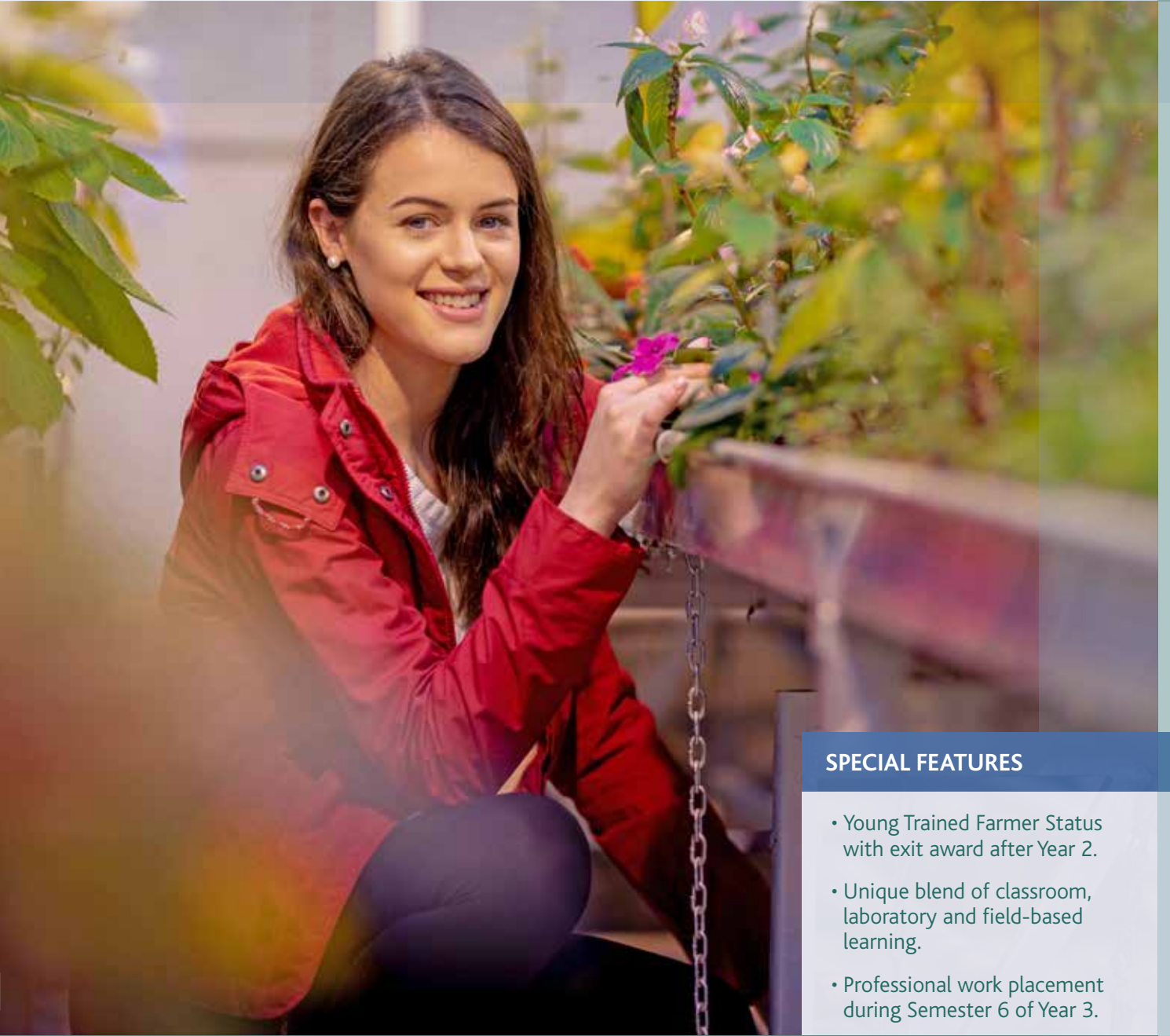
SPECIAL FEATURES

- Young Trained Farmer Status with exit award after Year 2.

- Unique blend of classroom, laboratory and field-based learning.

- Professional work placement during Semester 6 of Year 3.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW078	Sustainable Farm Management and Agribusiness BSc (Honours) – NFQ Level 8		Common First Three Years			Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW027	Sustainable Farm Management and Agribusiness BSc – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW078** and **www.itcarlow.ie/CW027**

Early Childhood Education and Practice

Bachelor of Education (Honours) or Bachelor of Education

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW028 NFQ LEVEL 8	30	4 YEARS	YES	**Lillian Byrne**, BA (Hons) Applied Social Studies (Social Care), MA Social Studies, MA Teaching and Learning, PhD E: lillian.byrne@itcarlow.ie
CW097 NFQ LEVEL 7	30	3 YEARS	YES	

What is Early Childhood Education and Practice?

Early childhood education or early learning and care, is a very rewarding profession that supports the development of young children from infancy and throughout the childhood years. Direct practice involves working with children by tailoring learning experiences to children's individual needs. Supporting parents in their parenting role is also an essential part of the job. Indirect practice involves managing services, educating students, professional representation, governance and national policy development. Such wide ranging career opportunities ensures early childhood education is a rewarding and diverse profession.

Course Structure

This course is a four-year programme, which equips graduates with the theoretical, policy, legal and practical knowledge required to work in early years services. Learning is through experiential and self-directed learning activities, as well as through group work and presentations. The final year research project is supervised by an experienced research team. Placement opportunities in each year of study supports learners to become competent early childhood educators.

Is this course for you?

If you are interested in supporting children to become curious and confident people, or interested in supporting parents raising their children, then Early Childhood Education and Practice could be the course for you.

Career Opportunities

- Direct practice work in early learning and care or school aged child care services
- Room leader or management positions in early years services
- Positions in county childcare committees, representative organisations, and early years governance bodies.

Exit Awards

- Level 6 Minor Award, Certificate in Education in Introduction to Early Childhood Studies after Year 1.
- Level 6 Major Award, Certificate in Education in Early Childhood Education and Practice after Year 2.
- Level 7 Major Award, B. (Ed). in Education in Early Childhood Education and Practice after Year 3.

Further Studies

Graduates will be eligible to progress to postgraduate study at either masters or doctoral level.

For example, graduates can progress to the Masters in Leadership in Early Years Education at Institute of Technology Carlow.

What subjects will I study?

YEAR 1 (LEVEL 7 & 8)
Semester 1
Academic Writing and Enquiry in Higher Education
Introduction to Sociology
Creative Arts Practice in Early Childhood
Introduction to Psychology
Early Childhood Education Practice
Semester 2
Play-based Pedagogy
Introduction to Children's Social Policy
Children's Health, Care, and Wellbeing
Child Development
Supervised Professional Practice 1

YEAR 2 (LEVEL 7 & 8)
Semester 3
Supervised Professional Practice 2
Semester 4
Language and Multilingualism in Early Childhood Practice
Diversity and Inclusion
School Age Childcare Practice
Creative Arts Practice for School Aged Children
Psychology and Sociology of Children and Childhoods

YEAR 3 (LEVEL 7 & 8)
Semester 5
Critical Perspectives on Children's Health, Care, and Wellbeing
Regulation and Inspection in Early Childhood Education
STEM Curriculum for Early Childhood and Afterschool Education
Law for Early Childhood Practice
Advanced Pedagogical Practices
Educational Needs
Semester 6
Supervised Professional Practice 3

YEAR 4 (LEVEL 8)
Semester 7
Leadership in Early Childhood Education
Supervision and Mentorship
Emerging issues in Early Childhood Education: Theory and Practice
Supporting Families and Communities
Semester 8
Research Methods and Project
Alternatives in Professional Practice

GRADUATE FEEDBACK

Jaime Somers
ECEC Graduate 2016
Assistant Primary School Principal, Kilnamanagh CNS

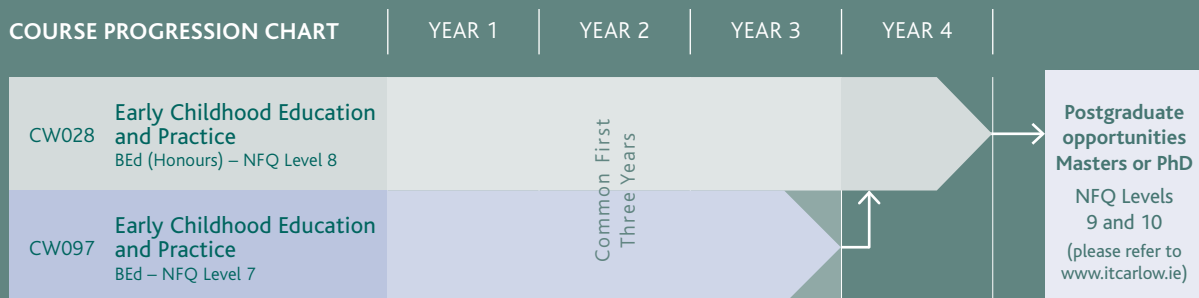I would definitely recommend studying ECEP at IT Carlow's Wexford Campus to anyone who would like to work with children. The Wexford Campus is a great place to study, lecturers are so invested in students learning and they go the extra mile to get students to where they need to be.

SPECIAL FEATURES

- The Department of Education and Skills has determined that our degree programme meets the requirements of their "*Professional Award Criteria and Guidelines for Initial Professional Education Degree Programmes for the Early Learning and Care (ELC) Sector in Ireland*."

- Placement in a variety of early years services.

- Modules related to play-based learning, arts and STEM, regulation and inspection, working with families, and leading quality services.

- Emphasis on the emergent curriculum and creative and play-based learning for children.

- Flipped classroom learning experiences.

- Research-rich teaching environment.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW028	Early Childhood Education and Practice BEd (Honours) – NFQ Level 8	Common First Three Years				Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW097	Early Childhood Education and Practice BEd – NFQ Level 7	Common First Three Years				

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW028** and **www.itcarlow.ie/CW097**

Applied Social Studies in Professional Social Care

Bachelor of Arts (Honours)

CW068

NFQ LEVEL 8

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
30	**4 YEARS**	**YES**	**Susan Barnes** BA (Hons), MA E: susan.barnes@itcarlow.ie

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.

Course Structure

The course engages a range of teaching strategies, including 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.

Is this course for you?

If you are interested in working with people, civil and social rights, addressing inequalities, and enjoy seeing others reach their full potential, then social care may be the profession for you.

Career Opportunities

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.

Exit Awards

- Higher Certificate in Applied Social Studies in Professional Social Care (NFQ Level 6) after Year 2.
- Bachelor of Arts in Applied Social Studies in Professional Social Care (NFQ Level 7) after Year 3.

Further Studies

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
Semester 1
Professional Social Care Theory and Practice
Introduction to Sociology for Social Care Practice
Creative Skills 1
Communications, Research and Study Skills
Introduction to Psychology

Semester 2
Professional Social Care Practice: Contexts, Models and Legal System
Introduction to Social Policy for Social Care Practice
Lifespan Development and Individual Difference
Safeguarding Children and Vulnerable Persons
Health and Safety in Social Care Practice

YEAR 2
Semester 3
Supervised Professional Practice 1

Semester 4
Community Based Social Care Services
Health and Wellbeing in Social Care Practice
Psychology of Social Cognition
Sociological Perspectives on Contemporary Social Care Policy and Practice
Disability and Positive Ageing
Legal Studies 1

YEAR 3
Semester 5
Children and Families
Legal Studies 2
Psychology of Mental Health and Neurodiversity
Social Research
Creative Skills 2
Alternative to Home Care

Semester 6
Supervised Professional Practice 2

YEAR 4
Semester 7
Contemporary Approaches to Leadership and Change Management
Psychology and Positive Change
Advanced Social Care Practice 1
Global Issues for Social Care Practice
Ethics and Human Rights

Semester 8
Leading Self and Others
Psychology, Adjustment and Alternative Views
Advanced Social Care Practice 2
Connecting Social Care Practice to a Globalized World
Social Research Methods and Dissertation in Social Care Practice

GRADUATE FEEDBACK

Tara Boland
Applied Social Studies in Professional Social Care Graduate 2019

Social Care students are supported, moulded and shaped into fully-fledged social care professionals through endless support from the lecturers. As a result of this, I gained confidence in myself and my practice, and was able to secure full-time employment.

Wexford Campus is a friendly place where learning is made easy. As a student, I felt happy, supported and confident. Going forward, I would certainly recommend this course to anybody who wishes to pursue a career in social care.

SPECIAL FEATURES

- A variety of teaching, learning and assessment methodologies are used, such as discussions, group projects, placements, facilitations, 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	Postgraduate opportunities Masters or PhD
CW068 Applied Social Studies in Professional Social Care BA (Honours) – NFQ Level 8					NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW068**

10,657 Learners

820 Staff

3 Campuses

Bachelor of Business

Bachelor of Business (Honours) or Bachelor of Business

Common Entry (CEY)

SPECIALIST AREAS:

Business (BUS)   **Digital Marketing** (DMK)

What is a Common Entry course?

A Common Entry course is a popular choice for students who have an interest in a discipline but are unsure of what career path they would like to follow. Common Entry courses allow students to study a broad range of subjects initially and then choose their preferred specialist area after 1-2 years. The advantage of this course type is that it allows students more time to discover what subjects they are most interested in.

Course Structure

Our Bachelor of Business (Hons) and Bachelor of Business courses equip students with a broad business skill-base, ensuring graduates will have a wide range of career options.

The first two years of this course provide students with a foundation in business and subjects are common for all students. 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.

After two years, students separate into one of the two streams of study. Those who have previously selected a specialty may also change their option at this stage.

CAO Application Procedure

CAO applicants who choose our Level 7 or Level 8 Bachelor of Business will be required to choose one of the following course options when completing their CAO application.

The options are:

Honours / Level 8	PAGE
CW018 CEY - Common Entry	
CW018 BUS - Business *	136
CW018 DMK - Digital Marketing *	138
Ordinary / Level 7	
CW037 CEY - Common Entry	
CW037 BUS - Business *	136
CW037 DMK - Digital Marketing *	138

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 time.
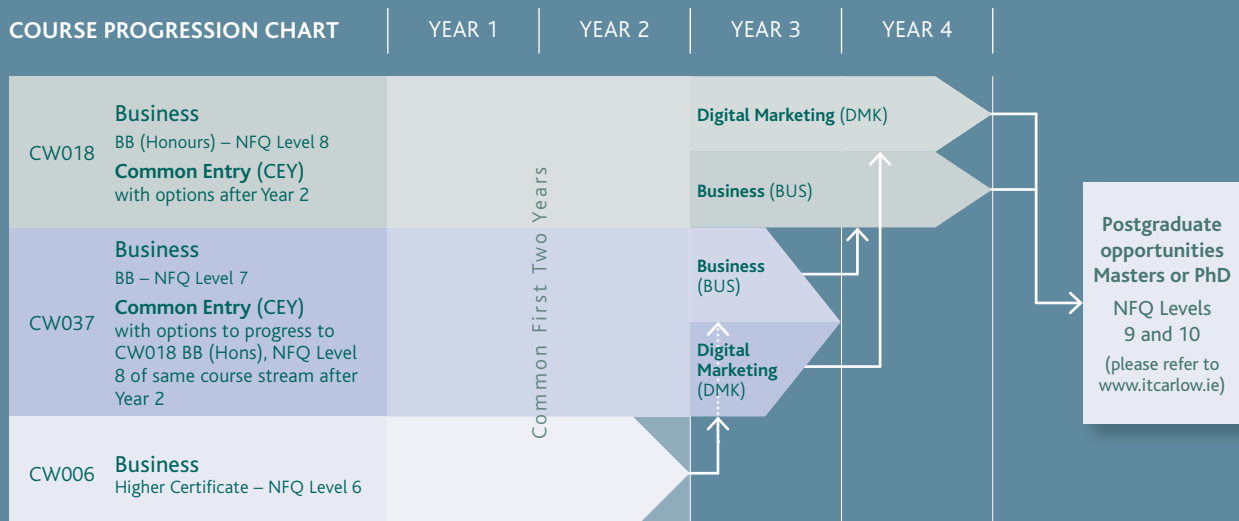
COURSE PROGRESSION CHART | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4

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

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

CW006 — **Business** Higher Certificate – NFQ Level 6

Common First Two Years

Digital Marketing (DMK)

Business (BUS)

Business (BUS)

Digital Marketing (DMK)

Postgraduate opportunities Masters or PhD

NFQ Levels 9 and 10

(please refer to www.itcarlow.ie)

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW018**

Business

Bachelor of Business (Honours) or Bachelor of Business

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
15	4 YEARS	YES	**Ailish O' Brien** BComm (Hons), HDE, MBA E: ailish.obrien@itcarlow.ie
15	3 YEARS	YES	

What is Business?

Business touches on almost every aspect of modern human society and careers in business are diverse. This degree course provides the foundation in the first two years, from which students explore areas of interest in more depth in the final two years. The course equips students with the knowledge and skills needed in a dynamic business environment.

Course Structure

The course is structured around gaining a deep understanding of four key pillars - management, finance and economics, business technology and marketing - with opportunities to focus on elective areas of interest. The course aims to enhance the graduate's ability to work effectively as part of a team and to take responsibility for their work in a dynamic business environment.

Is this course for you?

If you are interested in the world of business and enterprise, our course of applied research projects, combining creativity, innovation and strategic thinking will appeal to you. If you enjoy learning about the strength of multinationals, start-up success stories, and everything in between, from a local, Irish and global perspective, then this may be the course for you.

Career Opportunities

The course aims to produce graduates who can undertake roles in the areas of:

• Management
• Marketing (including Digital Marketing/Analytics)
• Financial Management
• Fund Administration
• Education
• Enterprise Development
• Financial Services.

Exit Awards

• Higher Certificate in Business (NFQ Level 6) after Year 2.
• Bachelor of Business (NFQ Level 7) after Year 3.

Further Studies

Graduates of the course can pursue a range of Level 9 masters programmes at a range of Irish and international third-level colleges and universities. Some of the postgraduate programmes students pursue include post-primary teaching, information technology and digital marketing. Alternatively, students can undertake professional qualifications such as accountancy.

What subjects will I study?

YEAR 1 (Level 6, 7 & 8)
Semester 1
Academic and Professional Skills
Digital Skills
Statistics & Forecasting
Micro Economics
Introduction to Management
Semester 2
Customer Service in Practice
Investment Maths
Macro Economics
Managing an Enterprise
Fundamentals of Financial Accounting

YEAR 2 (Level 6, 7 & 8)
Semester 3
Business Law
Cost Accounting
Introduction to Marketing
Plus Two Electives
    Managerial Economics
    HRM Skills
    Financial Reporting
Semester 4
Digital Applications
Management Accounting
Marketing Mix
Plus Two Electives
    Economic Policy
    People Management
    Computerised Accounting

YEAR 3 (BUS) (Level 7 & 8)
Semester 5
Marketing Management
Financial Management
Digital Marketing
Business Research Methods
Plus One Elective
    Commercial Law
    Fund Accounting
    Global Economics & The Circular Economy
Semester 6
Placement Preparation and Practice

YEAR 4 (BUS) (Level 8)
Semester 7
Business Dissertation
Operations Management
Strategic Management: Analysis
Entrepreneurship
Plus One Elective
    Services Marketing
    Derivatives & the Regulatory Environment
    International Business
    Global Economics
Semester 8
Business Dissertation
Data Analytics
Strategic Management: Advantage
Corporate Finance

GRADUATE FEEDBACK

Roisin Sheil
Business Graduate
PwC

The Bachelor of Business degree at Wexford Campus really helped me on my career path to accountancy. There is a wide variety of subjects on offe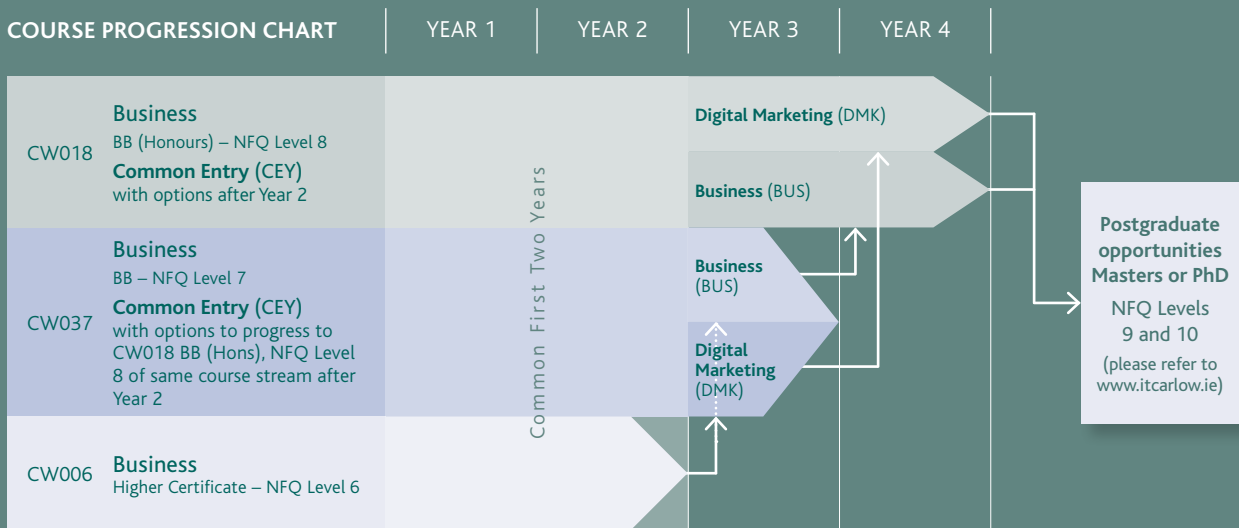r throughout the course, and each subject that I studied has helped me in some way in my new role. As PwC is a company that relies on technology, the emphasis placed on IT in the course is very beneficial to me now.

SPECIAL FEATURES

- Three-month professional work placement in Year 3 provides students with applied skills and networking opportunities.

- Interdisciplinary project in Year 4 integrates professional work placement experience with skills developed during the course.

- Application of Information Technology and Digital skills to complex business decisions.

- Electives in fund accounting are relevant for careers in financial services and fund administration.

- Exemptions available for accountancy bodies.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4

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

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

CW006
Business
Higher Certificate – NFQ Level 6

Common First Two Years

Digital Marketing (DMK)

Business (BUS)

Business (BUS)

Digital Marketing (DMK)

Postgraduate opportunities Masters or PhD

NFQ Levels 9 and 10

(please refer to www.itcarlow.ie)

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW018** and **www.itcarlow.ie/CW037**

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Business with Digital Marketing

Bachelor of Business (Honours) or Bachelor of Business

	PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
CW018 DMK **NFQ LEVEL 8**	15	**4 YEARS**	**YES**	**Owen Brady** BSc (Hons), MSc, MBA E: owen.brady@itcarlow.ie
CW037 DMK **NFQ LEVEL 7**	15	**3 YEARS**	**YES**	

What is Digital Marketing?

The discipline of marketing is going through deep changes because of technology disruption. Organisations are adapting across the marketing lifecycle, in product conception to development; in advertising to selling and aftersales.

This change has borne new roles and areas of expertise collectively known as 'Digital Marketing'.

The Business with Digital Marketing course was developed to meet employment demand for business graduates with a specialism in this area.

Course Structure

The first two years of this course provide students with a foundation in business, and subjects are common for all students studying our business degree.

In Years 3 and 4, along with regular business subjects, you will study digital design and web technologies. You will also undertake work placement in a digital marketing environment.

Is this course for you?

If you are interested in how organisations and individuals are evolving to take advantage of the opportunities that come with increased digital connectivity, this course will interest you.

The design and technology modules in this course will allow you to create a presence on social media and the web that attracts and gives value to users and customers.

Career Opportunities

Graduates of this course are suited to all areas of business and management that apply to graduates of our standard business degree.

In addition, graduates with the digital marketing specialism have career opportunities in digital marketing, social media marketing, digital product management, online selling, online customer experience (CX), user experience (UX), digital advertising, search advertising and search engine optimisation.

Exit Awards

- Higher Certificate in Business (NFQ Level 6) after Year 2.
- Bachelor of Business with Digital Marketing (NFQ Level 7) after Year 3.

Further Studies

Graduates can pursue postgraduate studies to masters or doctoral level in business or marketing areas. There are a range of further study options at Institute of Technology Carlow and at other institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Academic and Professional Skills
Digital Skills
Statistics & Forecasting
Micro Economics
Introduction to Management
Semester 2
Customer Service in Practice
Investment Maths
Macro Economics
Managing an Enterprise
Fundamentals of Financial Accounting

YEAR 2 (Level 7 & 8)
Semester 3
Business Law
Cost Accounting
Introduction to Marketing
Plus Two Electives
   Managerial Economics
   HRM Skills
   Financial Reporting
Semester 4
Digital Applications
Management Accounting
Marketing Mix
Plus Two Electives
   Economic Policy
   People Management
   Computerised Accounting

YEAR 3 (DMK) (Level 7 & 8)
Semester 5
Digital Marketing
Marketing Management
Digital Media Design
Business Research Methods
Operations Management
Semester 6
Work Placement

YEAR 4 (DMK) (Level 8)
Semester 7
Digital Marketing Research Project
User Interface and Experience Design
Strategic Management: Analysis
Entrepreneurship
Plus One Elective
   Services Marketing
   International Business
   Financial Management
Semester 8
Digital Marketing Research Project
Data Analytics
Strategic Management: Advantage
Web Design Methods

GRADUATE FEEDBACK

Patricia O'Farrell
Business with Digital Marketing Graduate
BNY Mellon

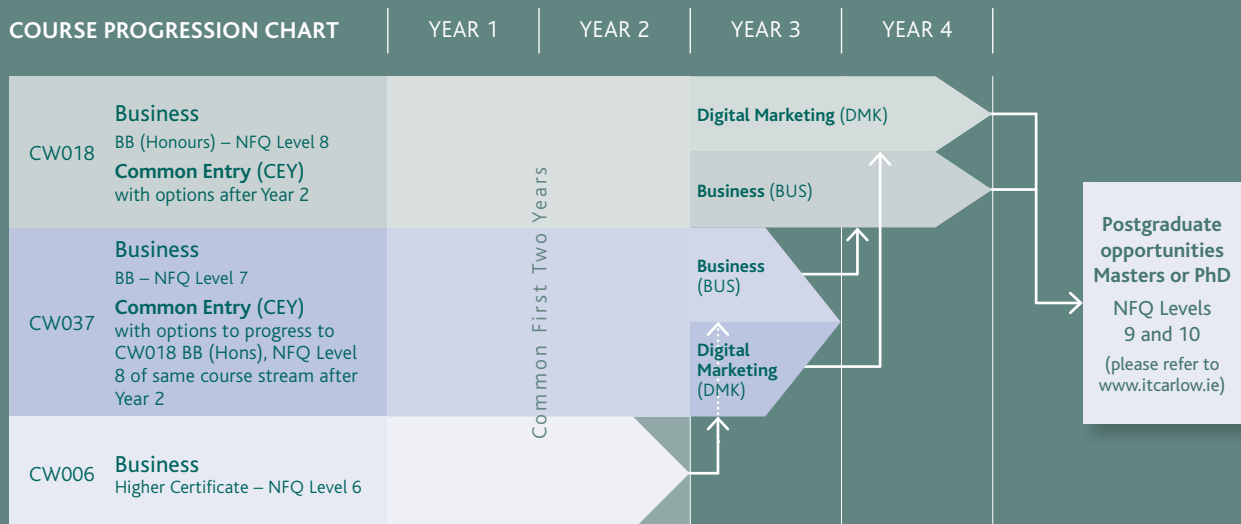My time at Wexford Campus was a great experience. The business degree gave me a broad understanding of the industry, giving me greater employment opportunities, especially in the area of digital marketing.

SPECIAL FEATURES

- Students undertake a 12 – 20 week work placement in a digital marketing role in Year 3. This placement gives students valuable experience in best practice approaches and improves their employability.

- Design subjects are informed by and delivered in partnership with our Visual Communications and Design faculty.

- Students will produce course work that can be added to a portfolio to showcase technical and design skills.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW018	**Business** BB (Honours) – NFQ Level 8 **Common Entry (CEY)** with options after Year 2	Common First Two Years		**Digital Marketing** (DMK) **Business** (BUS)		Postgraduate opportunities Masters or PhD NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW037	**Business** BB – NFQ Level 7 **Common Entry (CEY)** with options to progress to CW018 BB (Hons), NFQ Level 8 of same course stream after Year 2			**Business** (BUS) **Digital Marketing** (DMK)		
CW006	**Business** Higher Certificate – NFQ Level 6					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW018** and **www.itcarlow.ie/CW037**

Business

Higher Certificate

PLACES	DURATION	PROGRAMME DIRECTOR
10	2 YEARS	**Ailish O' Brien** BComm (Hons), HDE, MBA E: ailish.obrien@itcarlow.ie

What is Business?

This course prepares graduates for a career in the broad business field. Students develop skills in the core areas of business including: management, marketing, economics, information technology and law. The applied nature of the course is designed to provide you with the skills needed to succeed in your chosen area of business.

Course Structure

The course equips students with the skills and knowledge to work in a dynamic business environment. Electives are offered in both semesters in Year 2, providing students with an opportunity to focus on specific areas of interest. There is a strong emphasis on Information Technology and Digital Media development throughout the course.

Is this course for you?

If you are interested in how business works and enjoy keeping up-to-date with current business practices, then Business might be the course for you. If you enjoy working as part of team to solve real-world issues, this course may be for you.

Career Opportunities

Graduates of the course are qualified to work in roles such as:

- Customer service
- Financial services
- Administrative role
- Marketing
- Insurance
- Junior management
- Accounts.

Further Studies

Graduates of the Level 6 Higher Certificate in Business are eligible to progress into Year 3 of the Level 7 Ordinary Degree, and then on to Year 4 of the Level 8 Honours Degree, specialising in either Business or Digital Marketing.

Graduates can also progress to the Bachelor of Business (Honours) course (CW908) at the Carlow campus and are eligible for entry to business-related degree courses in other colleges.

What subjects will I study?

YEAR 1 (Level 6, 7 & 8)

Semester 1
Academic and Professional Skills
Digital Skills
Statistics & Forecasting
Micro Economics
Introduction to Management

Semester 2
Customer Service in Practice
Investment Maths
Macro Economics
Managing an Enterprise
Fundamentals of Financial Accounting

YEAR 2 (Level 6, 7 & 8)

Semester 3
Business Law
Cost Accounting
Introduction to Marketing
Plus Two Electives
   Managerial Economics
   HRM Skills
   Financial Reporting

Semester 4
Digital Applications
Management Accounting
Marketing Mix
Plus Two Electives
   Economic Policy
   People Management
   Computerised Accounting

SPECIAL FEATURES

- Graduates of this course may choose from a wide range of business-related Level 7 and Level 8 courses at Wexford Campus and other third-level colleges.

- Focus on enhancement of information technology and digital skills.

- Emphasis on employability skills throughout the 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.

COURSE PROGRESSION CHART	YEAR 1	YEAR 2	YEAR 3	YEAR 4	

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

Common First Two Years

Digital Marketing (DMK)

Business (BUS)

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

Business (BUS)

Digital Marketing (DMK)

CW006 — **Business** Higher Certificate – NFQ Level 6

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

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW006**

Tourism and Event Management

Bachelor of Science (Honours) or Bachelor of Science

PLACES	DURATION	WORK PLACEMENT	PROGRAMME DIRECTOR
30	4 YEARS	YES	**Julie Mulligan** BBS (Hons), MBS **E:** julie.mulligan@itcarlow.ie
30	3 YEARS	YES	**Edmund Joyce** ACA, BSc, MA **E:** edmund.joyce@itcarlow.ie

What is Tourism and Event Management?

Tourism is one of Ireland's most important and growing economic sectors, supporting jobs on both national and international level. Festivals and events are critical for tourism growth as they specifically attract both domestic and overseas visitors to Ireland and contribute significantly to the economy every year. 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 industry.

Course Structure

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.

Is this course for you?

If you are interested in a career in an exciting and dynamic industry where your contribution can make a difference, then Tourism and Event Management may be the course for you.

Career Opportunities

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
- entrepreneur.

Exit Awards

- Higher Certificate in Business in Tourism and Event Operations (NFQ Level 6) after Year 2.
- Bachelor of Science in Tourism and Event Management (NFQ Level 7) after Year 3.

Further Studies

Graduates who achieve a minimum of a second class honours degree are eligible to apply to a range of masters and postgraduate courses within Institute of Technology Carlow, such as the MSc in Digital Marketing or Masters of Business or those available in other institutions.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Academic and Professional Skills
Digital Skills
Statistics and Forecasting
Principles of Event Management
Irish Natural Heritage & Landscape
Semester 2
Customer Service in Practice
Investment Maths
Introduction to Tourism
Event Management
Irish Cultural Heritage

YEAR 2 (Level 7 & 8)
Semester 3
Event Planning
Introduction to Marketing
Tourism Elements
Irish Folklore and Tradition
Digital Technologies
Semester 4
Event Sustainability
Event Operational Control
Marketing Mix
Irish Tour Guiding
Built Heritage Appreciation

YEAR 3 (Level 7 & 8)
Semester 5
International Tourism & Destination Management
Applied Research Skills
Financial Management
Law & Regulations for TEM
Plus One Elective
People Management
Contemporary Irish Literature
Semester 6
Placement Preparation and Practice
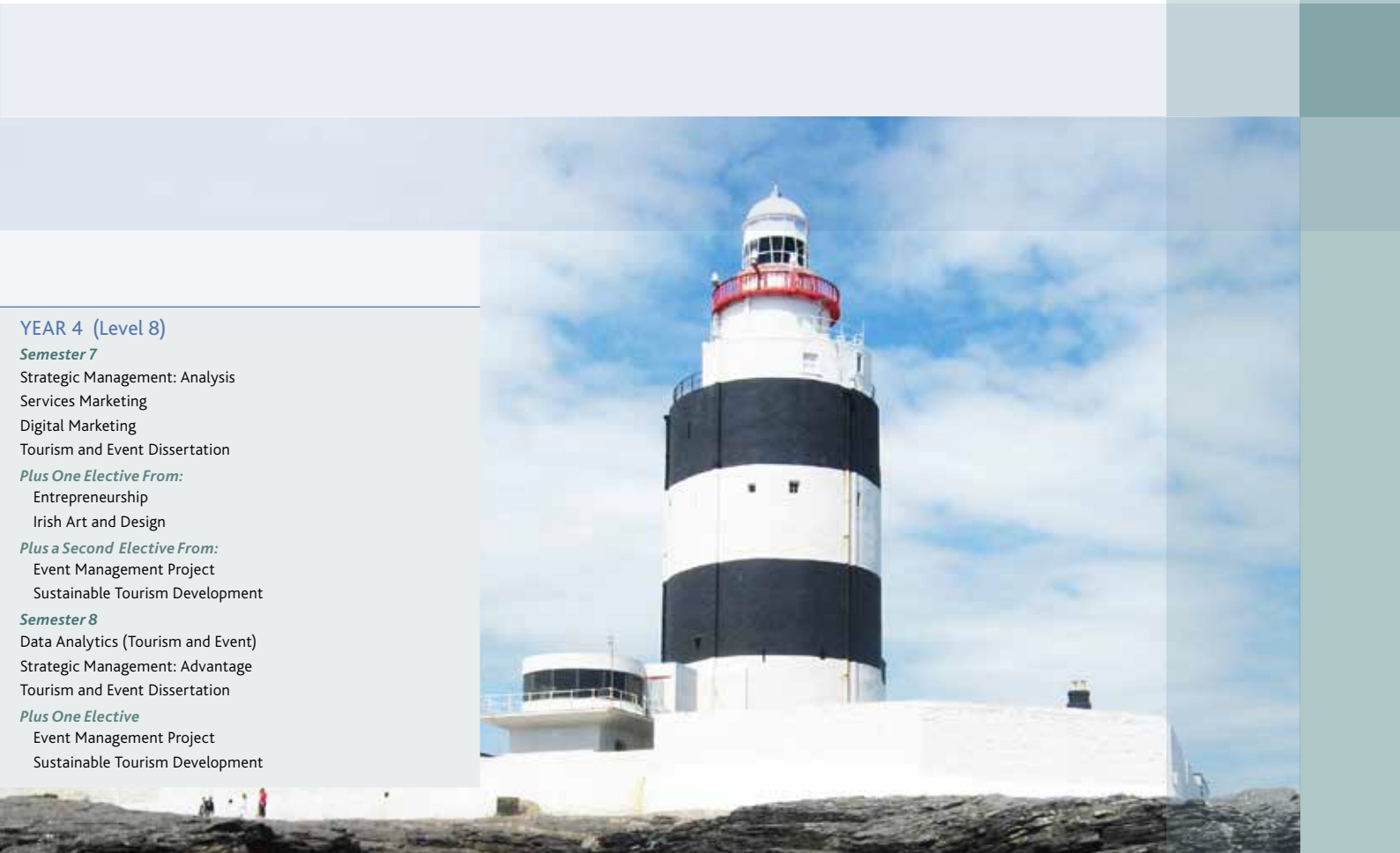
YEAR 4 (Level 8)

Semester 7
Strategic Management: Analysis
Services Marketing
Digital Marketing
Tourism and Event Dissertation

Plus One Elective From:
Entrepreneurship
Irish Art and Design

Plus a Second Elective From:
Event Management Project
Sustainable Tourism Development

Semester 8
Data Analytics (Tourism and Event)
Strategic Management: Advantage
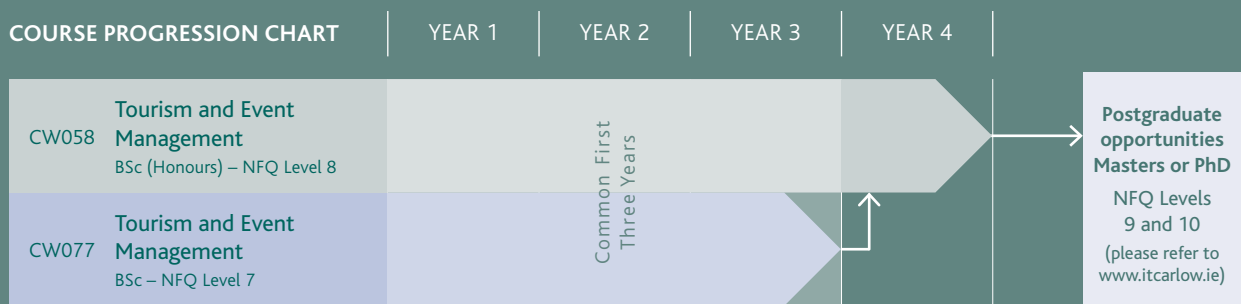Tourism and Event Dissertation

Plus One Elective
Event Management Project
Sustainable Tourism Development

SPECIAL FEATURES

• Practical skills gained 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 brings students in direct contact with key organisations in the Tourism and Event Management sectors.

• Digital and analytical skills acquired in key communication areas such as marketing, project management and research.

• Certificate in Regional Tour Guiding after Year 2.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW058	**Tourism and Event Management** BSc (Honours) – NFQ Level 8		Common First Three Years			**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW077	**Tourism and Event Management** BSc – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW058** and **www.itcarlow.ie/CW077**

Visual Communications and Design

Bachelor of Arts (Honours) or Bachelor of Arts

	PLACES	DURATION	PROGRAMME DIRECTOR
CW088 NFQ LEVEL 8	**20**	**4 YEARS**	**Patrick Morgan** BDes (Hons), MA **E:** patrick.morgan@itcarlow.ie
CW047 NFQ LEVEL 7	**20**	**3 YEARS**	**David O'Callaghan** BDes (Hons), MA **E:** david.ocallaghan@itcarlow.ie

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.

Course Structure

This 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; games; moving image video and animation.

Is this course for you?

If you are interested in what images, typefaces, packaging sell products; in what interface makes tasks more efficient; in what visual problem solving can achieve, then Visual Communications and Design could be the course for you.

Career Opportunities

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.

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.

Further Studies

Graduates can apply for entry on to the MSc in Digital Media with Business Analytics, or the MA in Interaction Design at Institute of Technology Carlow and other postgraduate courses.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Visual Studies Colour, Drawing, 3D
Visual Studies Skills Workshops
Visual Studies Notebook Research
Art and Design: Themes and Context
Semester 2
Visual Studies Themed Project
Digital Media Design
Photography & Video
Visual & Material Culture

YEAR 2 (Level 7 & 8)
Semester 3
Creative Studio 1
Design Print Production
Introduction to Marketing
Art and Design: Themes and Context
Semester 4
Creative Studio 1
Marketing Mix
Media and Communication
Web Design Methods

YEAR 3 (Level 7 & 8)
Semester 5
Creative Studio 2
User Interface and Experience Design
Marketing Management
Web Development
Semester 6
Creative Studio 2
Socially Engaged Practice
Information Design
Professional Design Practice

YEAR 4 (Level 8)
Semester 7
Creative Studio 3
Entrepreneurship
Digital Marketing
Semester 8
Creative Studio 3
Web Design

GRADUATE FEEDBACK

Rebecca New
Visual Communication and Design Graduate
Visual Marketing Executive, Real World Analytics

Our creativity was constantly challenged and there was no limitation to what we could do. The support from our lecturers encouraged us to think outside the box and really flourish. The course made me real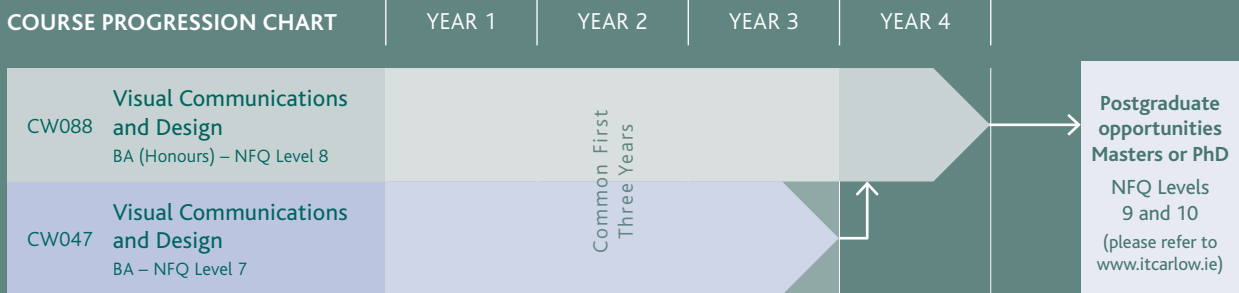ise exactly what I was meant to do. The range of subjects taught and the scope of the projects given has prepared me for almost any working environment. It gave me the confidence to work on multiple projects under pressure and helped me discover exactly what I wanted to do for the future.
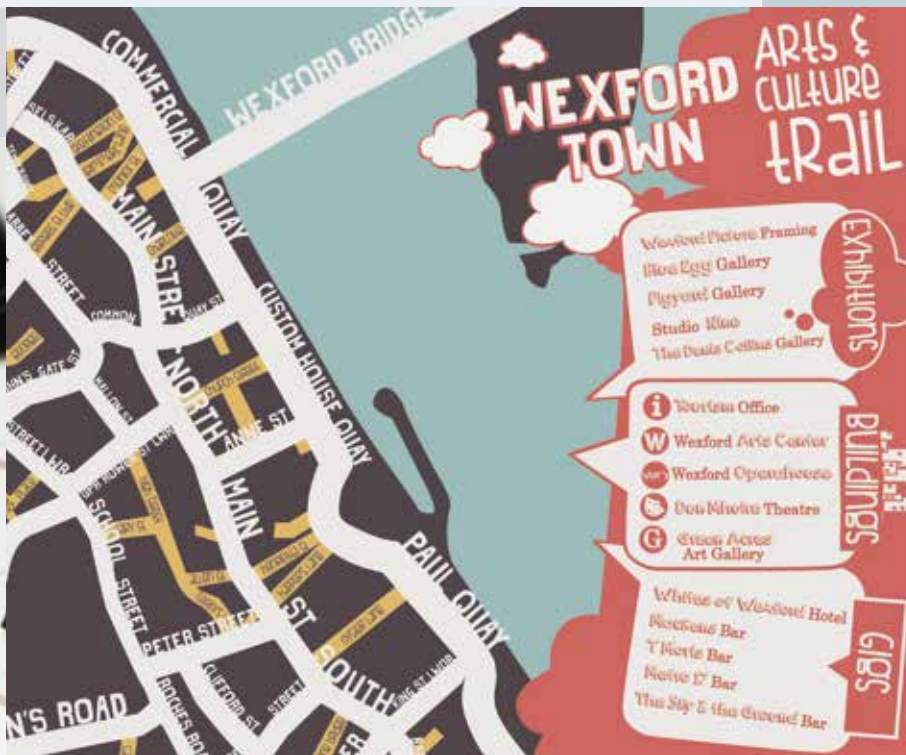
SPECIAL FEATURES

- 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.

- Students have the opportunity to take international field trips in Years 1 and 2.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW088	**Visual Communications and Design** BA (Honours) – NFQ Level 8	Common First Three Years				**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW047	**Visual Communications and Design** BA – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW088** and **www.itcarlow.ie/CW047**

Art

Bachelor of Arts (Honours) or Bachelor of Arts

PLACES	DURATION	PROGRAMME DIRECTOR
10	4 YEARS	**Dr Ciara Healy-Musson** BA(Hons), MPhil, PGEd, PhD E: ciara.healymusson@itcarlow.ie
15	3 YEARS	**Brian Garvey** ANCAD, BA, MA E: brian.garvey@itcarlow.ie

What is Art?

Art is a diverse range of activities involving imaginative and technical skill and includes the production of works of art, criticism of art, study of art history, and the aesthetic dissemination of art.

This dynamic and highly student-centred 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. A forum for exchanging diverse opinions and ideas is provided through group critique, field trips, and a visiting artists' programme.

Course Structure

Students learn creative skills, aesthetic awareness and professional practices in contemporary visual art. Subjects include painting, sculpture, digital media, photography and video, art and design history, as well as engagement with art and the moving image and material and visual culture. Students learn by working on creative projects in a studio context, in IT labs and traditional lectures and by engaging with the local community.

Is this course for you?

If you are interested in visual culture and enjoy learning-by-doing, experimenting, thinking creatively and imaginatively then this might be the course for you. You will engage in a variety of art-making methods and technologies that will equip you with the confidence and skills to operate professionally in the art world and the creative industries.

Career Opportunities

You will be able to commence your career as a professional artist, an artist's assistant or studio manager. You will also be qualified to work in related fields like film, photography, theatre, information technology, art handling, exhibition installation, community arts and arts administration. Your material and visual cultural training will enable you to become an art critic or writer.

Exit Award

- Bachelor of Arts in Art (NFQ Level 7) after Year 3.

Further Studies

You may pursue postgraduate studies at masters level in painting, sculpture, interdisciplinary arts practice, digital media or film studies. You may also pursue masters degrees in arts administration, conservation, curating, critical writing, community arts, art therapy or train to become an art teacher through a Masters of Art and Design Education.

What subjects will I study?

YEAR 1 (Level 7 & 8)
Semester 1
Visual Studies Colour, Drawing, 3D
Visual Studies Skills Workshops
Visual Studies Notebook Research
Art & Design: Themes & Contexts
Semester 2
Visual Studies Themed Project
Digital Media Design
Photography & Video
Visual & Material Culture

YEAR 2 (Level 7 & 8)
Semester 3
Video Editing
Art and The Moving Image
Plus One Elective
　Painting Practices
　Sculpture and Expanded Practices
Semester 4
Art & Design: Themes & Contexts
Professional Practice in the Arts
Plus One Elective
　Painting Practices
　Sculpture and Expanded Practices

YEAR 3 (Level 7 & 8)
Semester 5
Themes in Contemporary Art and Culture
Collaborative Exhibition Practices
Creative Entrepreneurship for Artists
Plus One Elective
　Painting Practices
　Sculpture and Expanded Practices
Semester 6
Visual Methodologies and Research Proposal
Socially Engaged Practice
Media Arts
Plus One Elective
　Painting Practices
　Sculpture and Expanded Practices

YEAR 4 (Level 8)
Semester 7
Dissertation
Plus One Elective
　Painting Practices
　Sculpture and Expanded Practices
Semester 8
Dissertation
Plus One Elective
　Painting Practices
　Sculpture and Expanded Practices

SPECIAL FEATURES

- A wide variety of studio disciplines including: painting; sculpture; digital media and photography.

- Students can choose to specialise in either painting practices or sculpture and expanded practice in Years 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 well-recognised 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.

COURSE PROGRESSION CHART		YEAR 1	YEAR 2	YEAR 3	YEAR 4	
CW038	**Art** BA (Honours) – NFQ Level 8		Common First Three Years			**Postgraduate opportunities Masters or PhD** NFQ Levels 9 and 10 (please refer to www.itcarlow.ie)
CW057	**Art** BA – NFQ Level 7					

FOR FURTHER INFORMATION: **www.itcarlow.ie/CW038** and **www.itcarlow.ie/CW057**

COVID-19

Institute of Technology Carlow is committed to providing active learning experiences on-campus, easy access to a broad range of learning materials, and student-focused supports designed to further strengthen our sense of community in a safe environment.

We have taken a number of additional measures to ensure your safety and wellbeing on campus during this year, in addition to providing continuing supports to you when off campus.

Health & Safety

✓ Mobile sink units throughout the campuses

✓ Additional hand gel sanitising stations throughout the campuses

✓ One-way systems in operation

✓ Perspex screens installed in offices

✓ Increased cleaning and disinfecting procedures in place

✓ Designated isolation room on each campus

Student Supports

✓ New Policy and Procedure for *At Risk* groups

✓ Protocol for student absenteeism due to Covid-19 diagnosis or requirement to restrict movements

✓ System for students to raise Covid-19 related concerns

✓ Enhanced peer-led transition programme for all first year students

✓ Easy to navigate contact app to support immediate answer to main student queries 24/7, 365.

Increased awareness

✓ Covid-19 videos for students and staff on Covid-19 prevention, hygiene and etiquette

✓ Self-Declaration Safety Form for all students and staff

✓ Covid-19 specific page on the Institute of Technology Carlow website with latest information for students

Up-to-date Information

For the most up to date information scan this QR code to bring you straight to the Return to Campus page on the Institute of Technology Carlow website: **www.itcarlow.ie/return-to-campus-2021**

SCAN ME

STUDENT SERVICES

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

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

Careers Service

Our multi-award winning Careers Service provides information and advice to students on course and careers, development of employability skills and graduate attributes, advice and guidance on employment and further learning opportunities. Student and graduate placement and recruitment is supported through our engagement with employers and graduate careers fairs.

Health Centre

The award winning Health Centre on the Carlow Campus provides medical services to students including full-time nursing services and surgeries from visiting GPs. Our full-time students on the Wexford campus benefit from an arrangement with a local GP practice.

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, students in the high risk groups of Covid-19 as defined by the HSE, and students with financial difficulties. Refer to page 165 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 ensure that students get the most out of college life and actively encourage students to get involved in Clubs and Societies, in becoming Class Representatives, along with providing exciting social, cultural, educational and recreational activities. Elected by the student body, the Students' Union executive represent students at various levels of the Institute, nationally and internationally and are also available to provide support to students during the year. The Students' Union area is welcoming and lively, perfect for students during breaks and after 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 first-class 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

The 2019/2020 academic year was a very successful one for the Institute's many sports athletes and teams. This success is not attributed to one club or athlete, but was achieved across a wide range of competitions and events. Some of the most notable sporting highs of 2019/20 included our hurling team making it to the Fitzgibbon Cup final, the men's Gaelic team securing a place in the Sigerson Cup final and the men's soccer team winning the CFAI Perpetual Cup.

2019/2020 Sports Achievements

Athletics
IUAA Indoor Intervarsity Championships 2020
Gold Medal - Men's 16kg WfD – *Thomas Bouchair*
Gold Medal - Men's 60m Hurdles – *Shane Aston*
Silver Medal - Women's 60m *Molly Scott*
Bronze Medal - Men's 1500m – *John Fitzsimmons*
Bronze Medal - Men's 4x200m Relay – *Shane Aston, David Murphy, Adam Murphy and Leon Chinaka*

Archery
ISAAA League Intermediate Recurve - Male, 3rd Place – *Kieran Keogh*
ISAAA League Intermediate Recurve - Male, Top 10 Placing – *Liam O'Brien*

Badminton
Student Sport Ireland League Semi-finalists
Student Sport Ireland/Badminton Ireland Open Singles Shield Winner – *Ciara Worrell*

Basketball
NBCC College Team
NBCC Men's Division 1 League 5th Place Finish
NBCC Women Division 1 League 5th Place Finish
Women's Super League Club
Women's Super League 9th Place Finish
Kaitlyn Slagus Super League First Team All Star
Men's National League Club
Men's National League 3rd Place Finish
Men's National League Division 1 Presidents Cup Runners Up
Duane Harper Third Team All-Star

Boxing
IABA Colleges Intervarsity Championship
Female Junior Novice 85kg - Gold Medal – *Taryn Tanton*
Junior Novice 69kg - Silver Medal – *Isamel Ada*
Senior 85kg - Silver Medal – *Conleth Kennedy*
Senior 91kg - Silver Medal – *Marcin Lis*

Camogie
CCAO Women's Division 2 League Winners 2019/2020
CCAO Purcell Cup Quarter-finalists

Cricket
IT Carlow 4 Team Indoor Cricket Tournament Winners 2019

Gaelic Football (Men's)
Higher Education GAA Men's Division 1 League Group Stages 2019
Higher Education GAA Men's Sigerson Cup finalists 2019/2020

Gaelic Football (Women's)
LGFA Division 2 Semi-finalists
LGFA Giles Cup Football Championship Group Stages

Hurling
Higher Education GAA Men's Division 1 Semi-Finalist 2019/2020
Higher Education GAA Fitzgibbon Cup finalists 2019/2020

Karting
Student Sport Ireland Karting Championship 3rd Place

Pool
Student Sport Ireland Division 1 Pool League Winners 2019/2020
UPC Irish Intervarsity 8 Ball Pool Championship Winners 2019/2020
UPC Perpetual Cup Winners 2019/2020 (B Team)
UPC Men's Singles Champion – *Adam Maher*
UPC Men's Singles Shield Champion – *Frank Tigue*

Rugby (Men's)
IRFU Student Sport Ireland (SSI) Division 1 League Winners 2019
Student Sport Ireland (SSI) Fresher U20 O'Boyle Cup Winners
Student Sport Ireland (SSI) Tier 2 Cup Semi-finalists

Rugby (Women's)
Student Sport Ireland Women's League Division 1 League 3rd Place
Student Sport Ireland Women's Tier 1 Cup Group Stages

Soccer (Men's)
CFAI Perpetual Cup Winners (**8th Title in 10 Seasons**)
CUFL Premier Division Semi-finalists
CFAI Eustace Shield Runners Up (C Team)

Soccer (Women's)
CUFL Premier Division Semi-finalists

Volleyball
Women's
Student Sport Ireland Women's Tier 1 Cup – Semi-finalists
Student Sport Ireland Women's Division 1 League – Group Stage Finish
Men's
Student Sport Ireland Men's Division 1 Volleyball League Semi-finalists
National League Club
Men's National Volleyball League Premier Division – 5th place finish

Other sports at the fore for Institute of Technology Carlow include: golf, equestrian, powerlifting, dance 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.

OLYMPIC GAMES – TOKYO 2021

Last summer, Institute of Technology Carlow was represented on the biggest sporting stage of all when MSc Strength and Conditioning graduate and Institute of Technology Carlow athletics ambassador Marcus Lawler, and MSc Data Science graduate Clíodhna Manning, competed at the Olympic Games in Tokyo. Clíodhna was a member of the 4 x 400m mixed relay squad that went on to reach the final, while Marcus competed in the Men's 200m, registering his best time this season.

SPORT

Institute Sporting Facilities

South Sports Campus

Our new South Sports Campus is situated 1km from the main campus. It includes six sports pitches as well as a state-of-the-art 400m all-weather athletics track.

South Sports Campus is a world-class training facility, consolidating Institute of Technology Carlow's position as one of Ireland's leading third-level institutions 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.
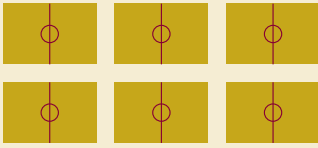
The facilities include:
- Multi-purpose sports hall
- Health and fitness suite with sauna and steam rooms
- High Performance Strength and Conditioning gym
- Sports Performance Analysis Lab
- Exercise studio
- Activity rooms
- Spinning room
- Rehabilitation therapy clinic
- Sports Science laboratories.

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 GAA pitch and a 250-seat viewing stand to showcase the weekly inter-colleges and weekend rugby matches. These facilities incorporate top-class team changing rooms, showers, sauna, steam rooms, athletic therapy areas and a series of inter-connecting seminar/hospitality rooms. As well as our on-site facilities, student rates have also been negotiated with the following local venues to provide a range of additional sporting facilities:
- Talbot Hotel Swimming Pool
- Carlow Golf Club
- Carlow Driving Range
- Carlow Tennis Club
- Pitfield Equestrian Centre.

NEW €15m SOUTH SPORTS CAMPUS 2021

6 FULL-SIZE PLAYING PITCHES

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 analysis. 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, college teams and recreational users.

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.

SPORT
IT CARLOW

South Sports Campus 2021

ALL-WEATHER
400 METRE
ATHLETICS TRACK

31 ACRE
WORLD-CLASS
SPORTS CAMPUS

SPORT

Sports Scholarships

Awarded for Excellence in Sport

Now in its 23rd 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. Following the introduction of our new elite scholarship strand, we now recognise and support our very best athletes competing at the highest level in their chosen sport. In 2020/2021, six students were recognised as elite scholars for their huge contribution to sport in hurling, camogie, cycling, rugby 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 highest level while pursuing a course of academic study. The programme 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 2020/2021, over 86 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
- Those currently studying at Institute of Technology Carlow.

Closing date for incoming first year students:
31st August 2022.

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 can 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

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, european handball, archery, hockey, volleyball, 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 the clubs and societies showcase 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, Computing, Cultural Shake up, Debating, DJ Society, Drama, Early Years, 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**

LIBRARY

The Library is an integral part of the Learning Resource Centre (LRC) 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 LRC is spread across three floors with photocopying and printing available on each floor. Wi-Fi is available throughout the building.

Study desks, including computers are available throughout the library and designated zones are available for individual, silent or group study.

The Library holds print items comprising of books, reports, official publications, reference and special collections and theses.

Library users may borrow or consult a range of material covering all subject areas taught at the Institute. A Short Loan Collection allows 2-day lending of texts which are in heavy demand.

The library's extensive online electronic resource collections also provides access to over 150,000 e-books, 60,000+ journals and a wide range of research databases. Our electronic resource collections are accessible on and off campus. The library homepage on the website provides access to library collections and to subscribed scholarly resources on the internet.

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, borrowing rights and details of all our print and online collection visit us on:

itcarlow.ie/library

Facebook: **IT Carlow library**

Twitter: **@itcarlowlibrary**

Instagram: **IT Carlow Library**

T: **353 59 9175760**

COVID-19
We are committed to providing you with all the library resources and help you need. Information about following protocols while in the Library is available on the library website.

PRESIDENT'S VOLUNTEER AWARD

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

The main aims of the awards are:

- To develop active citizenship and civic engagement amongst the student population

- To create joint projects with our volunteer communities

- To support the contribution that our student volunteers make to our communities

- To create civic and leadership skills amongst students.

The most important requirement for the award is a commitment to volunteering work. Carlow Volunteer Centre can help you to find a volunteering role that will suit your talents, interests and availability.

See **www.volunteercarlow.ie** for information on over 200 voluntary organisations and the voluntary roles you may be able to take up. Students in Wexford can find information about local volunteering opportunities at **www.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 2022 avail of the discounted application rate. The CAO closing date is 1st February 2022.

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 on each course page of the prospectus, providing students with a guide on how to advance qualification levels at Institute of Technology Carlow.

Cut off points for 2021 are listed on the CAO course chart at the back of the prospectus, pages 172-173.

Late Applicants and Change of Mind Applications

The closing date for Late Applications is 1st May, 2022.

The closing date for Change of Mind applications is 1st July, 2022.

Points Scale for Entry to Higher Education

The scale has eight grades at higher (H) level and eight 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.

New Common Points Scale for Leaving Certificate from 2017			
HIGHER		**ORDINARY**	
Grade (%)	Points	Grade (%)	Points
H1 (90-100)	100		
H2 (80<90)	88		
H3 (70<80)	77		
H4 (60<70)	66		
H5 (50<60)	56	O1 (90-100)	56
H6 (40<50)	46	O2 (80<90)	46
H7 (30<40)	37	O3 (70<80)	37
H8 (0<30)	0	O4 (60<70)	28
		O5 (50<60)	20
		O6 (40<50)	12
		O7 (30<40)	0
		O8 (0<30)	0

Accompanying Conditions

1. The best six results in one Leaving Certificate examination will be counted for points computation.
2. One sitting only of the Leaving Certificate examination will be counted for points purposes.
3. Common Bonus Points for Higher Level Mathematics.

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).

Foundation Level

Institute of Technology Carlow recognises foundation level grades for the purposes of admission to higher education under the following criteria:

- Foundation level mathematics is accepted as one of the five subjects required for entry to those courses where mathematics is not a requirement.
- Foundation level Irish at F3 level will meet the minimum language requirement. No points are awarded.

Foundation Level grades and Points (from 2017)	
F1	20
F2	12
F3	0

Basic Entry Requirements

QQI-FET (FETAC) - Entry Requirements	
Level 8	2H5s and 4O6/H7
Level 6/7	5 O6/H7

Please note that there will be variations on these entry requirements for certain courses. Please see course listings on pages 172-173.

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.

HOW TO APPLY

GENERAL ADMISSION

Leaving Certificate Vocational Programme
<u>Entry requirements – Honours Bachelor Degrees (NFQ Level 8)</u>
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.

<u>Entry requirements – Ordinary Bachelor Degree (NFQ Level 7) and Higher Certificate (NFQ Level 6))</u>
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 courses.

LCVP Link Modules Grade	Points
Distinction	66
Merit	46
Pass	28

APPLICANTS

Applicants

QQI-FET (FETAC)
Students who have completed a full QQI-FET award at Level 5, and achieved at least three distinctions, are eligible to apply through CAO for entry to Year 1 on to Level 6, 7 and 8 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 on most courses. For more information visit: **www.itcarlow.ie** or **www.cao.ie**.

QQI-FET Link Scheme
Institute of Technology Carlow has signed formal agreements with a number of Education and Training Boards (ETB) and almost 50 Further Education Colleges to ensure greater access to Higher Education. These agreements allow students in the linked Further Education Colleges "enhanced progression" into higher education programmes at the Institute via a defined Institute of Technology Carlow transition to higher education initiative.

Applicants from Further Education Colleges are advised to contact their guidance counsellor to see if their course and college are part of this Institute of Technology Carlow scheme.

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 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, please visit: **www.itcarlow.ie** or see pages 172-173.

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 may 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
- Email the Admissions Office at: **deferrals@itcarlow.ie** setting out the reason(s) for the request
- The email should arrive in the Admissions Office at least two days before the 'Reply Date' advised by CAO
- 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.

ADVANCED ENTRY

Advanced Entry and Transfers

Applicants 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 172-173. The closing date for receipt of applications is 31st July 2022.

For further detail on Advanced Entry, please visit: **www.itcarlow.ie**

SCHOLARSHIPS

High Performance Entry Schemes

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
• Creative Arts.

Application Process

Institute of Technology Carlow's High Performance Entry Scheme entry procedure is additional and separate to that of the Central Applications Office. Students should complete their CAO forms as usual by the deadline for undergraduate admission.

In addition to this process, eligible applicants should submit a separate application to the Institute of Technology Carlow High Performance Entry Scheme.

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 four 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 four 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 four 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 enhance their region.

HIGH PERFORMANCE ENTRY SCHEME – CREATIVE ARTS

The High Performance Entry Scheme has been developed for applicants who display excellence in the creative and performing arts. There are up to four places available for students who show exceptional artistic promise and achievement under six areas of excellence:
• Drama and Performance
• Media
• Art and Design
• Digital Arts
• Fine Art
• Sculpture

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

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.

ACCESS PROGRAMMES

HEAR Scheme

HEAR HIGHER EDUCATION ACCESS ROUTE

Institute of Technology Carlow is a participating member of the HEAR scheme, offering a number of reduced points course places to HEAR eligible applicants who, as a result of socio-economic disadvantage, have experienced additional educational challenges in second-level education.

HEAR is for school leavers under the age of 23 on 1st January in the year of entry, who are resident in the Republic of Ireland.

Mature and FET (Further Education and Training) students have their own Institute of Technology Carlow admissions routes and should contact the Institute's Admissions office for more information. Applications to HEAR can only be made online through the CAO.

For more information on applying to HEAR visit: **www.accesscollege.ie**

DARE Programme

DARE DISABILITY ACCESS ROUTE TO EDUCATION

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**

Carlow Access Programme (CAP)

Institute of Technology Carlow operates the CAP scheme through the CAO, offering scholarships to new first years who are QQI-FET award holders, mature students, care leavers and asylum seekers 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.

Leaving Cert students must have the minimum entry requirements for the course for which they have applied and also complete a CAP application form.

CAP applications must be made directly to Institute of Technology Carlow, and CAP applicants will be shortlisted on the basis of the barriers outlined on their application. All offers are made through the CAO.

The CAP application form and further information is available at: **www.itcarlow.ie/access** or contact the Institute's Access Office at: **access@itcarlow.ie**

1916 Bursary Fund

PATH Programme for Access to Higher Education

The 1916 Bursary Fund was established by the Department of Education and Skills to encourage participation and success by eligible students who are most economically disadvantaged and from communities significantly underrepresented in higher education.

Applicants must be a new entrant, pursuing an undergraduate course and progressing to higher education for the first time, and entering the first year of the programme of study.

Applications are made directly to the colleges or through a central cluster partner.

Eligibility criteria, the application process, and closing dates for Institute of Technology Carlow are available here: https://www.soarforaccess.ie/1916-bursary-fund

Each student awarded the bursary will receive €5,000 for each year of their undergraduate programme of study up to a maximum of €20,000 for full-time students and a maximum of €30,000 for part-time students.

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**

FEES

Schedule of Fees 2021/22 *

Undergraduates

Stage	Details	Tuition Fee	Student Contribution Fee	Total Due
Certificate Year 1	Maintenance Grant Holder	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000
Certificate Year 2	Maintenance Grant Holder	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000
Degree Year 1/2/3	Maintenance Grant Holder	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000
Honours Degree Year 1/2/3/4	Maintenance Grant Holder (Vocational Education Committee)	NIL	NIL	NIL
	Non Maintenance Grant Holder	NIL	€3,000	€3,000

* Fees may be subject to change in 2022/23.

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 2022/23.

Student Contribution Fee

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**.

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 Institute of Technology Carlow Admissions Office.

Institute of Technology Carlow Admissions Office

T: **059 9175174**

E: **admissions@itcarlow.ie**

GRANTS

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 2022/23 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.

Grant Rates for the 2021/2022 Academic Year	Greater than 45 km from IT Carlow	Less than 45 km from IT Carlow
Full 100% Maintenance	€3025	€ 1215
Part 75% Maintenance	€2270	€ 910
Part 50% Maintenance	€ 1515	€ 605
Part 25% Maintenance	€ 755	€ 305
Special Rate of Maintenance Grant	€5915	€2375
Fees only	€ 0	€ 0

For more information on grants:

Grants Helpline
T: **059 9175113**
E: **grants@itcarlow.ie**

NATIONAL FRAMEWORK OF QUALIFICATIONS (NFQ)

A major change in Irish Higher Education was the establishment of the National Framework of Qualifications (NFQ). This learner-centred framework, which is transparent and readily understandable, includes all education and training awards (schools, institutes of technology, universities and technological universities) made in Ireland and relates them to each other. In doing so, it brings coherence to the awards system.

The Institute has the authority to make its own awards up to, and including Masters degrees within the National Framework of Qualifications.

Additionally, 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

Awards	NFQ Level
Doctoral Degree	10
Masters Degree	9
Postgraduate Diploma	9
Higher Diploma	8
Honours Bachelor Degree	8
Bachelors Degree	7
Higher Certificate	6
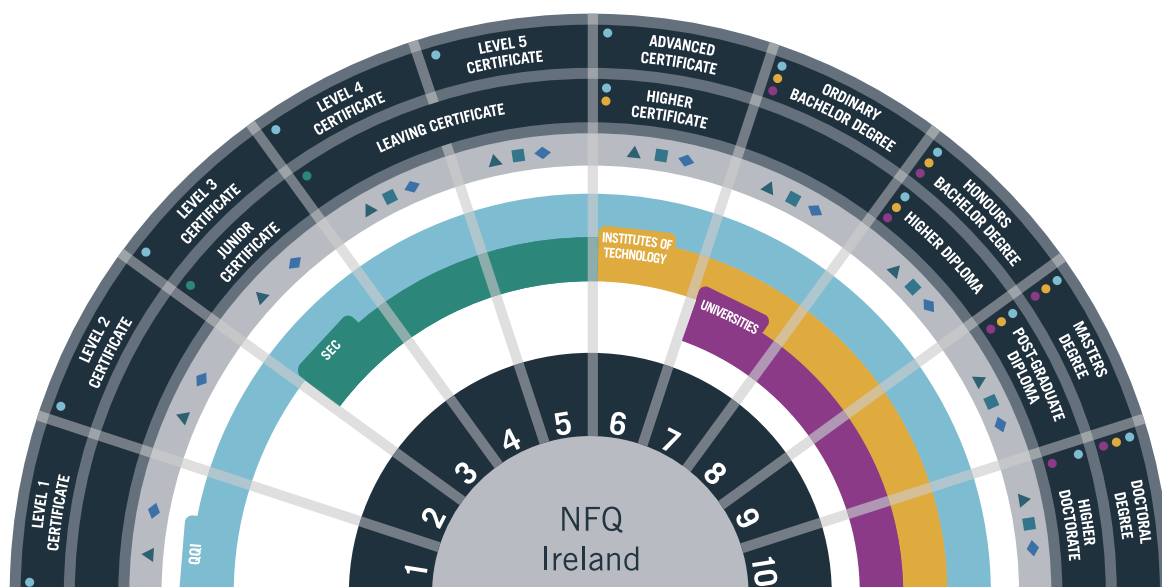
National Framework of Qualifications (NFQ)

OVER

65 sport clubs and societies

70 % participation rate

INDEX

Courses available through
CAO Application System 2022

CARLOW	Honours Bachelor Degrees - Level 8 (HD)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW108	**Science – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Biosciences with Biopharmaceuticals: **BPH**; Brewing and Distilling: **BRD**; Pharmaceutics and Drug Formulation: **PDF** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	266	65
CW128	Brewing and Distilling - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	307	68
CW138	Sport and Exercise Science - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7	O6/H7	430	58
CW148	Strength and Conditioning - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7	O6/H7	388	60
CW188	Sport Rehabilitation and Athletic Therapy - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7	O6/H7	451	62
CW208	Computer Games Development - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	272	50
CW238	Software Development - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	295	52
CW248	Information Technology Management - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	293	54
CW258	Cybercrime and IT Security - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	292	46
CW268	Computing in Interactive Digital Art and Design - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	291	48
CW438	Construction Management - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	260	36
CW468	Architectural Technology - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	291	34
CW478	Civil Engineering - Four Year	2H5 & 4O6/H7		O6/H7	H4	465	30
CW488	Quantity Surveying - Four Year	2H5 & 4O6/H7		O6/H7	H4	NEW COURSE	38
CW548	Mechanical Engineering - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	330	26
CW558	Electronic Systems - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	280	24
CW568	Aerospace Engineering - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	371	18
CW578	TV and Media Production - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	318	28
CW588	Robotics and Automated Systems - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	NEW COURSE	22
CW598	Biomedical Electronics - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	NEW COURSE	20
CW708	Law (LLB) - Three Year	2H5 & 4O6/H7		O3/H6 Eng		292	114
CW728	Product Design Innovation - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	246	118
CW748	Early Childhood Education and Practice - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		290	120
CW758	Professional Social Care Practice - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		360	122
CW808	Public Relations and Media - Four Year	2H5 & 4O6/H7		O3/H6 Eng		247	100
CW848	Digital Marketing with Analytics - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	269	102
CW858	Sports Management and Coaching (Options: GAA, Rugby, Football) - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		**	104
CW878	Sport, Business and Coaching - Four Year	2H5 & 4O6/H7		O6/H7		NEW COURSE	112
CW908	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business Management: **BMT**; Human Resource Management: **HRM**; International Business: **INT**; Supply Chain Management: **SCM**; Marketing: **MKT**; Finance and Accounting: **FAC** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	272	78
CW938	Business with Law - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	270	92
CW948	Accounting - Three Year	2H5 & 4O6/H7		O4/H6 Eng	O3/H6	319	94
CARLOW	Ordinary Bachelor Degrees - Level 7 (DG)						
CODE	TITLE	GENERAL LC REQUIREMENT		SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW107	Analytical Science	5O6/H7		O6/H7	O6/H7	261	70
CW117	Biosciences	5O6/H7		O6/H7	O6/H7	215	66
CW207	Software Development	5O6/H7		O6/H7	O6/H7	245	52
CW217	Information Technology Management	5O6/H7		O6/H7	O6/H7	269	54
CW227	Cybercrime and IT Security	5O6/H7		O6/H7	O6/H7	220	46
CW237	Computing in Interactive Digital Art and Design	5O6/H7		O6/H7	O6/H7	227	48
CW407	Architectural Technology	5O6/H7		O6/H7	O6/H7	234	34
CW417	Construction Management	5O6/H7		O6/H7	O6/H7	225	36
CW427	Civil Engineering	5O6/H7		O6/H7	O6/H7	208	32
CW507	Aircraft Systems	5O6/H7		O6/H7	O6/H7	293	18
CW517	Mechanical Engineering	5O6/H7		O6/H7	O6/H7	290	26
CW527	Electronic Engineering	5O6/H7		O6/H7	O6/H7	226	24

See: www.itcarlow.ie/courses/type/undergraduate-cao-courses for all Institute of Technology Carlow course information.

CARLOW	Ordinary Bachelor Degrees - Level 7 (DG)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW547	TV and Media Production	5O6/H7		O6/H7	O6/H7	303	28
CW567	Robotics and Automated Systems	5O6/H7		O6/H7	O6/H7	NEW COURSE	22
CW577	Biomedical Electronics	5O6/H7		O6/H7	O6/H7	NEW COURSE	20
CW707	Design	5O6/H7		O6/H7	O6/H7	241	118
CW717	Professional Social Care Practice	5O6/H7	Garda vetting required	O6/H7		271	122
CW727	Early Childhood Education and Practice	5O6/H7	Garda vetting required	O6/H7		NEW COURSE	120
CW807	Sport Coaching and Business Management - GAA	5O6/H7	Garda vetting required	O6/H7		**	106
CW817	Sport Coaching and Business Management - Rugby	5O6/H7	Garda vetting required	O6/H7		**	108
CW827	Sport Coaching and Business Management - Football	5O6/H7	Garda vetting required	O6/H7		**	110
CW837	Digital Marketing with Analytics	5O6/H7		O6/H7	O6/H7	215	102
CW847	Sport, Business and Coaching	5O6/H7		O6/H7		NEW COURSE	112
CW857	Public Relations and Media	5O6/H7		O6/H7		NEW COURSE	100
CW917	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business Management: **BMT**; Human Resource Management: **HRM**; International Business: **INT**; Supply Chain Management: **SCM**; Marketing: **MKT**	5O6/H7		O6/H7	O6/H7	228	78

CARLOW	Higher Certificates - Level 6 (HC)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW106	Physiology and Health Science	5O6/H7	Garda vetting required	O6/H7	O6/H7	451	62
CW116	Pharmacy Technician Studies	5O6/H7	Garda vetting required	O6/H7	O6/H7	224	74
CW126	Science - Applied Biology or Applied Chemistry	5O6/H7		O6/H7	O6/H7	251	72
CW206	Computing - Applications or Programming	5O6/H7		O6/H7	O6/H7	236	56
CW706	Legal Studies	5O6/H7		O6/H7	O6/H7	174	116
CW906	Business	5O6/H7		O6/H7	O6/H7	164	98
CW926	Business with Law	5O6/H7		O6/H7	O6/H7	204	92
CW936	Accounting	5O6/H7		O6/H7	O6/H7	207	96

WEXFORD	Honours Bachelor Degrees - Level 8 (HD)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW018	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business: **BUS**; Digital Marketing: **DMK** - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	307	135
CW028	Early Childhood Education and Practice - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		260	130
CW038	Art - Four Year	2H5 & 4O6/H7		O6/H7		*	146
CW058	Tourism and Event Management - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	292	142
CW068	Applied Social Studies in Professional Social Care - Four Year	2H5 & 4O6/H7	Garda vetting required	O6/H7		250	132
CW078	Sustainable Farm Management and Agribusiness - Four Year	2H5 & 4O6/H7		O6/H7	O6/H7	270	128
CW088	Visual Communications and Design - Four Year	2H5 & 4O6/H7		O6/H7		270	144

WEXFORD	Ordinary Bachelor Degrees - Level 7 (DG)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW027	Sustainable Farm Management and Agribusiness	5O6/H7		O6/H7	O6/H7	236	128
CW037	**Business – CAO applicants must choose ONE course option:** Common Entry: **CEY**; Business: **BUS**; Digital Marketing: **DMK** - Three Year	5O6/H7		O6/H7	O6/H7	279	135
CW047	Visual Communications and Design	5O6/H7		O6/H7		241	144
CW057	Art	5O6/H7		O6/H7		*	146
CW077	Tourism and Event Management	5O6/H7		O6/H7	O6/H7	223	142
CW097	Early Childhood Education and Practice	5O6/H7	Garda vetting required	O6/H7		NEW COURSE	130

WEXFORD	Higher Certificates - Level 6 (HC)						
CODE	TITLE	GENERAL LC REQUIREMENT	OTHER	SUBJECT REQUIREMENTS		2021 ROUND ONE CUT-OFF POINTS	PAGE
				ENGLISH OR IRISH	MATHS		
CW006	Business	5O6/H7		O6/H7	O6/H7	171	140

* CW038 and CW057: Combination of Leaving Cert points and portfolio.

** CW858, CW807, CW817 and CW827: Combination of Leaving Cert points, interview and portfolio.

INSTITUTE *of* TECHNOLOGY CARLOW

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Autumn Open Day

Thursday, 18 November 2021

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