



For Transition Year Students with
High Academic Ability

2022 - 2023 Academic Year
Semester I



Invitation to participate in the 2022-23

Early University Entrance Programme in DCU

March 2022

Dear Parent & Student,

The Centre for Talented Youth, Ireland is pleased to continue the Early University Entrance Programme at Dublin City University for Transition Year students of the 2022-23 academic year.

This is an exciting opportunity! Early University Entrance gives students with high academic ability the opportunity to enrol as part-time students on one of several courses based on degree programmes at DCU. Taking a portion of the first year modules, Early Entrants attend DCU for one day each week, over 13 weeks, to study degree level material alongside similarly aged students. The 10 courses are: Biology, Business, Engineering, International Relations, Law & Politics, Philosophy, Physics, Psychology, Sports Science and for the first time, Computer Science.

The Early University Entrance programme has been running for several years and its evaluation composed my PhD thesis. The young students were found to have performed as well (and at times better) than the regular cohort of first year students taking the same modules. They suffered no ill-effects socially as there was a large group of similarly aged students. They learned much in terms of their chosen field of study, but also in terms of independent learning, self-organisation, the demands of learning at university level, high level writing skills and group work. You will read further in the brochure feedback from some of the original Early Entrance students.

This brochure outlines the Programme and the courses available in detail. I would encourage any student who is bright, motivated and committed to learning to apply, as it will give you a unique opportunity to sample university life, but more importantly allow you to experience a level of learning and challenge that is more suited to your academic needs. Though the programme is relatively new to Ireland, it is not a new concept. There is much evidence of the success of acceleration programmes in other countries, and therefore much by way of best practice.

I can be contacted by email at catriona.ledwith@dcu.ie and at 01 700 5634.

Yours,

Dr. Catriona Ledwith
Assistant Director, CTYI
EUE Programme Manager

Programme Background

What is Early University Entrance?

Early University Entrance is an acceleration programme for Transition Year students with high academic ability. Participants may follow modules from degree programmes available at Dublin City University, part-time, throughout their transition year.

Students choose one course (see later in this brochure), and study 1-2 modules associated with that subject on one full day each week in DCU. Subjects may be scheduled any day from Monday to Friday. Classes take place between 10am and 4pm each day, in separate classes of approximately 20 students. Thus the Early Entrance classes will be made up of just Early Entrance students and run in parallel with the normal university lectures. Students will also be expected to dedicate time outside of the scheduled lectures to independent learning, course assignments, etc.

Students may choose partake in assessments and sit exams in their chosen modules at the end of the semester.

(Students should note that this programme will not help them to obtain a place at DCU when they are awarded their Leaving Certificate. They must still apply through the CAO).

The Reasons for Early University Entrance

Academically talented students are typically highly motivated, but too often complain of being unchallenged and under-stimulated at school. This Programme will give these students the opportunity to access a level of learning that more appropriately matches their academic needs. They will learn high level material at a relatively fast pace, thereby providing a more realistic level of challenge.

How will students benefit from the EUE Programme?

The advantages of taking on a degree programme at an earlier than typical age are wide- ranging. Research has shown that second level students who participate in university programmes benefit from:

- the experience of an intellectual peer group
- the opportunity to study challenging and interesting course material
- a level of learning that is *optimally matched*
- the experience of more appropriate and realistic academic expectations
- the opportunity to reach one's potential
- the focus it lends toward future study
- formal recognition of their ability
- access to specialist teachers
- it can enhance student motivation through specialisation
- greater learning and personal independent
- experience of university life
- direct access to cutting edge research
- improved perspective on their own education and their academic goals

Early Entrants will have the benefit of being part of an enhanced intellectual group over a sustained period. Students on similarly styled programmes have proven time and time again that their age is not a hindrance to academic success. Research on this programme and others have shown that Early Entrants perform as well, and in fact usually better, than regular first year students in end-of-term exams.

Knowledge Gaps

We are mindful that students taking on degree level coursework are likely to encounter material that requires the foundation given by the Leaving Certificate curriculum. Great care is taken therefore in adapting the modules so that students may learn all that is necessary to bridge any knowledge gaps.

The Development of Early University Entrance

The Programme was developed by Dr. Catriona Ledwith, at the Centre for Talented Youth, Ireland. The Programme development and evaluation was central to her PhD research at the School of Education Studies, DCU, under the supervision of Prof. Joe O'Hara. It was a unique experience for the students and a pioneering endeavour for DCU. The Programme was developed as a CTYI/DCU initiative, and had the approval of CTYI's Academic Advisory Board and the Research Ethics Committee, DCU.

The programme was found to have hugely positive academic and personal outcomes for its participants. Based on this research, it is hoped that Early University Entrance will form a new direction for second level students at CTYI.

The Early University Entrance Programme has received the full support of the Centre for Talented Youth, Ireland, and Dublin City University itself. Individual Faculties and Schools have given generously of their time, advice and resources. (The original Programme also received the support of the then National Coordinator for Transition Year, Mr. Michael O'Leary.)

Pastoral Care

Much consideration and deliberation preceded the setting up of this Programme. It has been developed in line with the procedures and guidelines of the Irish Centre for Talented Youth, a long-established unit at DCU, with strict rules and guiding principles on working with children and young people. It adheres to the best practices in concurrent enrolment and early college entrance, as set down by the universities and third level institutions in the US where similar programmes exist. The Programme will also operate in a manner that ensures effective child protection. The Early University Entrance Programme will have a strong support network in place, given that the students will be younger than the ordinary student population on campus. Though not as intensive in a supervisory capacity as the CTYI Summer Programme, the students will be monitored closely from a variety of different perspectives. Links with parents and the TY Coordinator will be made early on and Dr. Ledwith will correspond with them on a regular basis to assess each student's progress. Students will have frequent contact with Dr. Ledwith and the EUE support staff throughout.

Accessible to Students across the Country

The 10am start is primarily to facilitate the commute to the DCU campus. Each year we have students coming from counties as far away as Cork and Donegal, taking very early trains to get here. Starting at 10am means EUE is a workable option. Having to attend over a number of days each week might make it prohibitive but one day makes it a little more accessible from most locations around the country. Finishing at 4pm also means that students can get home at a reasonable hour!

Course Information

The modules listed below indicate what is involved in each course; however, the precise content will be finalised at a later time. Specific details on each degree programme are given over the following pages. The general information is taken from the DCU Prospectus. Please note that, though unlikely, the modules listed below may change. (From time to time, Schools reorganise the arrangement of modules).

Eligibility

The Early University Entrance Programme is happy to receive applications from any student who:

- » is in Transition Year during the 2022-2023 academic year **AND**
- » has previously qualified for the CTYI or CAT Programmes through CTYI Talent Search or based on a Psychological Assessment **OR**
- » may not have the formal assessment results documented above but who have demonstrated high ability. These students will be accepted at the programme organiser's discretion.

Course Options - Semester 1

The course modules will, where possible, relate to existing first year modules on the named degree programmes. In some instances, the course modules on Early Entrance will follow the module precisely, while in others excerpts will be selected so that knowledge gaps are minimised. Each cooperating School and their nominated course instructor have worked with Dr. Ledwith on exact course content.

Early Entrance Biology from the degree Common Entry into Science

- How Life Works 1 (BE101)

Early Entrance Business based on modules from the BA in Business Studies

- Management Accounting for Decision Making (AC115)
- Introduction to Microeconomics (EF113)

Early Entrance Computer Science based on modules from the BSc in Computer Science

- Introduction to Computer Hardware (CA112)
- Introduction to Computer Systems (CA103)

Early Entrance Engineering based on modules from the Common Entry into Engineering

- Introduction to Electronics (EM113)
- Materials Engineering (EM115)

Early Entrance International Relations based on modules from the BA in Int. Relations

- Introduction to International Relations & Security (LG117)
- Introduction to Global Governance (LG132)

Early Entrance Law & Politics based on modules from the BA in Economics, Politics & Law

- Irish Legal System (LG131)
- Irish Political System (LG108)

Early Entrance Philosophy based on modules from the Bachelors of Arts (Joint Honours)

- Introduction to Philosophy (TP132)
- Environmental Philosophy (TP233)

Early Entrance Physics based on modules from the BSc in Applied Physics

- Light and Optics (PS102)
- Motion & Energy (PS101)

Early Entrance Psychology based on modules from the BSc in Psychology

- Child Development (NSP01)
- Cognitive Psychology (NS124)

Early Entrance Sports Science based on modules from the BSc in Athletic Therapy & Training

- Introduction to Athletic Therapy and Training (SS126)
- Biomechanics 1 (SS206)

Understanding Biology

Biology makes up an integral part of degrees in Biotechnology, Genetics and Cell Biology, but it is also an important aspect in almost all other science degrees in DCU, such as the BSc. in Science Education, or the BSc. in Chemical and Pharmaceutical Science, etc.

Biology plays an important role in understanding complex forms of life. What are the differences between humans and plants, and what have we in common? Knowledge of biology allows us to create solutions to the challenges many living organisms face, and it paves the way for discoveries and inventions that can improve our quality of life. Through studying biology, we can develop a greater understanding of the human body and how to effectively deal with diseases. By studying the components of living cells, we can learn how to control, fix and modify them to our benefit.

This course will introduce students to the concept of the cell and focus on the basic biochemistry, physiology and molecular detail of animals and plants, including an introduction to animal evolution and diversity.

Will it suit me?

The course in Biology will be of interest to students who enjoy studying biology and for those with an interest in recent scientific breakthroughs in human disease, molecular biology and research at the cellular level.

What will I study?

SEMESTER 1 How Life Works 1 (BE101)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Understanding how cells work underpins many areas, and so there is huge demand for a workforce with scientific knowledge, particularly in molecular and cellular biology. Graduates of biology degrees go on to work in biomedical research, biophysics, cell biology, bioengineering, microbiology, physiology, and more.

Instructor's Comments

"The subject of microbiology is a truly fascinating one. This module will introduce you to the world of microscopic organisms and how they work. From studying them in a lab, to understanding their inner workings, this course will lay down the basic understandings of bacteria, archaea, fungi and protista. Included are introductions to the studies of pathology, epidemiology and virology, where we take a look at the disease causing microbes and our advances in preventing them. If you're interested in developing an understanding in a world you cannot see, this is the course for you!" *Megan Griffiths*

"Biochemistry is the study of all chemical process that occur in the body in order to keep an organism alive and is truly a subject you cannot miss. In this captivating class you will learn about how your body performs every day to keep the body functioning, studying everything from the most intricate processes of cells to the molecules that keep everything held together and running smoothly. If you want to learn more about how the body can sustain such complex life, carrying out mechanisms that you didn't even know could happen then Biochemistry is the subject for you!" *Cora Lambert*

Understanding Business Studies

The Bachelor of Business Studies degree is a first-class all-round business degree with exciting options in HR management, marketing, economics, eBusiness management, and finance. It is the essential toolkit for the world of business.

Today's business world is rapidly evolving, and the key to success in this world is creativity and innovation. Just look at how the internet has changed the way we communicate, buy products and inform ourselves. These values are at the core of our Business Studies course - a course that is constantly innovating to reflect both best practice in business education and relevance to management and business practice in the real world.

Since the early 1980s the Bachelor of Business Studies (BBS) has introduced many innovations to undergraduate education. Through elements such as business simulations and new enterprise development projects, we set out to stimulate and foster imaginative thinking among our graduates, giving you the skills to arrive at solutions to business problems.

Will it suit me?

Do you find the world of business an interesting place? Do you see yourself enjoying a career in one of the many areas of business that could take you from management and finance to marketing and HR?

What will I study?

SEMESTER 1 Management Accounting for Decision Making (AC115)

Introduction to Microeconomics (EF113)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

You will be ready to make a genuine and lasting contribution to any workforce. Indeed, graduates from the BBS have an international reputation for making an immediate and significant contribution whatever path they choose. And you will follow in their footsteps. As shown in surveys of university graduates, graduates of the BBS are now the most sought after business graduates in Ireland.

Business Studies is a smart choice for anyone who wants to pursue an industrial, commercial or public career, or start their own business.

Instructor's Comments

"While a majority of students that undertake the Business course have a good appreciation of the subject and general topics from an academic perspective, it can often be the non-academic things that greatly assist students in achieving high grades (i.e. > 65% in end of term exams). Some of the things that I have noticed is that students that form friendships within the class group often develop greater interaction, both socially and academically, and are more likely to question and challenge conventional thinking and traditional theory of the subject matter. In particular, participation in study groups with each other can greatly assist students experience the potential eclectic mix of personalities and knowledge levels that will most likely exist in third level and within future work environments. To be able to experience and demonstrate an ability to work with people in groups comprising of different skill sets within a team can greatly enhance one's own experience, knowledge and understanding of the subject. Sometimes we can learn more about a subject topic in a more efficient manner from social and topical interaction with fellow class attendees." *Patrick D'Arcy*

Understanding Computer Science

Computing technology is all around us in our everyday lives. As intelligent, innovative and forward-thinking people continue to develop technology, it can help us to solve problems in a great range of applications (e.g. traffic circulation, climate modeling, the study of diseases, systems engineering, business modeling and ecology).

This degree prepares you for a career in computing and information technology. It gives you in-depth knowledge of software engineering and the practical skills to apply this knowledge to develop the technology behind computer games, mobile phones, the Internet, web applications, entertainment systems and many other computing-based products.

Will it suit me?

Do you enjoy problem solving? Do you like creating things? This course will help arm you with the tools needed to impact and shape our world with technology. This course will suit anyone who is technically minded and enjoys problem solving.

What will I study?

SEMESTER 1 Introduction to Computer Hardware (CA112)

Introduction to Computer Systems (CA103)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

There is a broad range of careers that lead on from a degree in Computer Science. Students who continue to study CS at degree level become software engineers, programmers, systems analysts, web developers, cloud computing developers, app developers, technical consultants and computer studies teachers.

Understanding Engineering

Of all the courses and careers, you can pursue, engineering is one of the most exciting. Engineers invent and design things, they make things work and they analyse and solve problems in all sorts of fields. For example, one of the areas emerging at the moment is the application of electronic and mechanical engineering to biology and life sciences. Engineering solutions help patients with better diagnostic imaging, improved hearing devices, better blood vessel implants, laser surgery, etc. Engineers have designed digital televisions, laptops and mobile phones. Engineers' work is behind industrial robots and racing cars, 3D cinema and airplanes, the latest computer games and the international space station. As engineers, you can find yourselves at the heart of just about any field, from high-tech industry and medicine to financial services, energy-aware technologies and biotechnology - the cutting-edge dynamic industries of tomorrow.

Common Entry into Engineering is specially designed to help you to find the course most suitable for you while studying the fundamentals of engineering. After the first year (common to all six engineering degrees in DCU), students may apply to follow a specific programme. Early Entrance Engineering is based on modules from this general programme, to give students a flavour of as many of the specialized areas within engineering as possible.

Will it suit me?

As for most engineering degrees, ability in mathematics is a key requirement. A logical mind and an eye for detail are also important. Previous experience of maths, engineering or theoretical physics at CTYI will be an advantage, but is not essential, as the fundamentals will be covered on each module.

What will I study?

SEMESTER 1 Introduction to Electronics (EM113)

Materials Engineering (EM115)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Engineering is about the design and production of useful products and services. It translates scientific knowledge into technology, and technology into successful innovation. Engineering subdivides into a broad number of specializations; mechatronic, electronic, digital media, mechanical and manufacturing, biomedical, and informational and communications engineering degrees, all of which are available to study in DCU. Engineering is a smart choice for anyone who is interested in design, technology, and development.

Instructor's Comments

"This is a broad and interesting introduction to materials science, covering the science of why materials have the properties they do, and leading to the use of materials in design. Looking at the minute level up to the very large, this all-encompassing course suits those with an interest in science and engineering. The class investigates practical examples, thinking about why things are made from what they are made from. This might be something students had never considered before. The theory in the course is backed up by practical example which aids understanding and learning. Students work independently and in groups. Questions are invited and encouraged during the lectures. Group work during tutorials helps the students to get to know others in class and to see different points of view and different answers to the same question. By the end of the course, students should have a good overview of the various engineering materials available and a good idea as to why a particular material choice is made for a particular design."

Dr Niamh Plunkett

EUE International Relations

Understanding International Relations

The International Relations degree will give you insight into the major world issues that challenge and fascinate us today. You'll examine the forces that shape contemporary societies, such as globalisation, international law, third-world debt and American foreign policy. You'll also study key institutions like the European Union and the United Nations.

You'll learn from staff with expertise in areas such as Terrorism and Counter-terrorism, European Union studies, Middle-Eastern studies, International Security and Conflict Studies, International Law and Aid, and Development Studies.

The programme also prepares you for the work force by imparting broader abilities, such as oral and written communication skills, the capacity to think analytically, teamwork skills, and research techniques.

Will it suit me?

International Relations is a diverse field that is extremely relevant in the increasingly globalised world we live in. Graduates from our BA in International Relations will be ideally suited to a number of roles especially when combined with work experience abroad and foreign language skills. With deep insight into global politics, cultures and the ability to identify and analyse global issues, graduates of International Relations are well placed to pursue careers with governmental and non-governmental organisations, both national and international, like the United Nations and European Union, diplomatic services, as well as with major international corporations.

What will I study?

SEMESTER 1 Introduction to International Relations & Security (LG117)

Introduction to Global Governance (LG132)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Students who study International Relations go on to work in fields such as the international civil service, diplomatic services, international aid, policy evaluation and research, international commerce, journalism, politics, the armed forces, public affairs and public policy education.

Instructor's Comments

Why do states go to war? How can we explain conflicts, crises, and cooperation, and what role is there for the key institutions of global governance? In International Relations and Global Governance, students will explore a variety of theories to describe, explain, and critique the behaviour of states and non-state actors. They will also examine the roles and responsibilities of key institutions in global governance, like the UN Security Council and General Assembly, and consider the future of their reform. Drawing on students' knowledge of (and curiosity about) contemporary events, this interactive course is an opportunity to engage in organised debates and produce critical written reflections on war and security, the environment, human rights, gender, and public health – some of the most pressing issues on today's global governance agenda. *Sharon Galantino*

Understanding Economics, Politics and Law

Economics, Politics and Law (EPL) is an intellectually challenging course that explores various issues and methods of analysis in the disciplines of economics, politics and law. You can see them every day in Irish society. The course will give you a deep and thorough understanding of the political, legal and economic institutions that shape the current global environment. More specifically, you will gain a profound awareness of how these three disciplines are bound together in the exploration of concepts of common interest.

Will it suit me?

Are you interested in Politics and/or Law? Would you like to know more about the political and legal institutions that shape our world? By studying on the Early Entrance Law & Politics course you will learn how these disciplines interact and help to shape the local and global contexts in which we live.

What will I study?

SEMESTER 1 Irish Legal System (LG131)

Irish Political System (LG108)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Graduates from the BA in Economics, Politics and Law will be ideally suited for work in a variety of areas. Some graduates may choose to work in the public service, private industry or international and European institutions, while others may choose a career in law (graduates will be eligible for entry to the Law Society of Ireland as trainee solicitors, on successful completion of the relevant entrance exams and all subjects required for the entrance exams are covered), tax/financial services, journalism, policy-evaluation or research.

Instructor's Comments

"The Irish Legal System module offers students an insight into the foundations of our legal system, focusing on the work of legal professionals, the court structure, the judiciary, the concept of rehabilitation vs punishment, the special protections afforded to children in the justice system, the mechanics of how a trial operates, sentencing options for an accused, and much more. This interactive course includes plenty of in-class discussions and activities with the aim of getting students to really engage with the law, develop their own opinion, and become passionate about law in Ireland. There are many hypothetical scenarios given throughout the course culminating in a mock trial at the end, giving students the opportunity to act as solicitors and barristers and put their legal knowledge into action!" *Shannon Colmey*

EUE Philosophy

Understanding Philosophy

Philosophy is possibly the most fundamental of subjects as it asks the question: 'What does it mean to be?' The aim of this course is to enable students to acquire the basic skills of philosophy i.e. analytic argument and essay writing; and to introduce students to some of the most profound thinkers in history. The course will cover some of the fundamental concerns of philosophy such as: the history of philosophy, metaphysics and epistemology, logic, ethics and political theory, the philosophy of mind.

Will it suit me?

Philosophy has something for everybody, but particularly suits those who are curious about all aspects of life and want to use reason to answer life's biggest questions. If you are interested in the nature of reality, the concept of truth or how to live a good life, philosophy is the course for you. If you enjoy expanding your mental horizons, learning how to construct an argument and find weaknesses in other arguments, and analysing contemporary issues using logic, philosophy is for you. Everybody asks philosophical questions at some point in their lives; and such questions are especially pertinent during the teen years.

What will I study?

SEMESTER 1 Introduction to Philosophy (TP132)

Environmental Philosophy (TP233)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Philosophy does not create an obvious career path outside of academia. However, the skills philosophy graduates develop widely sought after in a variety of fields. It turns out that over the long term, philosophy graduates earn the most of any liberal arts graduate. The problem solving abilities and creative approaches of philosophy graduates are increasingly valued, notable amongst big-tech companies.

Instructor's Comments

The EUE Philosophy course is a program designed to inspire and engage young students with ideas in the history of philosophy as well as with contemporary philosophical concerns and debates. It consists of two modules. In the Introduction to Philosophy module, the students will learn to identify key innovations in the evolution of philosophy from the pre-Socratic to the Modern period. In the Environmental Philosophy module, students explore several environmental and ecological controversies that raise fundamental questions about what we, as human beings, value, about the kind of beings we are, the kinds of lives we should live, our place in nature, and the kind of world in which we might flourish. By the end of this course, the students will be able to grasp philosophical concepts, learn how to formulate strong arguments, identify mistakes in the arguments of others and engage with several philosophical problems in a highly interactive, fun, and stimulating teaching and learning environment. *Evie Filea*

Understanding Physics

Physics is the most fundamental science. It explains the mysteries of the universe and has fuelled many of the scientific and technological developments that we take for granted. Physicists also pioneered modern technologies as diverse as the Internet, nuclear power and MRI scanners. Today physicists continue to generate new knowledge about our world and lead innovation in yet-to-be exploited realms such as quantum information and communications technology, nano-systems design, ultrafast molecular switching and terahertz medical imaging.

Will it suit me?

If you are interested in how the world works and how science seeks to answer the big questions, if you have a logical mind and competency in mathematics then Physics may be the course for you.

What will I study?

SEMESTER 1 Light and Optics (PS102)

Motion & Energy (PS101)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Physics provides you with the platform to progress to a degree in your chosen area of specialism, with potential to pursue careers in areas as varied as:

Meteorology, Astronomy and Astrophysics, Design Management, Data Science, Research and Development, Education, Information Technology, Healthcare and Aeronautics. You will also be ideally positioned to pursue further study.

Instructor's Comments

In Motion and Energy module, some fundamental physical concepts are taught in depth. Students begin with looking at the standards and units that are used by all scientists and continue by looking at vectors and motion in one and two dimensions. Newton's laws are introduced before moving on to looking at the huge area of energy. This is an interesting course that gives students a great foundation in the physics that is needed in a wide number of areas. Group work during tutorials enables the students to get to know their classmates and fosters teamwork.

The study of light and optics is a hugely important side of physics, and in this module, students are introduced to electromagnetic waves, the nature of light and how it propagates, geometric optics, diffraction and interference. The area of sound is also introduced and the differences and similarities between light and sound examined. Knowledge of the properties of light and optics is vital in understanding wide ranges of modern applications and technologies. Teamwork is an aspect of the course that is promoted during tutorial time, when the students work together in groups. This is a wide ranging course that introduces interesting and vital aspects of physics that explain a huge amount about the world around us. *Dr Niamh Plunkett*

EUE Psychology

Understanding Psychology

Psychology is concerned with all aspects of behaviour and the thoughts, feelings and motivations underlying such behaviour. While psychologists differ in their interests within the field of psychology and in the type of work they do, they all approach the study of psychology in a scientific way. Psychologists are concerned with practical problems such as:

- How can we make sure that eyewitness accounts in court are reliable?
- How can we help people overcome depression, stress or phobias?
- How do footballers keep their anger in check on the pitch?
- What makes a good manager?
- How can teachers ensure students are really learning?

If you think these research questions are interesting, then you may be interested in studying psychology.

Will it suit me?

You should possess good verbal and written skills, be hard-working and creative, have an enquiring mind and have the ability to think critically. Other qualities that would be an advantage are flexibility and good interpersonal skills.

What will I study?

SEMESTER 1 Child Development (NSP01)

Cognitive Psychology (NS124)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

For those wishing to work as a psychologist in a professional setting, e.g. counselling, clinical, organisational, health, educational, sport or academic, further study is required. A degree in psychology opens up a number of different career paths. Many psychology graduates have used their degree to pursue a career in management, social research, youth work, community development, public relations, human resources and marketing.

Instructors' Comments

The EUE Psychology module is a thought-provoking and engaging course that gives students insight into the processes of human cognition and development. The course highlights to students the interaction between our biological and genetic disposition and the social influences that shape how we think, feel and behave. The course covers topics such as Cognitive Psychology and Child Development, which gives students a broad understanding of the complexities and nuances of human behaviour. The course teaches students how to engage critically with the material presented in class, and how to develop their own educated, well informed opinion that is backed by empirical research. The course also gives students some insight into the scientific process of conducting research within psychology, and an awareness of the ethical issues that have been dealt with within psychological research over the past number of decades.

Shauna Glennon

Understanding Sports Science

Sport and exercise scientists use research and analysis to give specialist advice to improve individual or team athletic performance. They also design and administer appropriate methods of assessment, and create exercise or training programmes aimed at improving either health or sporting performance.

As a sport scientist, you must be well versed in technical, physiological and psychological aspects of your field in order to cover territory as diverse as exercise testing, psychological preparation for competition, movement analysis, dietary considerations and strength training.

Will it suit me?

As part of the Early Entrance Sport Science course, you'll examine the key science subjects that form the backbone of this degree: chemistry, physics, anatomy, physiology, psychology and sociology. As you progress, you'll learn how these subjects are applied to the study of sport, exercise and health, and what role factors like nutrition and genetics play, as well

What will I study?

SEMESTER 1 Introduction to Athletic Therapy and Training (SS126)

Biomechanics 1 (SS206)

Full details of these modules are available at <https://www.dcu.ie/registry/search-module-specifications>

Please note that although the modules for this course will follow the techniques practised at DCU undergraduate level, the course material will be specifically adapted to the Early Entrance students.

A Future Career

Sports Science graduates can pursue further study in related areas, including: physiotherapy, nutrition, clinical exercise, strength and conditioning, coaching and education. Potential careers include; Coaching, Education, Exercise Rehabilitation, Health Promotion, Sport and Leisure Administration, Sports Development

Instructors' Comments

The Introduction to ATT module is a great taster of what Athletic Therapy students learn over the course of their four years in DCU. In this module, students get the chance to learn about the background causes, assessment and treatment of injuries that are crucial to becoming a Certified Athletic Therapist. As well as this, The Intro to ATT modules teaches students key skills of academic writing and literature appraisal. This course would be of particular interest to students interested in sports and the healthcare professions.

Sarah Dillon

EUE Student Testimonials

I love it! The classes are engaging and extremely interesting and I have loved every second of it so far! It really gives you the feeling of getting a taste of university life on campus and I highly recommend it and I can say with pure certainty, as well as all my friends who have partaken in a course, that it has been the highlight of our TY experience. **Biology EUE Student**



Participating in this course has given me an opportunity to experience the college lifestyle as well as participating in the course I am interested in. I have met loads of great friends through the course and I have a better understanding of college life overall. I am very grateful for this opportunity to participate in a course that most 4th year students will not get to experience. **International Relations Student**



It is so nice to be able to sit in a college campus with individuals who wish to learn more about and or have interest in the same course as you as I have found it to be very beneficial studying the course having been able to talk to my peers and discuss topics further to be able to compare, develop theories as well as properly research. **Psychology Student**



Overall it was an amazing experience. I felt academically challenged, yet it was extremely fun and I'd recommend this opportunity to anyone. It definitely helped me in figuring out what I wanted to do/study post-secondary school. **Philosophy Student**



EUE was one of the highlights of my TY experience. It was so refreshing to be in a new, more intellectually challenging environment with young people who shared the same interests as me. It gave me real insight into the areas of study I want to pursue in the future and the course material was thought provoking and made accessible through group work and creative projects I found to be thoroughly enjoyable, I genuinely looked forward to learning and seeing my newfound friends every week! 100% recommend participating if you are someone who likes cerebral stimulation in the company of like-minded individuals! **Philosophy Student**



Participating in EUE was one of the best things I did in transition year. It was a great experience and I really enjoyed it. I always felt welcome and I made so much more friends than I thought I would that I still talk to. The instructors were always so encouraging and my classmates and I worked together and had lots of fun even when the coursework was challenging. The coursework benefits me still to this day in my everyday life and in my school work. The thing I enjoyed about the experience was talking to people with similar interests and seeing a glimpse of what college is like. Overall it was an amazing experience and would recommend it to anyone because I think everyone gets benefits from it academically and socially. **Engineering Student**



I, for one, had thoroughly enjoyed doing the physics course from EUE. It definitely enlightened me into pursuing physics through leaving cert, and as a consequence, also made me interested in applied maths, as part of the course is quite interlinked. The tutor was really helpful at guiding us to the right answers, and aided us during our tutorial times as best as she could, overall, a fantastic experience I would highly recommend. **Physics Student**



Taking part in EUE has to be the best decision I made in Transition Year. My favourite thing has to be that we get to choose what we study, making it much more freeing than school. The teachers have all been really helpful and I never left feeling that the day was bad. At first I was worried about having a new class but it turned out to be fantastic. I got the opportunity to meet so many new people and this was made better by the in-class debates and discussions we all had. The only downside for me were 2 bus rides home that would be late sometimes. However, I find that the experience itself outweighs the negatives! More than anything, this course has made me excited for college and has helped prepare me in some ways. Not just that, but EUE has helped me discover a passion for debate and Law! I'll definitely recommend this course to my brother when he's old enough. **Law & Politics Student**

Parent Testimonials

Participating in the EUE programme is a wonderful opportunity for a TY student to completely embrace a university course and indulge in the material. (She) just loves the course she is doing (**Law and Politics**) and is really enjoying the experience. She comes home from her day in DCU full of information and new knowledge. I believe this experience will reaffirm her desire to study law at university.



We have had a very positive experience with the EUE (**Engineering**) programme. It is an amazing opportunity for any student who is in the position to be able to do it. The communication is amazing from the EUE staff who constantly keep parents and students up to date with all correspondence. My son was nervous at the beginning but once he took that first step into DCU he hasn't looked back. This is fantastic for any young student to add to their CV also.



The opportunity that this programme provides is extremely beneficial. Not only does it provide great course access and content but it also allows EUE students to flourish in a world that they can grow and excel both academically and as young adults. It alleviates any fears that students may have around third level education. Meeting likeminded friends is also an added bonus. This has transformed our son's life for the better. – parent of student in **International Relations**



My older son really enjoyed his Politics and Law course during his transition year, but **Engineering** and, this term, **Physics**, has been absolutely transformative for my younger son. I've never seen him come home from regular school this excited about learning anything, and while I confess that I don't always even understand what he's telling me, the very idea that he's excited about, say, various properties of different matters makes ME excited for him. It has helped him clarify and crystallise his likes and interests and helped set his path for his leaving cert subjects, and after these difficult couple of years for all our children, it's a massive relief to me that EUE has allowed my child to remain interested in and excited about learning.



The EUE programme has provided my daughter with important opportunities for intellectual, social and personal development. The standard of curriculum delivery and student support is extremely high. Through her participation in the EUE programme (**Psychology**), my daughter has gained key skills as well as valuable insights into third level teaching and learning methods. This has been the highlight of her TY experience.



I was not totally for it as we are in Donegal however she takes the 5am bus to Dublin and 5.30 pm bus home and even with the long commute she is so unbelievably happy and enjoying every minute of her course and can't wait to go to university. It has clearly helped in her choosing her subjects for leaving cert as she wanted to do all science subjects but was afraid she was not leaving her options open but she has no doubts whatsoever 5 weeks in ...that for her it's **science** all the way...



(My son) has benefitted enormously from the programme. When I picked him up from the very first session, his eyes were shining and he didn't stop talking the whole way home. He was delighted to finally meet other students as passionate about **Physics** as he is and was mentally stimulated by the subjects covered. It's crystallised his desire to study Physics at third level. It has been the highlight of his week.



I am delighted with the outcome of my son attending the **psychology** class in DCU every Thursday. From the very first day of the class he was happy. He said that the atmosphere in the classroom is very warmth and welcoming. His classmates are friendly. The instructors were very engaging and topics were interesting. He looks forward coming to the class on Thursday with excitement. I am grateful for this opportunity my son was given.

Course Dates & Times

Timetable information

Each semester runs over 13 weeks. Students will be required to attend at lectures during school holidays if lectures are scheduled.

Semester 1

Begins week starting Monday, 12th September 2022	Concludes week ending Friday, 16th December 2022	<u>Exams</u>: Final week of term
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Please note there are no lectures on the week of the 31st October 2022.

Class will take place between 10am and 4pm, with an hour for lunch and a short break mid-morning and mid-afternoon. Exact times will be defined later, to suit lab sessions etc.

Provisionally, we have the following set in place. Please note that days may change. Previously, classes have had to be offered on alternative days due to the large numbers of students and limited availability of classrooms, but we will do our best to offer the classes on the days listed below.

Orientation

The orientation for new students will take place on the Thursday before the semester begins. Parents may attend orientation if desired. Orientation will take place on Zoom.

Timetable

Mondays	Tuesdays	Wednesdays	Thursdays	Fridays
Business Studies	Engineering	Biology	Psychology	Law & Politics
International Relations	Sports Science	Computer Science	Physics	Philosophy

Days may change due to availability of classrooms on the campus.

Daily Schedule

Morning Lecture	Lunch	Tutorial	Afternoon Lecture
10am – 12pm	12pm – 1pm	1pm – 2pm	2pm – 4pm

Arizona Exchange Programme

Gary K. Herberger



**young
scholars
academy**

Continuing the partnership between DCU and Arizona State University, the Early University Entrance Programme at CTYI has linked up with the Gary K. Herberger Academy in Arizona State University. The Herberger Academy is a full time high school dedicated to exceptionally able students (a bit like a year round CTYI). The mission of the Academy is to provide gifted young people advanced education opportunities and develop programmes that serve these students, encouraging them to become globally minded citizens.

We are offering incoming Early University Entrance students the opportunity to take part in an exchange to the Herberger Academy in Arizona. The exchange will last three weeks, from approximately the **6th August to September 10th, 2022**. Students will be staying with host families whose children attend the Academy year round. The students will have the opportunity to take part in classes with the Academy's full time high school students, attend lectures within the University and experience the Academy's annual back to school camping trip, as well as other extra-curricular activities. We will be choosing participants on a lottery system and there are three places on offer. The conditions are as follows:

- The student attending **MUST** commit to two semesters of Early University Entrance and pay the total price (€1600) before **30th June 2022**.
- CTYI will cover the cost of flights and the students will be accompanied by a member of CTYI staff flying over, but not flying back.
- Student's families **MUST** agree to host a US student on their return in January/February; this stay will be approx. three weeks.
- Students will pay their host family **\$500 (€450)** to cover accommodation and board. Students from Arizona pay the same when they stay with their Irish host family in February.
- Students will be assigned their host family by Kim Lansdowne, Executive Director of the Herberger Academy. (Kim has been a friend to CTYI for many years and currently sits on the CTYI Academic Advisory Board). Students will be assigned with students the same age and gender.
- Applications are open now and students will be chosen in our lottery on the **10th June 2022**.

Fees, Scholarships & Financial Aid

Fees

The fees for the Early University Entrance Programme semester 1 are **€800** in total.

Semester fees are paid in two portions:

A €200 registration fee is required with your application. (This is refundable if you don't get offered a place).

The remaining €600 fee will fall due on **Friday, 5th August 2022**.

Payment can be made by cheque, bank draft, postal order, or credit/debit card. Cheques & POs should be made payable to "CTYI". Cash is not accepted.

To pay by card, go to **<https://www.dcu.ie/ctyi/application-payment>** where you will be able to pay through the CTYI Online Payment Portal.

Scholarships

CTYI Scholarships

The Centre provides one scholarship per class. The details on how to apply for this are in the student application form. Please note that scholarships are awarded on the basis of merit and need.

DCU Sports Scholarships

CTYI in conjunction with DCU Sport have created 4 scholarships for students with high sporting achievement as well as academic achievement. The application for the DCU Sports Scholarship can be found in the attached application form.

Financial Assistance

Financial assistance is also available and is granted on the basis of need. . Please contact Catriona if you require a form for this, as it should accompany your application.

DCU DEIS-linked Schools

Students from DEIS schools linked to DCU should contact Catriona directly also, as they are eligible for greatly reduced fees. Please find a list of these DEIS schools below.

Only students from the schools listed overleaf qualify for reduced EUE fees. Please note this reduced fee only applies to EUE courses.

DCU DEIS-linked Schools

Beneavin De La Salle College

Beneavin Road, Finglas, Dublin 17

Chanel College

Coolock, Dublin 5

Colaiste Dhulaigh

Barryscourt Road, Coolock, Dublin 7

Colaiste Eoin

Cappagh Road, Dublin 11

Cabra Community College

Kilkiernan Road, Cabra, Dublin 9

Grange Community College

Grange Road, Donaghmede, Dublin 13

Margaret Aylward Community College

The Thatch Road, Whitehall, Dublin 9

New Cross College

Cappagh Road, Dublin 11, Dublin 5

Mercy College

St. Brendan's Drive, Malahide Road, Dublin 9

Pobalscoil Neasáin

School Ln, Baldoyle, Dublin 13

Rosmini Community School

9 Gracepark Road, Drumcondra, Dublin 9

St Aidan's C.B.S.

Collins Avenue, Whitehall, Dublin 11

St David's CBS, Artane

Malahide Road, Artane, Dublin 5

St. Marys Holy Faith, Glasnevin

Old Finglas Road, Glasnevin, Dublin 11

St Mary's Holy Faith, Killester

Brookwood Meadow, Killester, Dublin 7

St Vincent's CBS

Finglas Road, Glasnevin, Dublin 11

St. Finian's Secondary School

Castlefarm, Swords, Dublin 11

St. Kevin's College

Ballygall Rd East, Finglas, Dublin 11

St. Michael's Holy Faith

Wellmount Road, Finglas, Dublin 9

The Donahies Community School

Streamville Road, Dublin 13

Trinity Comprehensive

Main Street, Ballymun Road, Dublin 9

Exams, Credits & Exemptions

Students are strongly encouraged to undertake all assessments associated with their modules. This includes continuous assessment and examinations. If a student opts to take the examinations, they will receive a transcript of their results from the Centre for Talented Youth.

Please note that the nature of this programme means grades obtained through examination will not be stored by Dublin City University. They will however be retained by CTYI. If the exam taken was the same, and the student decides to return to that degree programme (or a degree programme that shares that module), post-Leaving Certificate, they may be able to apply to their particular School for exemptions from these modules. These credits may only be redeemed on relevant DCU degree programmes, are not transferable to any other third level institution, and their redemption is entirely at the discretion of the school involved.

It should also be noted that participation on the Early University Entrance Programme does not entitle students to a place on an associated degree programme upon completion of the Leaving Certificate. Students wishing to return to that degree programme must apply through the CAO.

Academic Arrangements

Student Enrolment

Early Entrants will be registered as CTYI students, not DCU students.

Lecture Attendance

Students are required to attend all scheduled lectures. Lecture attendance will be monitored by CTYI, and parents/students will be expected to call/email the office to notify of any absences. All attendance is recorded and we write out to the TY coordinator from each school at the end of the semester with the full attendance record for their students.

Course Delivery and Online Components

Each module will be supported by content on the Google Classroom platform, including copies of lecture slides and notes, useful links, class discussion forums, and further resources.

Since we had to adapt our teaching during the Covid period, we are now livestreaming the lectures as they happen on the DCU campus. This means that students don't need to come to the campus each week, which will be helpful to students coming a long distance. Zoom links, etc. will be sent to students prior to the course starting.

Course Numbers

There will be a limited number of places available on each of the Early University Entrance courses. Class groups on EUE are typically 20-24 students. Where we are oversubscribed, we may make up on a second class group. Please be aware that some courses are more limited than others due to lab restrictions, etc.

Student Difficulties

Parents are asked to contact the office in the event of their child experiencing any difficulty; academic, social or otherwise.

Dr. Catriona Ledwith will be available to the Early Entrants during the week for support. Where a student is experiencing difficulties on the Programme, they, their parent/guardian or their school are advised to contact us immediately. In the event that Dr. Ledwith is unavailable, Early Entrants should report to the CTYI Director, Dr. Colm O'Reilly.

Research

Like the original Early University Entrance programme, we engage in research to better understand the outcomes of the programme. Full details of any planned research will be outlined and participation is optional.

Discipline

The Early University Entrance Programme demands the same standards of behaviour, one would normally find in a caring, well-organised home. Honesty, cooperation and respect will be expected from all students. Rules concerning student conduct will be explained at the beginning of the Programme. Our rules are for the safety and well-being of all students and we ask both parents and students to cooperate fully with the Programme. Students may be dismissed from the Programme for any of the following reason:

- Stealing
- Vandalism
- Unruly or abusive behaviour
- Bullying
- Possession of alcohol, drugs, tobacco or any substance controlled by law
- Not attending satisfactorily to their academic work
- Being off campus without specific authorisation
- Violating or putting at risk the safety and well-being of any person
- Non-compliance with any of the University rules and regulations

Or for any other reasons, which in the opinion of the director are of a sufficiently serious nature to warrant dismissal.

Any student who has been dismissed from the Programme will not be permitted to take end of semester examinations.

Online Code of Conduct

CTYI will conduct these classes through university supported applications and students will be assigned CTYI email addresses for communication. Please note CTYI is responsible for these accounts and can access and terminate these at any stage.

Staff will only communicate with students through these forums and will only contact students through mobile devices in emergency situations.

CTYI is not responsible for information shared between students through personal mobile devices but will apply any sanctions necessary if any rule is breached and all child protection standards will be applied.

Students must not:

- Play videos or music while the class is in progress
- Post comments unrelated to the class topic or about other students in the chat/class
- Have parents or other people not in the course visible on screen during the class
- Share the link or login details of the online class with others
- Take screenshots of the class or attempt to photograph or record the class in any way
- Share any inappropriate image or document on screen at any stage - this includes inappropriate Zoom backgrounds
- Appear in a state of undress
- Attempt to contact a staff member on any social network
- Use your @ctyi.org account to open any external accounts. It is to be used for these classes only.

Please note that continued breaking of rules or behaviour which disturbs other students' learning will lead to a student being muted or removed from the online session.

Application Procedure

Applicants must prove that they are sufficiently motivated and ready to undertake learning in a real university environment. The letter of motivation and school recommendations are included in the application pack so that students can present their desire to participate as fully as possible. As spaces are limited on the programme, it is important that applicants take this opportunity to present themselves as worthy candidates for the programme.

How do I Apply?

Candidates should complete the application form accompanying this information brochure. Applicants should refer to the checklist below to ensure that their application contains all of the necessary information. The closing date for receipt of applications is **Friday, 20th May 2022**

Recommendations

You must have two recommendations from teachers at your school. Recommendations should be posted separately. They should be forwarded by your referees to:

Dr. Catriona Ledwith
Early University Entrance Programme
Centre for Talented Youth, Ireland
Dublin City University
Dublin 9

Application Checklist

Please ensure that your application includes the following information:

- τ Completed Application Form
- τ €200 Registration Fee
- τ Recommendations submitted to teachers for completion
- τ Signed parent and student consent forms
- τ Copy of Psychologist's report, if requested

Please note that **Teacher Recommendations** may follow your application. Make sure to get your application form in first and we will contact you if your recommendations have not been returned.

Brochures not received

If you know a CTYI student who is in Transition Year during the 2022-23 academic year and has not received this information pack, please ask them to contact 083 11 66 022 or **catriona.ledwith@dcu.ie**.

Once we Receive your Application

We aim to send course offers by post approximately 3-4 weeks after the closing date. Please bear in mind we receive an increasingly high number of applications each year so unfortunately we cannot guarantee when the course offers will be posted, but we process them as quickly as we can.

Details of orientation days will be included in course acceptance packs.

Terms & Conditions

Registration Fee

All fees include a €200 registration fee, which is non-refundable for courses accepted. Returned Cheques/declined Credit Cards: Returned cheques/declined credit cards are liable for a €10 fee to cover handling costs. Please note, your child's application will be suspended until the payment has been processed.

Course Allocations

All communication relating to course allocations is communicated by Post. Please do not call the office as we cannot share this information by any other means.

Please note that -

- Fees are non-transferable.
- No refunds will be made to students dismissed from the programme.
- Students and their families are liable for any damage they cause to university property.
- CTYI reserves the right to cancel or alter any course, if due to unforeseen circumstances the course cannot be run economically or efficiently.

Refunds

Written requests for a refund of Application Fees received up to and including 6th August will be considered. After this date there will be no refund of Application Fees.

Refunds are only provided where a course does not take place or where a course is full.

No refunds will be offered in the event of the course moving online due to public health guidelines or a university directive.

Refunds are not given if the student withdraws from the programme having been offered a place on one of their course choices.

The €200 Registration fee is non-refundable for courses accepted.

Important Application Dates

Closing Date for Applications...	Friday, 20 th May 2022
Balance of Fees...	Friday, 5 th August 2022
Orientation...	Thursday before the semester begins
Lectures begin...	Week beginning Monday 12 th September 2022

Contact Information

Dr. Catriona Ledwith
EUE Programme Organiser
catriona.ledwith@dcu.ie
01 700 8423

Ms. Hazel Skinner
EUE Administrator
hazel.skinner@dcu.ie
01 700 5598

Ms. Cathy Woods
EUE Administrator
cathy.woods@staff.ctyi.org
01 700 7031

CTY Ireland
Main Office
ctyi@dcu.ie
01 700 5634

Closing date for Applications
Friday, 20th May 2022

Post applications to:
Early University Entrance Programme
CTY Ireland
Dublin City University
Dublin 9

