



OLLSCOIL NA GAILLIMHÉ
UNIVERSITY OF GALWAY

Flexible Construction Innovation courses

2024-25

Commencing September 2024





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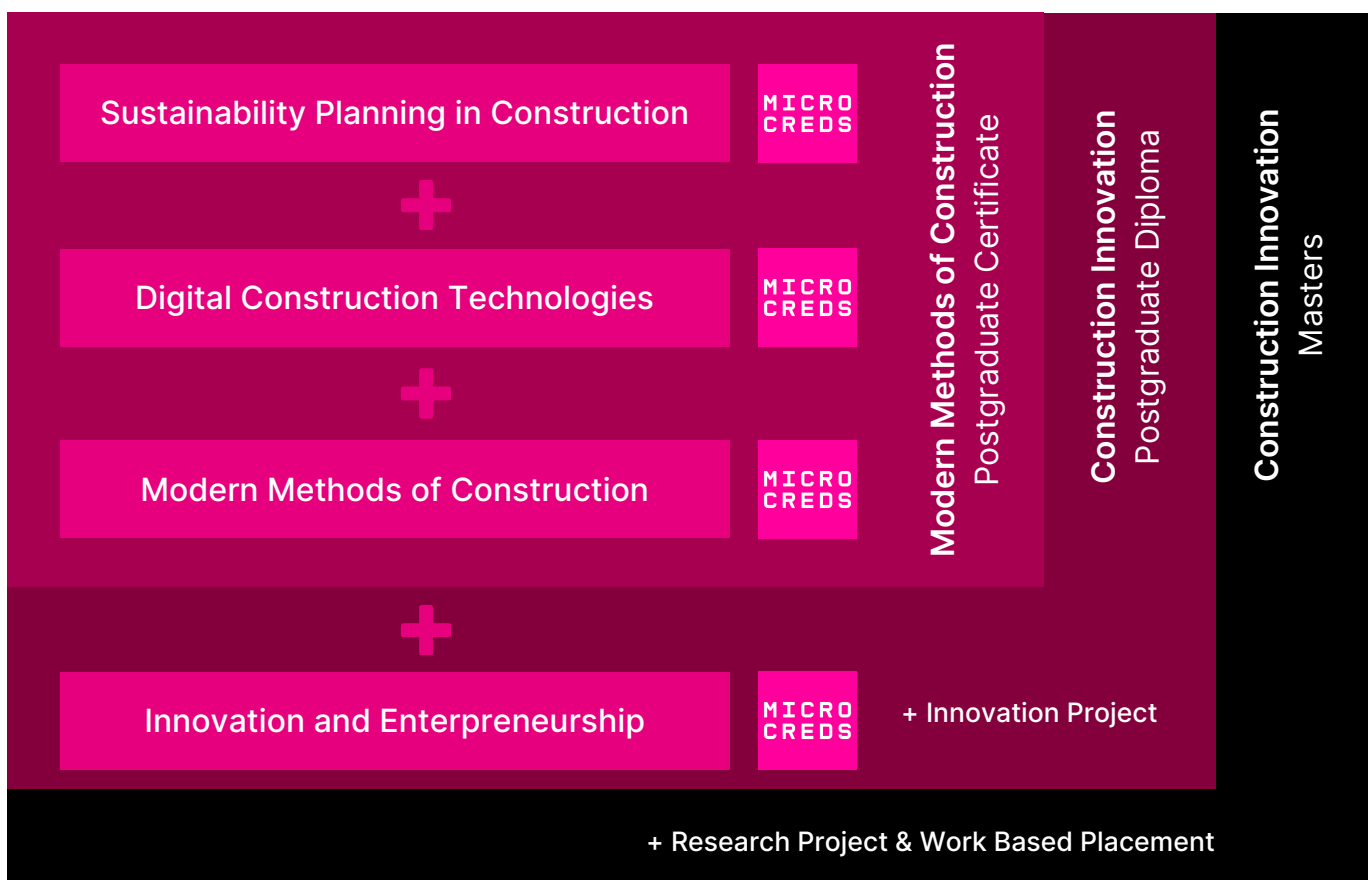


OILLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY

Flexible Construction courses at University of Galway

A suite of courses are being offered in the area of construction innovation including a Postgraduate Certificate in Modern Methods of Construction, together with the Postgraduate Diploma in Construction Innovation, an MSc in Construction Innovation and Micro-credentials. These were developed in response to critical and proven skills needs in the construction/built environment sector and for students seeking skills in innovation, digital adoption, sustainability and modern methods of construction.

Our courses are delivered via blended learning, with course materials and methods available online and supported by weekly webinars and one onsite workshop in the University of Galway every eight weeks. A progression pathway is offered to students who may wish to take a micro-credential and progress to the PG Cert, followed by PG Diploma and onto Masters level.



Passive House Designer

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Modern Methods of Construction

(Postgraduate Certificate)

The Postgraduate Certificate in Modern Methods of Construction is a one-year part-time course that aims to equip students with the key knowledge and skills needed to develop sustainable technological solutions to the challenges facing the construction and built environment sector in Ireland and elsewhere with a particular focus on modern methods of construction. This course will target individuals at multiple qualification levels wishing to upskill/reskill to meet the critical demand for skills in digital adoption, sustainability and modern methods of construction.

This course will enable prospective students to:

- Develop skills and knowledge in sustainability, digitalisation and modern methods of construction;
- Identify opportunities (and challenges) for innovation in the construction sector;
- Continue their professional development to meet the future needs of the sector.

Course Facts

ECTS: 30

NFQ Level: 9

Duration: 1 year, part-time

Mode of study: Blended learning

Fees: €3,850

Subsidised fee: €770*

Start date: Semester 1, 2024

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

*MicroCreds Fee Subsidy of 80% applies for a limited number of eligible applicants. More information on eligibility [can be found here](#).



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Construction Innovation

(Postgraduate Diploma)

The Postgraduate Diploma in Construction Innovation was developed in response to critical and proven skills needs in the construction/built environment sector by Construct Innovate, Ireland's National Research Centre for Construction Technology and Innovation. It is a one-year part-time course, that aims to equip students with key knowledge and skills needed to develop sustainable technological solutions to the challenges facing the construction and built environment sector in Ireland and elsewhere.

The course will develop the newest breed of global entrepreneurs, construction experts and sustainable construction leaders, who can develop innovative concepts, identify market opportunities and tackle challenges related to getting new building products and services to market. This course will support the development of a modernised and sustainable construction sector underpinned by circular economy and climate action.

Course Facts

ECTS: 60

NFQ Level: 9

Duration: 1 year, part-time

Mode of study: Blended learning

Fees: €7,550

Subsidised fee: €755*

Start date: Semester 1, 2024

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

*This course is funded by HCI Pillar 1. It is 100% funded for unemployed students and 90% funded for the employed.



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Construction Innovation (MSc)

The masters course can be taken on a phased basis over a number of academic years (i.e. from micro-credential to PG Certificate, to PG Diploma), coupled with a follow-on final 30 credit Research Project carried out in industry. Alternatively, the course can be taken on a two-year part-time basis.

Whatever mode of study you choose, students of the masters course will develop skills in sustainability, digitalisation and modern methods of construction. With modules covering topics in the area of sustainability, construction innovation and digitalisation students will create novel technology and service solutions to previously unmet, under-met and unrecognised industry problems. Through your research project, you will develop advanced research and analytical skills, including expertise in a specific field, effective communication, teamwork, and project management skills.

The course is delivered through blended learning, consisting of pre-recorded lectures, live online webinars (1 hour/week), live online workshops (2 hours/week), self-directed learning materials, online activities and extensive resources, and on campus sessions (full-day every 8 weeks).

For further course details, visit to our website using the QR code below.

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Sustainability Planning in Construction

This module will support the students, as the current/future construction sector stakeholders, in developing more sustainable construction processes and products, with a focus on areas of energy performance of buildings, retrofitting of existing structures, decarbonisation of construction processes and circularity.

The module will introduce the concept of a just transition for the construction sector, where the needs of end users are understood and translated into new products and processes. This module is a science-based approach and key tools, methods and materials will be explored.

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Course Facts

ECTS: 10

NFQ Level: 9

Duration: 8 weeks, part-time

Mode of study: Blended learning

Fees: €1,850

Subsidised fee: €370*

Start date: Semester 1, 2024

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

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Digital Construction Technologies

This module will cover the broad areas of building information modelling (BIM) technology, digital twinning, visualisation methods and their standard approaches within the construction sector.

Digitalisation will fundamentally change the ways in which construction teams interact. Technologies such as BIM will seamlessly monitor the materials and products delivered to the construction site, in a manner that respects the need for sustainability and traceability.

Furthermore, sensors will provide the data for digital twins and their incorporation into construction elements, thus the ability to analyse and exploit the large volumes of data is required. This module will engage with students to ensure they are fully prepared for the potential of these new work practices. This module is a science-based approach and key tools, methods and materials will be explored.

**MICRO
CREDS**

Course Facts

ECTS: 10

NFQ Level: 9

Duration: 8 weeks, part-time

Mode of study: Blended learning

Fees: €1,850

Subsidised fee: €370*

Start date: Semester 1, 2024

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

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Modern Methods of Construction

Modern methods of construction (MMC) is one of the key areas for the construction and built environment sector. As part of this module, students will develop skills in MMC, as the sector moves rapidly towards Industry 4.0. The module will cover key areas of standardisation and routes to certification, next generation rapid build systems (off-site panelised and modular construction), automation and autonomous construction. This module is a science-based approach and key tools, methods and materials will be explored.

**MICRO
CREDS**

Course Facts

ECTS: 10

NFQ Level: 9

Duration: 8 weeks, part-time

Mode of study: Blended learning

Fees: €1,850

Subsidised fee: €370*

Start date: Semester 2, 2025

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

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Innovation and Entrepreneurship

Construction industry needs to be empowered to take ownership of the innovation process. This module focuses on the overall innovation process, from identifying domain-specific needs, validating those needs, brainstorming, and concept creation for new technology products.

The module utilises the Massachusetts Institute of Technology "Disciplined Entrepreneurship" approach (d-eship.com). The module highlights both business analysis and communication skills, ensuring that graduates are well equipped with skills to manage innovation projects and launch their own enterprises. This module is a science-based approach and key tools, methods and materials will be explored.

**MICRO
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Course Facts

ECTS: 10

NFQ Level: 9

Duration: 8 weeks, part-time

Mode of study: Blended learning

Fees: €1,850

Subsidised fee: €370*

Start date: Semester 2, 2025

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

*MicroCreds Fee Subsidy of 80% applies for a limited number of eligible applicants. More information on eligibility [can be found here](#).



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Passive House Designer

This course was designed in partnership with Passive House Institute (PHI). Learners will become competent Passive House designer/consultants by learning how to define the thermal envelope, to how to overcome frequent planning and construction challenges. This course will cover details of Passive House buildings to achieve the desired energy savings and planned building performance. It provides an overview of the Passive House Standard, the certification requirements and the elements to be considered when designing and building Passive Houses.

An essential component is to learn to effectively use the Passive House Planning Package (PHPP) tool, which is the energy balancing tool for Passive House buildings and efficient retrofits worldwide. PHPP software will be provided to all course students. This course and examinations are accredited by Passive House Institution for the Certified Passive House Designer/ Consultant certificate, which is a qualification recognised worldwide.

**MICRO
CREDS**

Course Facts

ECTS: 10

NFQ Level: 9

Duration: 10 weeks, part-time

Mode of study: Blended learning

Fees: €1,850

Subsidised fee: €370*

Start date: Semester 1, 2024

The mode of study for this module is blended (in-person and online). Assessment will be carried out on a continuous basis.

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