



WELCOME



Graduate Apprenticeships

Derek Thomson Chartered MCIPD
Business Relationship Manager



Why Heriot-Watt? – pioneers in education

95%
of our graduates are in
employment or further
study within 6 months
of graduation

350
over
companies
with employees
benefiting from
upskilling and
reskilling

39%
of our graduate
apprentices achieve
a first class Honours
degree

HW
produces
more CEO's than
any other learning
institute in Scotland
Source: Hitachi Capital
Invoice Finance

Why Heriot-Watt? – our rankings

1st

**in Scotland for
Building**

The Times/Sunday Times
Good University Guide
2023

2nd

**in the UK for
Building**

The Times/Sunday Times
Good University Guide
2023



3rd

**in Scotland for
Civil Engineering**

The Times/Sunday Times
Good University Guide
2023

TOP 15

**in the UK for
Civil Engineering**

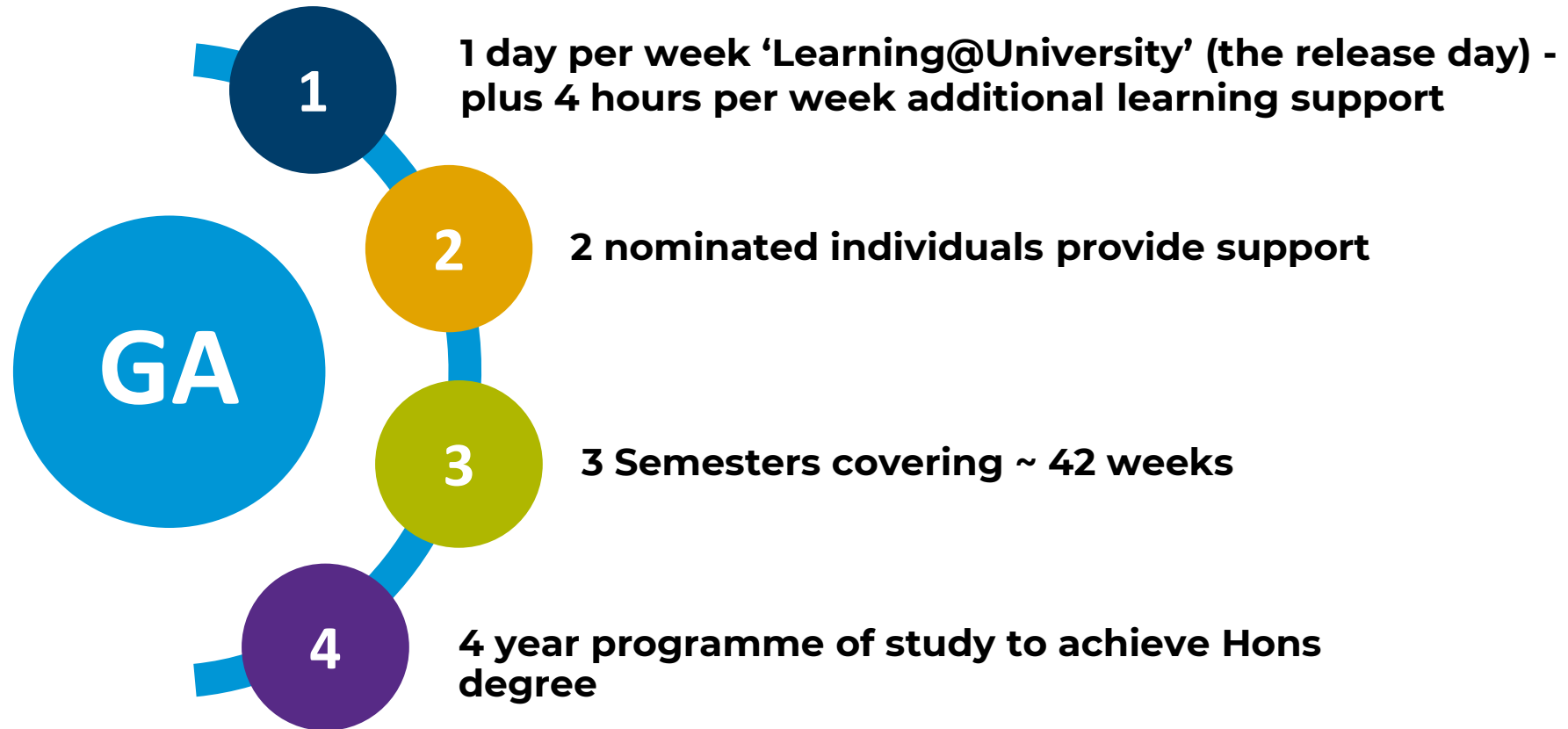
The Times/Sunday Times
Good University Guide
2023

What is a Graduate Apprenticeship (GA)?

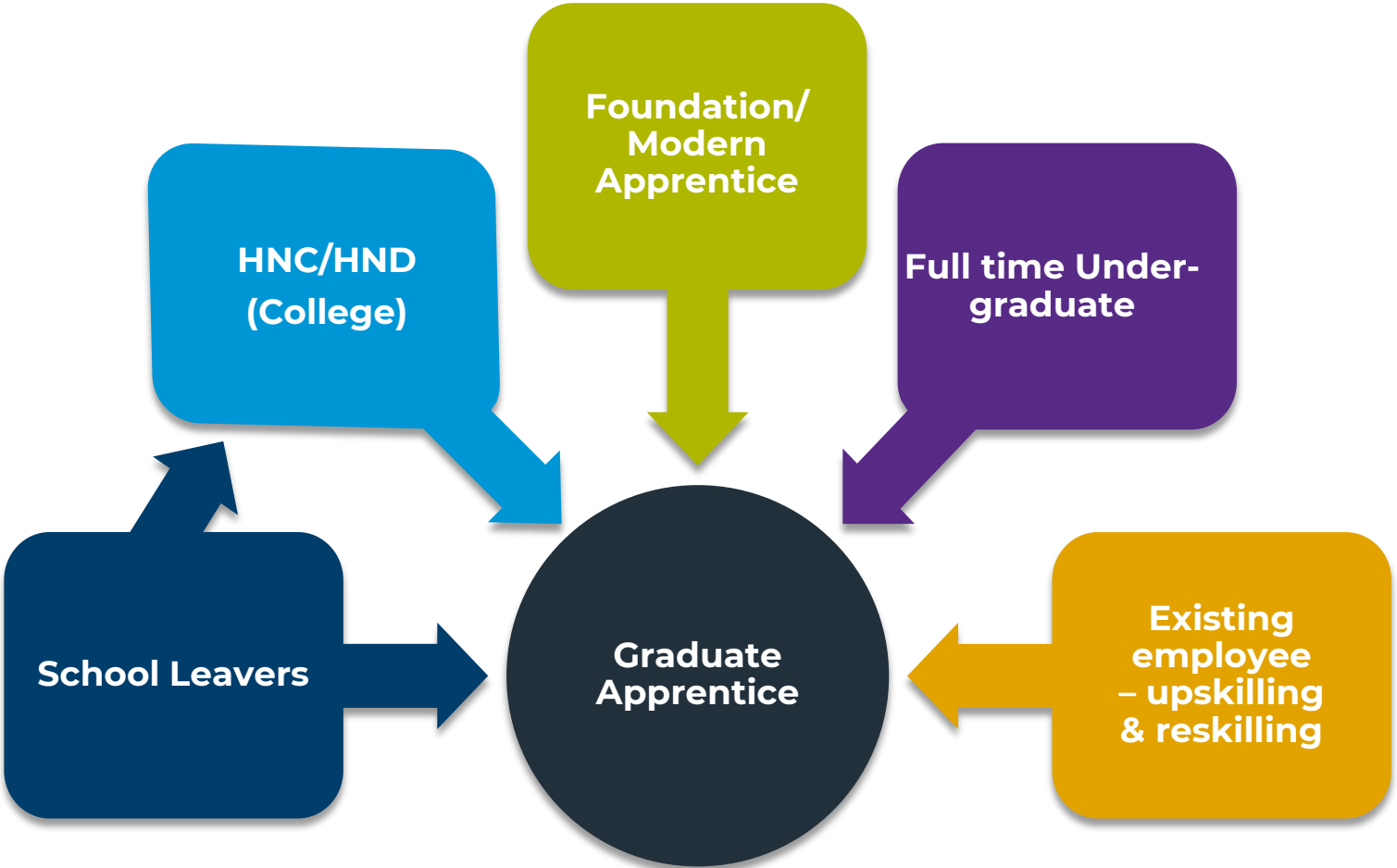


Graduate Apprenticeship = an Apprenticeship which provides an employee with a route to become qualified at Honours degree level, whilst remaining in work

How does a Graduate Apprenticeship work?



GA programmes – candidate pathways



Graduate Apprenticeships – benefits for employers



The basics..... Candidate's checklist

1. **Support from your employer (for 4 years)? –**

- Student Engagement Time
 - ✓ Contact Days (Release for 1 day/week) **PLUS**
 - ✓ Individual Self-Study Time (4 hrs additional Learning Support in work time)
- Work-based learning – undertaken in relevant workplace environment (in work time/ integrated with job)
- Workplace Mentor appointed?

2. **Eligible for SAAS GA funding? -** What's the Process? = Candidates must contact SAAS

3. **Meet HWU Entry Requirements? –** SQA Highers at AAAB (typical)

Each candidate will be assessed for entry individually and other forms of prior learning or experience will be considered if a candidate doesn't hold the exact qualifications

4. **Next Steps to enrol as a GA student? –**

- Candidate completes Pre-Approval Form, Admission Process & Decision,
- Employer Details Form and Employer Support Agreement, Signed and returned,
- SAAS funding letter provided to HWU

5. **Invited to accept a place on GA programme – HWU credentials and student enrolment**

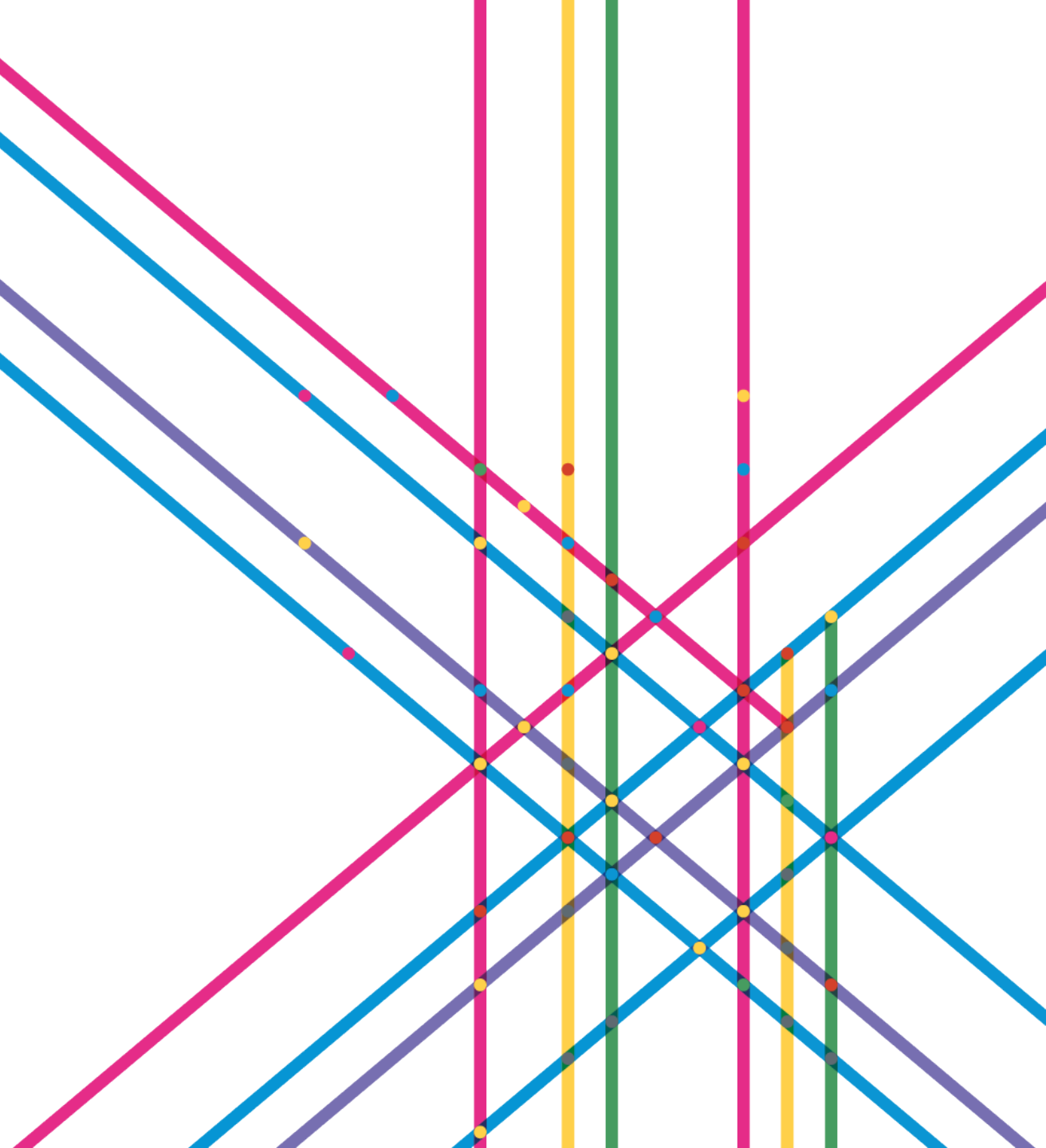
SAAS | Student Awards Agency Scotland
Funding your future





GRADUATE APPRENTICESHIPS: SHAPING TOMORROW TOGETHER

Dr Laurent Galbrun
Programme Director
BEng (Hons) in Civil Engineering



Graduate Apprenticeship: BEng (Hons) Civil Engineering

- Entry requirements
- Programme information
- Programme content/structure
- Work-based learning in practice
- Work-based mentor role
- Accreditation: routes to IEng and CEng



Graduate Apprenticeship: BEng (Hons) Civil Engineering



Civil Engineering at Heriot-Watt University

- *Our Civil Engineering courses are ranked top 15 in the UK and 3rd in Scotland in the Times/Sunday Times Good University Guide 2023.*
- *Heriot-Watt is ranked in the world's top 200 for Civil and Structural Engineering in the QS World University Rankings by Subject 2023.*

Graduate Apprenticeship: BEng (Hons) Civil Engineering



Entry requirements

Based on the qualifications and experience of potential apprentices.

- **Year 1 entry:** this may include, but is not limited to, traditional high school qualifications:
 - SQA Highers at AAAB or AB BBB (Mathematics desirable but not essential)
 - A-Levels at ABC or BBB
 - Candidates should have National 5/Standard Grade Maths or equivalent
- **Advanced entry**
 - SQA Advanced Highers at BB including Mathematics and SQA Highers at AAAB
 - A-Levels at ABB including Mathematics
 - HNC/HND Civil Engineering, or equivalent

Recognised Prior Experiential Learning (RPEL) will also be considered

Graduate Apprenticeship: BEng (Hons) Civil Engineering

Programme information

The Civil Engineering Graduate Apprenticeship has been designed to...

“produce high quality graduates with the understanding, knowledge, skills and personal qualities required to undertake a wide range of roles across the construction industry.”

- Technical subjects: **Structures, Geotechnics, Materials, Hydraulics & Hydrology, Maths...**
- plus Environmental, Sustainability, Management...
- Problem solving, design, analysis, teamwork, writing skills, professional skills
- Theory and practice
- Assessment: work-based portfolios, coursework and exams



Graduate Apprenticeship: BEng (Hons) Civil Engineering



YEAR 1 – Mandatory Courses		
Semester 1	Semester 2	Semester 3
Mechanics A (D27MA) *	Mechanics B (D27MB) *	Work Based Learning Support
Building Services Technology (D18BT) – <i>Work Based Learning</i>		
Surveying and Monitoring (D28SV) – <i>Work Based Learning</i>		
Construction Modelling (D37CD) – <i>Work Based Learning</i>		
Construction Technology 1 (D37CT) – <i>Work Based Learning</i>		
eConstruction (D38EE) – <i>Work Based Learning</i>		
Introductory Maths for Civil Engineering (D26ME) – <i>Work Based Learning</i>		

YEAR 2 – Mandatory Courses		
Semester 1	Semester 2	Semester 3
Mathematics for Engineers and Scientists 1 (F17XE)	Mathematics for Engineers and Scientists 2 (F17XF)	Work Based Learning Support
Analysis of Determinate Structures (D28DS)*	Civil Engineering Materials (D28MA)*	
Hydraulics and Hydrology A (D28AH) – <i>Work Based Learning</i>		
Design Studies (D28DG) – <i>Work Based Learning</i>		
Geology and Soil Properties (D29SP) – <i>Work Based Learning</i>		
Construction Technology 2 (D38CT) – <i>Work Based Learning</i>		

* Course assessed via examination (in whole or in part)

Graduate Apprenticeship: BEng (Hons) Civil Engineering



YEAR 3 – Mandatory Courses		
Semester 1	Semester 2	Semester 3
Indeterminate Structures (D29IS)*	Design of Concrete Elements (D29DC)	Work Based Learning Support
Design of Steel Elements (D29SE)	Geotechnics A – Introduction to Soil Mechanics (D29GA)*	
Environmental Engineering (D29EN) – <i>Work Based Learning</i>		
Transport, Design, Infrastructure and Society (D29TA) – <i>Work Based Learning</i>		
Innovation in Construction Practice (D30CN) – <i>Work Based Learning</i>		
Procurement and Contracts (D39AC) – <i>Work Based Learning</i>		

YEAR 4 – Mandatory Courses		
Semester 1	Semester 2	Semester 3
Geotechnics B – Geotechnical Applications (D20GB)*	Foundation Engineering (D21FE)*	Work Based Learning Support
Structural Element Design (D20SE)*		
Design Project (D20PR) – <i>Work Based Learning</i>		
Dissertation (D20ZC/ZD) (30 credits) – <i>Work Based Learning</i>		
Urban Drainage and Water Supply (D21UR) – <i>Work Based Learning</i>		
Highway Engineering (D20TB) – <i>Work Based Learning</i>		

* Course assessed via examination (in whole or in part)

Graduate Apprenticeship: BEng (Hons) Civil Engineering



Graduate Apprenticeship (GA) Course Specification Document



D28SV – Surveying and Monitoring

SCQF Level: 8

Version Number: 1

Credit Value: 15

Apprentice Name: _____

Year: 1

In order to fulfil the course learning outcomes, the apprentice must complete all assessment criteria of the specification schedule, selecting from multiple choice requirements when necessary.

Section A: Course Outline

Learning outcomes

On completion of this course the apprentice will have, and be able to demonstrate, an understanding of:

Land surveying:

- general principles and methods of land surveying with particular reference to those relevant to the design and construction of buildings;
- instrumentation: setting up and using levels, theodolites and total stations;
- setting out of horizontal and vertical curves, services, structures and earthworks;
- measuring: linear distances, geometrical angles and engineering levels.

Measurement and monitoring:

- data acquisition and measuring devices used in construction and the built environment, with particular reference to laboratory and/or site measuring equipment;
- monitoring and observing data trends;
- data analysis.

Use of Information Technology:

- data logging, storage and transfer;
- the use of appropriate CAD and mapping software;
- the use of Geographic Information System (GIS) software;
- the use of data analysis tools including Microsoft Excel or Apple Numbers.

Graduate Apprenticeship (GA) Course Specification Document



D37CT – Construction Technology 1

SCQF Level: 7

Version Number: 1

Credit Value: 15

Apprentice Name: _____

Year: 1

In order to fulfil the course learning outcomes, the apprentice must complete all assessment criteria of the specification schedule, selecting from multiple choice requirements when necessary.

Section A: Course Outline

On completion of this course the apprentice will have, and be able to demonstrate an understanding of:

Topic 1 Design and detailing of foundations

- A. Site Investigation
- B. Foundations

Topic 2 Masonry and Mortars

- A. Masonry and Mortars
- B. Masonry bonding and Construction

Topic 3 Floor Construction

- A. Ground Floors
- B. Upper Floors

Topic 4 Wall Construction

- C. Outer Wall Construction
- D. Openings in Walls

Topic 5 U Values calculations

Topic 6 Roof Construction and Finishes

- A. Roof Structures
- B. Roof Coverings

Topic 7 Sustainable forms of construction

Course specification documents

Examples

Graduate Apprenticeship: BEng (Hons) Civil Engineering

Work-based learning

- During Semester time: **1 day per week at HWU and 4 days with employer.**
 - During the 4 days with the employer, our recommendation is to have ½ day specifically dedicated to university work.
- **Regular meetings** will be between the personal tutor, apprentice and work-based mentor (4 contacts per year)
- An **Individual Learning Agreement (ILA)** will be developed in partnership with the employer and the apprentice at the beginning of the academic year.



Graduate Apprenticeship: BEng (Hons) Civil Engineering



Accreditation

The programme is accredited by the Joint Board of Moderators (JBM) for IEng status.

Graduates from the programme will have achieved the educational base for Incorporated Engineer.

Apprentices wishing to progress to CEng, can do so by taking one of our Technical Masters following completion of the BEng.

“The Graduate Apprenticeship will encourage awareness of the profession and the development of professional competencies.”



Graduate Apprenticeship: BEng (Hons) Civil Engineering



Thank you
Dr Laurent Galbrun



<https://www.hw.ac.uk/ga>



l.g.u.galbrun@hw.ac.uk

For applications: ga@hw.ac.uk



ice.org.uk/students

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Donna Surgeoner CEng MICE ICE Membership Manager Scotland, Northern Ireland & Europe



Who are we?

We qualify Engineers

We qualify Technicians

Knowledge providers

Home of civil engineering

Voice of infrastructure

Global organisation

Institution of Civil Engineers

The world's leading
civil engineering
institution



Who are we?

Progress your career with our professional qualifications

Connect with over 90,000 members in 150+ countries

Institution of Civil Engineers

The world's leading civil engineering institution

Develop with access to our knowledge resources

Access support to help you throughout your career



Free ICE Student membership



Get professionally qualified quicker



Early Careers Network



Enhanced career progression



World's largest civil engineering library, plus Ask Brunel



Save with ICE Rewards



Industry updates (NCE digital)

GAs - Achieving professional qualification

A training agreement, with an ICE Approved Employer, or on ICE's mentor supported training programme, in parallel with academic studies



Initial Professional Development (IPD)

Continuing Professional Development (CPD)

Heriot Watt GA courses are accredited for: **IEng MICE** and partially meet the requirements for **CEng MICE**

Graduation, Initial Professional Development completion, followed by ICE's Professional Review





Membership support



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sabine.maclean@ice.org.uk
barbara.murray@ice.org.uk
jen.hopkins@ice.org.uk

Early Careers Network



Social Media
Events

ICE knowledge events



scotland@ice.org.uk
ice.org.uk/scotland



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ICE membership and professional qualification will help you progress with your career and bring you up to a standard to be on the world stage of civil engineering.



Susie McAllister
ICE Student member



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ice.org.uk/students

CITB Grants & Funding
Hazel Johnson– CITB Engagement Adviser
27th April 2023



What support is available for me?

You can access financial support for training through **CITB grants and funds**:

- Only CITB registered employers can claim grant. [CITB: Construction Industry Training Board - CITB](#)
- Our **grants** support employers who provide day to day training for their workforce
- They contribute to the cost of training and qualifying your workforce in construction-related subjects across the following three categories:
 - Short course grants - [Short course grants - CITB](#)
 - Qualification grants - [Qualification Grant Options Available - CITB](#)
 - **Apprenticeship grants** - [Scotland Apprenticeship grants - CITB](#)
- CITB also offers **funds** for specific projects relating to innovation and training
 - **Skills and Training fund** - [Skills and Training fund - CITB](#)

Graduate Apprenticeships (Scotland)

Graduate Level

- BSc (Hons) Construction and the Built Environment

Activity	Amount
1 st year of attendance	£2,500
2 nd year of attendance	£2,500
3 rd year of attendance	£2,500
4 th year of attendance	£2,500
Achievement of Graduate Apprenticeship	£3,500
Total	£13,500

For more information on the support available please visit www.citb.co.uk or speak to your local CITB Engagement Adviser.

Any Questions?

- Hazel Johnson, Engagement Adviser – Scotland
- 07767691955
- Hazel.Johnson@citb.co.uk





Q&A with Craig Johnston

Will Rudd Davidson



Q&A





For further information,

email us at:

ga@hw.ac.uk

Or visit

www.hw.ac.uk/ga

