



YOU THINK YOU MIGHT WANT TO STUDY:

CIVIL
ENGINEERING

BUILDING
ENERGY,
SERVICES
& DESIGN

QUANTITY
SURVEYING

CONSTRUCTION
& FIRE
TECHNOLOGY

ARCHITECTURAL
TECHNOLOGY

FIRE SAFETY
ENGINEERING

COURSE LISTING

Bachelor of Engineering in Civil Engineering

**Bachelor of Engineering in Building Energy,
Services & Design**

Bachelor of Science in Quantity Surveying

**Bachelor of Science in Construction
& Fire Technology**

Bachelor of Science in Architectural Technology

**Bachelor of Science Honours in
Fire Safety Engineering**

DEPARTMENT OF CIVIL ENGINEERING & CONSTRUCTION

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The courses in the Department of Civil Engineering and Construction lead to a wide range of career opportunities in the construction industry – from civil engineers designing bridges, roads and structures, to quantity surveyors costing construction projects; building services engineers designing energy usage systems to construction technologists managing sites; fire safety engineers implementing fire safety technology to architectural technologists designing construction details.

All professional engineering courses (Civil Engineering, Building Energy, Services & Design and Fire Safety Engineering) have been accredited by Engineers Ireland and the Quantity Surveying course is accredited by the Society of Chartered Surveyors.

Accreditation is being sought from the Royal Institute of the Architects of Ireland (RIAI) for the BSc in Architectural Technology.

COURSE TITLE

BACHELOR OF ENGINEERING IN CIVIL ENGINEERING

NATIONAL FRAMEWORK LEVEL

7

CAO CODE

LY527

DURATION

3 years

NUMBER OF PLACES

28

AWARDING BODY

LYIT

POINTS IN RECENT YEARS

YEAR	FINAL	MEDIAN
2008/09	165	295
2009/10	95	250
2010/11	AQA	235

Is this the course for you?

Do you want to be at the heart of society, delivering sustainable development through knowledge, skills and professional expertise? Then civil engineering could be for you. Infrastructure such as dams, bridges, roads, tunnels, railways, airports, harbours and large buildings are all designed and maintained by civil engineers. They also work on public services such as sewerage and water supply facilities, dealing with air, ground and water pollution.

On completing this course you would be entitled to become an Associate Civil Engineer with a broad-based technician level training and practical experience using the latest technology such as Electronic Distance Measurement (EDM) equipment and Computer Aided Design (CAD) systems.

Minimum entry requirements

Pass (OD3 or better) in 5 Leaving Certificate subjects, including passes in Mathematics and in either Irish or English (or an equivalent qualification). The minimum points for entry is 140 points.

Career Opportunities

Whether you decide to work as a civil engineering technician or to specialise in a particular area, you will have a creative, lucrative and varied career employed by:

- Private civil engineering contractors – roles include site management, design and detailing, project planning and estimating (civil works)
- Consulting civil or structural or environmental engineering companies – designing projects and assessing environmental impacts
- Local and central government – working on the provision of local services such as clean drinking water systems, safe road construction, new services development
- Material testing laboratories – quality assurance of all materials used in the construction processes.

Visit www.steps.ie, www.iei.ie, www.ice.org.uk and www.istructe.org.uk for more career ideas.

Follow-up study options

- Honours degrees at other institutes or universities. A fully accredited Engineers Ireland honours degree in civil engineering normally takes 2 years of further study.
- LYIT has an articulation agreement with Edinburgh Napier University. Gain an average of 50% or above in final year subjects at the first sitting for entry to year 3 of the BEng (Hons) / MEng Civil Engineering courses.
- Bachelor of Science (Honours) in Fire Safety Engineering at LYIT (1 year).

What will I study?

Year/ Semester	Proposed Modules	Mandatory /Elective	Class hours per week	No. of credits
1 1	Elementary CAD	M	4	5
	Structures 1	M	5	5
	Surveying 1	M	4	5
	Communications & IT 1	M	3	5
	Mathematics 1	M	4	5
	Physics 1	M	4	5
1 2	Construction Technology & CAD	M	5	5
	Structures 2	M	5	5
	Surveying 2	M	4	5
	Communications & IT 2	M	3	5
	Mathematics 2	M	4	5
	Physics 2	M	4	5
2 3	Mathematics 3	M	4	5
	Civil Engineering Methods	M	4	5
	Water & Wastewater Technology	M	4	5
	Materials Technology	M	4	5
	Structures 3	M	5	5
	Surveying 3	M	4	5
2 4	Mathematics 4	M	4	5
	Research & Communications	M	3	5
	Fluid Mechanics	M	4	5
	Soil Mechanics 1	M	5	5
	Structures 4	M	5	5
	Surveying 4	M	4	5
3 5	Civil Engineering Materials	M	4	5
	Hydraulics	M	4	5
	Project 1	M	3	5
	Structures 5	M	5	5
	Mathematics 5	M	4	5
	Civil Engineering Practice	M	3	5
3 6	Highway & Traffic Engineering	E	4	5
	Occupational Safety & Health	M	3	5
	Project 2	M	3	5
	Soil Mechanics 2	M	5	5
	Structures 6	M	5	5
	Mathematics 6	M	4	5
	Environmental Engineering	E	4	5



COURSE TITLE

**BACHELOR OF ENGINEERING
IN BUILDING ENERGY, SERVICES
& DESIGN**

NATIONAL FRAMEWORK LEVEL

7

CAO CODE

LY517

DURATION

3 years

NUMBER OF PLACES

32

AWARDING BODY

LYIT

POINTS IN RECENT YEARS

YEAR	FINAL	MEDIAN
2008/09	N/A	N/A
2009/10	AQA	240
2010/11	115	235

Is this the course for you?

Are you interested in how buildings come to life? More than just bricks and mortar, buildings have a pulse made up of all kinds of services, equipment and technology.

This course covers all systems and facilities that make buildings function safely, efficiently and comfortably, such as heating, ventilation and air conditioning systems, lighting, lifts, plumbing, acoustics, power, energy, information technology and security systems.

If you feel that working with electrical and mechanical systems and understanding how different energy usage technologies affect the environment is for you, then the specialist area of building services could be what you're looking for.

Minimum entry requirements

Pass (OD3 or better) in 5 Leaving Certificate subjects, including passes in Mathematics and in either Irish or English (or an equivalent qualification). The minimum points for entry is 140 points.

Career Opportunities

The shortage of engineers in this growing, specialist area means that building services engineers have excellent career prospects. They are needed to design, install and maintain the systems and equipment needed to allow buildings to function.

You may find yourself working on the design of heating systems for special care baby units or creating a sustainable energy usage system for a large office block. Your expertise could be applied to buildings with all kinds of different uses.

Typical employers include:

- Building services engineering consultancies
- Architectural services companies
- Renewable energy companies
- Energy assessors & auditors
- Building contractors.

This course is accredited by Engineers Ireland at Associate Engineer level.

This course also incorporates the Sustainable Energy Authority of Ireland's (SEAI) Assessor Training Course for Building Energy Rating (BER), enabling graduates to apply to the SEAI for registration as BER Assessors (see page 130).

Visit www.steps.ie, www.cibse.org.uk, www.iei.ie and www.seai.ie for more career ideas.

Follow-up study options

- Honours degree in building services or energy engineering at other institutes or universities. A fully accredited Engineers Ireland honours degree in building services engineering normally takes 2 years of further study
- Bachelor of Science (Honours) in Fire Safety Engineering at LYIT (1 year).

What will I study?

Year/ Semester	Proposed Modules	Mandatory /Elective	Class hours per week	No. of credits
1 1	Building Services 1	M	4	5
	Elementary CAD	M	4	5
	Electrical Services 1	M	4	5
	Communication & IT 1	M	3	5
	Mathematics 1	M	4	5
	Physics 1	M	4	5
1 2	Building Services Design 2	M	4	5
	Construction Technology & CAD	M	5	5
	Electrical Services 2	M	4	5
	Communications & IT 2	M	3	5
	Mathematics 2	M	4	5
	Physics 2	M	4	5
2 3	Mathematics 4	M	4	5
	Building Services Design 4	M	5	5
	Electrical Services 4	M	4	5
	Process Control for Building Services	M	4	5
	Design Project	M	4	5
	Lighting & Acoustics	M	4	5
2 4	Building Services Design 3	M	5	5
	Electrical Services 3	M	4	5
	Electro-Mechanical Draughting	M	4	5
	Fluids & Thermodynamics	M	5	5
	Research & Communications	M	3	5
	Mathematics 3	M	4	5
3 5	Building Services Design 5	M	4	5
	Renewable Energy Technologies	M	3	5
	Environmental Modelling	M	4	5
	Mathematics 5	M	4	5
	Electrical Services 5	M	4	5
	Project 1	M	4	0
3 6	Mathematics 6	M	4	5
	Building Services Design 6	M	4	5
	Occupational Safety & Health	M	3	5
	Project 2	M	6	10
	Sustainable Construction & Building Energy Rating (BER)	M	4	5
	Construction Management	M	3	5



COURSE TITLE

**BACHELOR OF SCIENCE IN
QUANTITY SURVEYING**

NATIONAL FRAMEWORK LEVEL

7

CAO CODE

LY507

DURATION

3 years

NUMBER OF PLACES

32

AWARDING BODY

LYIT

POINTS IN RECENT YEARS

YEAR	FINAL	MEDIAN
2008/09	200	302
2009/10	115	250
2010/11	135	265

Is this the course for you?

If you like the idea of being able to examine building drawings and know how much it would cost to make them a reality, then this course could be for you.

Quantity surveyors estimate and manage the construction costs of building projects – they take building design drawings and decide how much of each material is needed, the costs involved, the project planning needed to get it off the ground and any tax or legal implications that may arise. This course teaches the practical measuring skills and the legal, financial and business knowledge needed for careers in this area.

Minimum entry requirements

Pass (OD3 or better) in 5 Leaving Certificate subjects, including passes in Mathematics and in either Irish or English (or an equivalent qualification). The minimum points for entry is 140 points.

Career opportunities

Graduates of the course measure and price materials for building construction and work up to project management roles where they make key decisions as a project develops from start to finish.

They also work with teams in other areas of an organisation. For example, they may help a company's sales team to cost tender documents, they often influence the building design team to keep designs in line with costs and they may offer advice on contractor selection and materials purchasing.

Typical employers include:

- Professional quantity surveying (PQS) practices
- Building contractors
- Property developers
- Housing associations
- Local and central government
- Industrialists.

This course also incorporates the Sustainable Energy Authority of Ireland's (SEAI) Assessor Training Course for Building Energy Rating (BER). Certified graduates may apply to the SEAI for registration as BER Assessors.

Domestic BER Assessor Statistics (June 2010):

Total Number of Registered Assessors for all Dwellings	2,222*
Number of Certified Assessors (Including Registered Assessors)	6,978

*Of those who have passed the domestic BER exam

The course is approved by the Society of Chartered Surveyors (SCS) at technician level, so graduates may complete their Assessment of Technical Competence (ATC) and apply for the title of Technical Surveyor (TechSCS).

Follow-up study options:

- Honours degree at other Institutes or Universities. An honours degree with associate accreditation from SCS normally requires 1-2 years of further study.
- LYIT has an articulation agreement with Edinburgh Napier University. Gain 60% or above in final year subjects at the first sitting for entry to year 4, otherwise gain an average of 50% or above for entry to year 3. The BSc Honours in Quantity Surveying is accredited by the RICS (Royal Institute of Chartered Surveyors) as meeting the education requirements to become a Chartered Surveyor

Visit www.scs.ie and www.rics.org.uk for more career ideas.



What will I study?

Year/ Semester	Proposed Modules	Mandatory /Elective	Class hours per week	No. of credits
1 1	Quantity Surveying Skills	M	5	5
	Construction Technology 1	M	4	5
	Mathematics 1	M	4	5
	Construction Science	M	4	5
	Communications & IT 1	M	3	5
	Building Services 1	M	4	5
1 2	Measurement & Pre-contract Cost Planning	M	5	5
	Elementary CAD	M	4	5
	Mathematics 2	M	4	5
	Construction Technology 2	M	4	5
	Communications & IT 2	M	3	5
	Land Surveying	M	4	5
2 3	Measurement & Estimating 1	M	5	5
	Construction Technology 3	M	4	5
	Electro Mechanical Draughting	M	4	5
	Law	M	4	5
	Tendering & Procurement	M	4	5
	Microeconomics	M	3	5
2 4	Measurement & Estimating 2	M	5	5
	Macroeconomics	M	3	5
	Quantitative Methods	M	3	5
	Site Organisation	M	4	5
	Measurement Project	M	4	5
	Building Services 2	M	4	5
3 5	Measurement & Building Economics 1	M	5	5
	Financial Management 1	M	4	5
	Civil Engineering Methods	M	4	5
	Project 1	M	3	5
	Professional Practice	M	4	5
	Project Administration 1	M	4	5
3 6	Measurement & Building Economics 2	M	5	5
	Financial Management 2	M	4	5
	Project Administration 2	M	4	5
	Project 2	M	3	5
	Construction Economics	M	4	5
	Sustainable Construction & Building Energy Rating (BER)	M	4	5

COURSE TITLE

**BACHELOR OF SCIENCE IN
ARCHITECTURAL TECHNOLOGY**

NATIONAL FRAMEWORK LEVEL

7

CAO CODE

LY547

DURATION

3 years

NUMBER OF PLACES

32

AWARDING BODY

LYIT

POINTS IN RECENT YEARS

YEAR	FINAL	MEDIAN
2008/09	100	285
2009/10	125	275
2010/11	120	275

Is this the course for you?

This course attracts people who are interested in the architectural details of how buildings are put together; the space, form and function created by architectural designs and those who have a flair for drawing, ie. sketching, hand drawing and using computers.

You will be based in the architectural studio working on projects individually and as a group. The course provides a good mix of architectural theory, construction technology and practical skills in Computer Aided Design (CAD). It also covers building services and energy usage, how to organise site operations, dealing with tender applications and writing specifications for buildings.

Although this course does not qualify you to work as an architect, it does give you the skills and knowledge to work alongside architects and other building professionals as part of the design team.

Minimum entry requirements

Pass (OD3 or better) in 5 Leaving Certificate subjects, including passes in Mathematics and in either Irish or English (or an equivalent qualification). The minimum points for entry is 140 points.

Career Opportunities

As an architectural technologist, you may work on a variety of tasks from planning, site selection and developing client briefs, to preparing drawings using CAD, interior design and building project management.

Employers include:

- Architectural practices
- Local authorities
- Property developers
- Housing associations
- Engineering companies and consultancies
- Manufacturers of construction components and systems.



This course is being developed in accordance with the guidelines of the accreditation body, the Royal Institute of Architects of Ireland (RIAI).

It also incorporates the Sustainable Energy Ireland (SEI)'s Assessor Training Course for Building Energy Rating (BER), enabling graduates to apply to the SEAI for registration as BER Assessors (see page 130).

Visit www.riai.ie and www.ciat.org.uk for more career ideas.

Follow-on courses

- Honours degrees in architectural technology at other institutes or universities
- LYIT has an articulation agreement with Edinburgh Napier University. Gain an average of 60% or above in final year subjects at the first sitting for entry to year 4, or an average 50% for entry to year 3 of the BSc Honours in Architectural Technology at Napier.
- Subject to a qualifying and selection process, graduates may be eligible to progress to the BSc Honours in Fire Safety Engineering at LYIT (1 Year).

What will I study?

Year/ Semester	Proposed Modules	Mandatory /Elective	Class hours per week	No. of credits
1 1	Elementary CAD	M	4	5
	Construction Technology 1	M	4	5
	Architectural Project 1	M	8	10
	Communications & IT 1	M	3	5
	Construction Science	M	4	5
1 2	Building Services 1	M	4	5
	Construction Technology 2	M	4	5
	Architectural Project 2	M	8	10
	Graphics	M	4	5
	Mathematics	M	4	5
2 3	Construction Technology 3	M	4	5
	History & Theory of Architecture	M	4	5
	Architectural Project 3	M	8	10
	Specification & Tendering Procedures	M	5	5
	Land Surveying	M	4	5
2 4	Building Services 2	M	4	5
	Construction Technology 4	M	4	5
	Architectural Project 4	M	10	15
	Site Organisation	M	4	5
3 5	Construction Technology 5	M	4	5
	Architectural Project 5	M	10	15
	Structural Design & Materials	M	4	5
	Professional Practice	M	4	5
3 6	Construction Technology 6	M	4	5
	Sustainable Construction & Building Energy Rating (BER)	M	4	5
	Architectural Project 6	M	10	15
	Advanced CAD, Modelling & Visual Presentation	E	4	5
	Fire Engineering	E	4	5



COURSE TITLE

**BACHELOR OF SCIENCE
IN CONSTRUCTION & FIRE
TECHNOLOGY**

NATIONAL FRAMEWORK LEVEL

7

CAO CODE

LY537

DURATION

3 years

NUMBER OF PLACES

28

AWARDING BODY

LYIT

POINTS IN RECENT YEARS

YEAR	FINAL	MEDIAN
2008/09	AQA	250
2009/10	105	275
2010/11	130	245

Is this the course for you?

Are you a practical person? Do you want the opportunity to work indoors and outdoors as part of a construction team? This course gives you a broad training in all aspects of the building industry.

The science of construction looks at the building process from the first site survey, through all the construction stages to completion, when the building is secure, safe and ready for use. The course covers everything from building design regulations, site administration, health and safety to materials costing. The scientific principles and practical skills learned apply to all kinds of buildings, be they for industrial, domestic, retail or leisure use.

Minimum entry requirements

Pass (OD3 or better) in 5 Leaving Certificate subjects, including passes in Mathematics and in either Irish or English (or an equivalent qualification). The minimum points for entry is 140 points.

Career Opportunities

As a construction technician, your role may involve many different aspects of construction such as: land surveying, using CAD to create construction drawings, managing on-site safety and operations, interpreting and applying building regulations, managing materials usage and assessing fire safety measures. You will also regularly work with people from other related areas such as engineers, architects and quantity surveyors.

Typical employers include:

- Architects
- Local authorities
- Contractors
- Property developers
- Housing associations
- Energy assessors.

This course also incorporates the Sustainable Energy Ireland (SEI)'s Assessor Training Course for Building Energy Rating (BER), enabling graduates to apply to SEAI for registration as BER Assessors (see page 130).

Visit www.cif.ie, www.ciob.org.uk and www.seai.ie for more career ideas.

Follow-on courses

- Bachelor of Science (Honours) in Fire Safety Engineering at LYIT (1 year)
- Honours degrees at other institutes or universities.

What will I study?

Year/ Semester	Proposed Modules	Mandatory /Elective	Class hours per week	No. of credits
1 1	Elementary CAD	M	4	5
	Construction Technology 1	M	4	5
	Surveying 1	M	4	5
	Communications & IT 1	M	3	5
	Mathematics 1	M	4	5
	Physics 1	M	4	5
1 2	Building Services 1	M	4	5
	Construction Technology 2	M	4	5
	Surveying 2	M	4	5
	Communications & IT 2	M	3	5
	Mathematics 2	M	4	5
	Physics 2	M	4	5
2 3	Construction Technology 3	M	5	5
	History & Theory of Architecture	M	4	5
	Measurement 1	M	4	5
	Surveying 3	M	4	5
	Planning Project	M	4	5
	Mathematics 3	M	4	5
2 4	Mathematics 4	M	4	5
	Surveying 4	M	4	5
	Site Organisation	M	4	5
	Measurement 2	M	4	5
	Construction Technology 4	M	4	5
	Building Services 2	M	4	5
3 5	Construction Technology 5	M	4	5
	Measurement & Construction Economics	M	4	5
	Fire Safety Science	M	5	5
	Law	M	4	5
	Project 1	M	4	5
	Structural Design & Materials	M	4	5
3 6	Construction Technology 6	M	4	5
	Sustainable Construction & Building Energy Rating (BER)	M	4	5
	Fire Engineering	M	4	5
	Occupational Safety & Health	M	3	5
	Construction Management	M	3	5
	Project 2	M	4	5



COURSE TITLE

**BACHELOR OF SCIENCE HONOURS
IN FIRE SAFETY ENGINEERING**

NATIONAL FRAMEWORK LEVEL

8

LYIT INTERNAL CODE

LY_CFIRE_B

DURATION

1 year

NUMBER OF PLACES

24

AWARDING BODY

LYIT

In the event of a fire, how safe are you? Have you ever considered who determines where the fire exits are and specifies the fire resistance of materials that surround you? Fire Safety Engineers are responsible for the design of fire safety measures in buildings.

This one-year add-on honours degree is aimed at those who wish to specialise in the growing area of fire safety in buildings. You will study the latest fire safety engineering techniques to design fire escape routes, learn about the regulatory framework and responsibilities, understand how fire spreads and how it causes humans to behave, and take part in risk analysis and practical projects.

Minimum entry requirements

The Bachelor of Science in Construction & Fire Technology or an equivalent (Level 7) qualification with 180 ECTS credits and appropriate learning outcomes, such as a Bachelor of Engineering in Civil or Building Services Engineering.

Increased merit is given to applicants who have studied fire safety engineering modules in their ordinary degree or gained relevant work experience since graduation.

Career Opportunities

As a fire safety engineering consultant you will advise architects and engineers on the technical aspects of fire safety design of buildings. A key role will be ensuring that building owners, developers and designers fulfil legal and regulatory obligations relating to fire safety, including the obligation to obtain fire safety certificates from local authorities. Wherever there is a building design team there is an opportunity for a fire safety engineer.

Employers include:

- Architectural firms
- Fire Safety Consultants
- Health Boards
- Local Authorities
- Fire research laboratories.

This course is recognised by Engineers Ireland at Associate Engineer level. Graduates are also entitled to corporate membership of the Chartered Institute of Building (CIOB).

Visit www.iei.ie, www.ciob.org.uk and www.ife.org.uk for more career ideas.

Follow-on courses

- Masters degrees (by research) at LYIT or at other institutes or universities such as the taught Masters in Fire Safety Engineering at the University of Ulster.

What will I study?

Year/ Semester	Proposed Modules	Mandatory /Elective	Class hours per week	No. of credits
4 7	Fire Dynamics	M	4	5
	Fire Protection Systems	M	5	5
	Fire Safety Design	M	4	5
	Laboratory Practicals	M	4	5
	Quantitative Risk Analysis	M	4	5
	Research Report	M	3	5
4 8	Computer Fire Modelling	M	4	5
	Applications of Fire Safety			
	Engineering Principles	M	4	5
	Fire Safety Management	M	3	5
	Human Behaviour in Fire	M	4	5
Project	M	6	10	

