

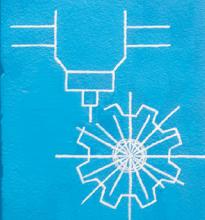
UHI | NORTH, WEST AND HEBRIDES
A TUATH, AN IAR IS INNSE GALL

Powering careers in the **energy sector**



EMPLOYER GUIDE

nwh.uhi.ac.uk/energy



Technology and
Innovation
Centre



The energy transition



The Highlands and Islands' strong legacy in engineering, oil and gas, combined with its natural capital and proximity to marine and offshore renewable energy resource,

positions our region at the forefront of the energy transition to clean, renewable power. Early research by the Highlands and Islands Regional Economic Partnership (HIREP) identifies up to £100 billion of inward investment over the next 10 to 15 years in the region, including significant investment in renewable energy and supporting infrastructure. This presents a once in a generation opportunity to enhance the economic prosperity and social mobility for people in our rural and island communities.

As both your local college and university, and a leading provider of skills, education, and research in our communities, **UHI North, West and Hebrides** collaborates with employers and industry sectors to ensure access to a fully tertiary talent pipeline to support the green energy sector.

Strategic investment and innovation in the energy sector is set to drive increased demand for further education and apprenticeships, continuous professional development, upskilling and reskilling, as well as undergraduate and postgraduate level qualifications. Working with a huge number of key employers and supply chain businesses in the region, we already see a steep rise in demand exceeding available supply in areas like electrical engineering, operation and maintenance, fabrication and welding, and construction. It is therefore critical that we work together to ensure our offer meets the demand for a skilled workforce.

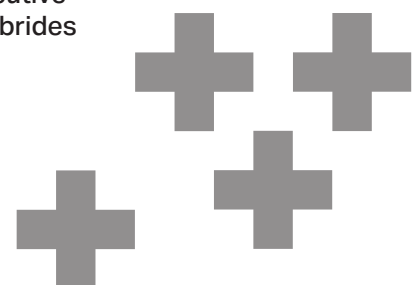
This guide is intended to provide an overview of the range of qualifications, facilities and expertise offered by UHI North, West and Hebrides. Our offer constantly develops and evolves, and we can tailor and customise our provision directly to each individual employer need.

We would like to hear from investors and employers directly how we best meet your workforce and training needs right here in our rural and island communities.

Lydia Rohmer

Lydia Rohmer
Principal and Chief Executive
UHI North, West and Hebrides

Across the North and West Highlands, Skye and Outer Hebrides, the opportunities are vast across **onshore** and **offshore wind, hydro, and hydrogen**, while the **just transition from oil and gas**, as well as **nuclear decommissioning**, will continue to be important energy sectors for our communities for the foreseeable future. Our region faces significant opportunities for economic growth, high value job creation, and innovation in future-facing sustainable technologies. To turn this opportunity into reality, we need to work in strategic partnership with industry and employers to retain more people in our region, attract new talent, and urgently address skills shortages in the energy sector.



Supporting employers with essential skills, education, and research

UHI North, West and Hebrides is one of the largest partners in UHI, a regional further and higher education partnership covering the Highlands and Islands, Moray, and Perthshire. This makes us a college and university like no other, with qualifications pathways spanning all levels of the Scottish Credit and Qualifications Framework (SCQF) and a diverse range of students, from senior phase pupils, school leavers, and those entering the workforce, to working adults looking to upskill, reskill, or change careers.

The plus symbols on this map illustrates the network of UHI North, West and Hebrides campuses and centres.

Working across key curriculum areas like **engineering, environmental science, sustainability, maritime, construction and the built environment, and business**, we can support employers train, upskill, and reskill staff, and nurture a talent pipeline in the energy sector or supply chain.

We do this by providing:

+ **Industry focussed skills and training to your employees** – practical, transferrable skills, delivered to employees through Modern and Graduate Apprenticeships and work-based Scottish Vocational Qualifications. We build knowledge, understanding, and technical skills, working closely with employers.

+ **Advanced learning opportunities to help upskill or reskill employees** – we can help your employees take their learning further, through short continuous professional development, or undergraduate and postgraduate level qualifications, building advanced knowledge, critical thinking and personal growth.

+ **Access to a talent pipeline of people looking for employment** – with a wide range of senior phase courses for secondary school pupils, further education skill based vocational programmes, and higher education programmes at undergraduate and postgraduate level, we can provide access to college leavers and graduates looking for jobs.

+ **Research, knowledge exchange, and consultancy** – we're building excellence across a range of energy themes, with cutting-edge research, innovation and skills development, as well as problem solving approaches between academia, businesses and communities.

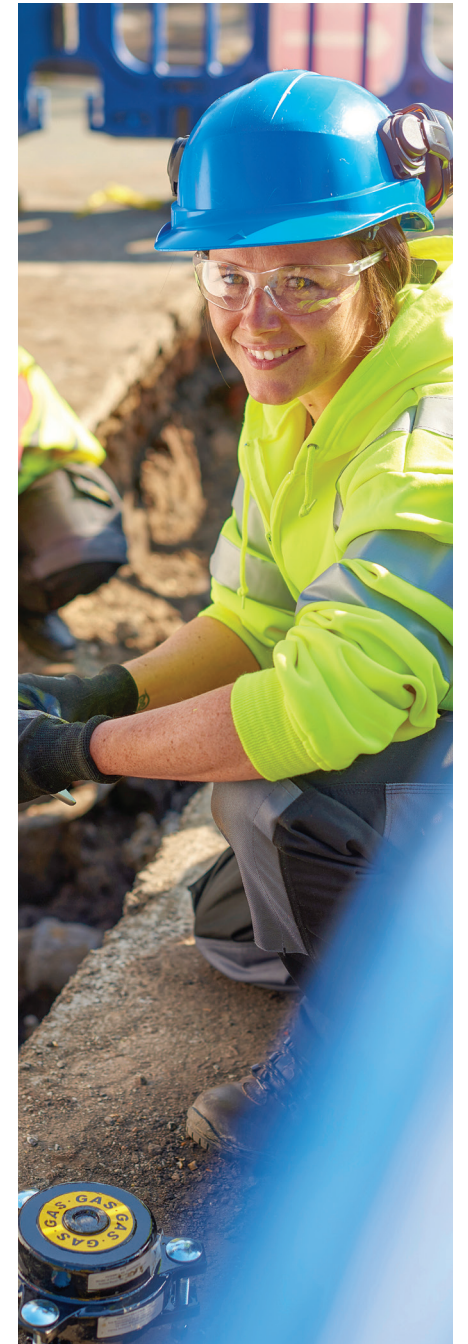
Customised training and education to meet employer needs -

our wide range of qualification progression pathways, modularity of our courses, and flexible study modes, including on campus, online, or work-based study modes, means we can shape a bespoke offer to meet the specific need of an individual employer.

Working in partnership with employers

We are committed to helping employers meet their needs for a skilled workforce, but we want to do this by working in partnership. Here's some things employers can do:

- + Visit www.nwh.uhi.ac.uk/energy and explore the subject areas specifically relevant to the energy sector detailed in this guide.
- + Get in touch with us and tell us about your skills gaps so we can help – we can advise on our courses and qualifications, explore a more customised offer to meet your needs, or direct you to colleagues across the UHI partnership. Email enterprise.nwh@uhi.ac.uk
- + Visit our fantastic facilities and meet our talented teaching teams.
- + Nurture the talent pipeline in our rural and island communities and help our learners reach their true potential by enhancing their academic and personal experience. You could do this in a variety of ways, including:
 - + Offering student/graduate internships, work experience, or placement opportunities.
 - + Talking to our learners about career opportunities and advertising vacancies in your sector.
 - + Delivering guest lecturers, hosting site visits, or supporting employer-led projects or work simulation activities.
 - + Participating as a mentor.
 - + Co-creating courses with us – this could range from working with us to deliver senior phase courses for secondary school pupils or developing pioneering initiatives like the CECA Scotland Academy, which provides a college to work pathway for civil engineering operatives and a guaranteed job interview.
 - + Working with our STEM outreach coordinators.
 - + Donations and sponsorship.
 - + Corporate scholarships, bursaries or prizes.
 - + Supporting research and knowledge exchange including funded student placement projects.



Statkraft supports students across the UHI partnership through the Statkraft STEM Entrance Scholarship Fund. Two students are selected every year, each receiving £3000 per year for the duration of their course, as well access to professional development opportunities and experiences.



Engineering

Our courses equip our students with transferrable skills across various engineering and manufacturing disciplines, allowing them to move into a range of careers within the energy sector. These engineering skills are critical across almost all stages of an energy project.

Our courses support training in:

- + Fabrication and welding
- + Engineering maintenance
- + Control and instrumentation
- + Electrical engineering
- + Mechanical engineering
- + Engineering systems
- + Energy engineering
- + Civil engineering



We also support the development of meta-skills such as communication, critical thinking and problem solving.

Explore our full range of engineering courses, which range from senior phase courses to full-time access programmes, apprenticeships and work-based vocational qualifications, to undergraduate and postgraduate study.



Flexibility to meet employer needs

Get in touch with us directly to discuss your specific skills need and we can look at how we can customise training to meet your needs.

Email enterprise.nwh@uhi.ac.uk or speak to a member of the engineering team.

Apprenticeships and work-based qualifications

A Modern Apprenticeship is supported by funding from Skills Development Scotland and helps employers train new staff and upskill existing employees. We deliver Modern Apprenticeships in a range of engineering disciplines including engineering asset lifecycle and maintenance, engineering manufacturing and fabrication, engineering technical support, and engineering installation.

We also deliver stand alone work-based qualifications, such as Scottish Vocational Qualifications (SVQs), which can be completed by anyone working in an engineering role.

“Apprenticeships allow us to rebuild the workforce and maximise the opportunities

presented by the energy transition. UHI North, West and Hebrides equips our apprentices with the theoretical knowledge and the practical skills, allowing them to integrate into the yard environment while earning qualifications alongside their on-the-job training.”

Albert Allan
General
Manager,
Arnish Yard,
Navantia UK



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- the average number of employers we're working with each year to deliver Modern Apprenticeships in Engineering in the North Highlands, Orkney Islands and Outer Hebrides. In 2025/2026, we will be working with more than 150 engineering apprentices.

Progression pathways which fit around work

We provide progression pathways from skills-based programmes such as apprenticeships and vocational programmes through to undergraduate and postgraduate level, including:

- + Higher National Certificate (HNC) Engineering Systems
- + Higher National Diploma (HND) Engineering Systems
- + Bachelor of Engineering (BEng) (Electrical and Electronic, Electrical and Mechanical, Energy, Mechanical pathways)
- + Bachelor of Engineering (Honours) (Electrical and Electronic, Electrical and Mechanical, Energy, Mechanical pathways)
- + Master of Science (MSc) Engineering (Electrical, General, Mechanical pathways) level,

These qualifications provide flexible entry and exit points each year. With full-time and part-time options, these courses are all delivered online to fit around work and other commitments.

As well as delivering Modern Apprenticeship training to SSE plc, we have created a bespoke training programme, enabling trainee engineers to earn an HNC in Engineering Systems and progress to the 2nd year of a BEng in Electrical and Electronic Engineering

“UHI North, West and Hebrides' commitment to service and understanding our needs and requirements ensures our transmission trainee engineers are well-prepared for the challenges of the industry;”

Kayleigh Bell
Apprenticeship Programme
Manager, SSE plc



Hydrogen

The Highlands and Islands is poised to lead the UK's green hydrogen revolution, and we have unrivalled expertise in our lecturing staff, who currently deliver Professional Development Award (PDA) Hydrogen: An Introduction for Technicians - Scotland's only SQA recognised qualification dedicated to hydrogen.

Dr Alasdair Macleod, based in Stornoway, is a renowned expert in hydrogen, contributing significantly to research and innovation in hydrogen technologies, renewable energy and decarbonisation. He teaches renewable energy topics to students in China through a transnational education programme and is involved in Europe's Clean Hydrogen Joint Undertaking Partnership.

UHI North, West and Hebrides is leading Scotland's hydrogen technology skills training, working alongside PlusZero Energy on the **Creed Hydrogen Skills and Innovation Centre**, Stornoway, which will transform the Outer Hebrides into a world leading green hydrogen production hub, driving innovation in green hydrogen production learning, testing and research.

“UHI's long-standing hydrogen expertise, the development of their hydrogen PDA training courses, and their openness to collaborating on our innovation plans, make them our go-to academic, research and training partner;”

David Amos
Founder and
Managing Director,
PlusZero Energy



Our training facilities

We support skills, training and education across the various engineering and manufacturing disciplines from state-of-the-art facilities across the region.

Engineering, Technology and Energy Centre (ETEC), Thurso

The largest and best equipped engineering training facility in the North of Scotland, consisting of engineering and fabrication and welding skills workshops. The facility includes a materials testing lab, an industrial-scale rig for electrical and mechanical maintenance, and a five-tonne crane to support heavy fabrication work.



Technology and Innovation Centre, Stornoway

Recently upgraded through a £2.3 million Islands Growth Deal investment, our Technology and Innovation Centre includes a Future Energy Lab, Newton Room supporting STEM activity, CAD suite, fabrication workshops, advanced manufacturing with 3D printing and CNC machine tools, and innovation facilities supporting areas like hydrogen technology.



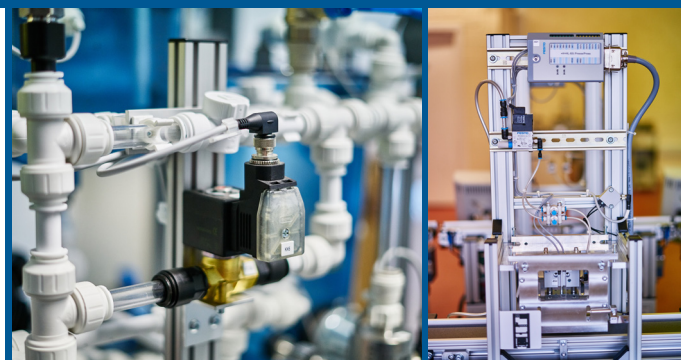
Nigg Skills Academy, Cromarty Firth

Hands-on fabrication and welding training at one of the UK's largest industrial ports, providing real-world experience for future careers in the energy industry.



Advancing Manufacturing Centre (AMC), Fort William

Access to advanced manufacturing equipment, rapid prototyping, and expert support, helping rural businesses embrace innovation. The AMC includes 3D scanners and printers and CNC machining capability, including a 5-axis Mazak mills. The AMC has supported more than 100 businesses and assisted in the development of more than 50 new products or innovations.



Environmental Science and Sustainability

With a responsibility to minimise environmental impact, and ensure projects are sustainable and efficient, the demand for green skills is increasingly important if Scotland is to reach net zero emissions of all greenhouse gases by 2045.

To support these skills, we offer a wide range of courses in **environmental science, bioscience, geography, sustainable development, sustainable energy solutions, net zero communities and wildlife and countryside management**, many of which can be studied part-time and online by employees balancing work commitments.

Explore our full range of environmental science and sustainability courses:



Short, online, continuous professional development courses are available throughout the year, and these can be tailored into bespoke courses to meet the specific needs of employers.

They include:

- + Climate Energy Fundamentals
- + Developing a Community Energy Project
- + Energy Modelling for Buildings
- + Energy, Climate and Carbon
- + Extreme Weather
- + Net Zero Society
- + Renewable Energy Technologies
- + Sustainable Resource Management
- + Sustainable Land Use
- + Sustainable Marine Environmental Management
- + Tidal, Wave and Future Energy
- + Environmental Impact Assessment
- + GHG Auditing and Carbon Footprinting
- + Understanding GIS for Spatial and Data Analysis

Explore our full range of CPD options:



UHI is a lead academic partner in the **TalENTed Islands Programme**, part of the **Islands Growth Deal** – a 10-year package of investment that will seek to drive economic growth and the creation of sustainable jobs across Shetland, Orkney and the Outer Hebrides. **TalENTed** aims to attract and retain talent, fostering green job growth and supporting islands-based businesses with a focus on work-based learning, entrepreneurship, and innovation. We're also an active partner of the **Island Centre for Net Zero**, which is helping to spearhead decarbonisation and a community driven energy transition across the islands.

Maritime

Maritime skills will be particularly important for the **offshore wind, tidal and wave sector**, with a wide range of roles needed to support the industry from project development, to delivering people and components to wind farm sites, and supporting the installation and monitoring of subsea structures.

We offer a range of courses to support **maritime and shipping skills**.

We also run Royal Yachting Association (RYA) and Maritime and Coastguard Agency (MCA) Standards of Training, Certification and Watchkeeping for Seafarers (STCW) short courses, including:

- + RYA Powerboat (Level 2, Intermediate and Advance)
- + RYA Essential Navigation (online basic navigation)
- + RYA Marine Radio Short Range Certificate (SRC)/VHF
- + RYA Day Skipper Theory
- + RYA Yacht Master Theory
- + RYA Professional Practices and Responsibilities (PPR) (Online Course)
- + STCW Personal Survival Techniques
- + STCW Personal Safety and Social Responsibilities
- + STCW Elementary First Aid

These courses are run from our various centres around the Scottish coastline or online.

Explore our full range of maritime courses:




Do you have a specific skills need in this area?
Let us explore how we can help.

Email enterprise.nwh@uhi.ac.uk or speak to a member of the maritime team.



Construction, Civil Engineering and the Built Environment

Skills in construction, civil engineering and the built environment will be critical to **support the infrastructure** around the renewable energy sector. We offer access level programmes in Fort William, Thurso, Stornoway and Portree, providing a stepping stone into a Modern Apprenticeship and further study across the UHI partnership.

Explore our full range of construction and built environment courses:



“The CECA Scotland Academy is dedicated to bridging the skills gap in civil engineering. Colleges play a crucial role in the delivery of this initiative, ensuring that students receive high-quality, industry-relevant training.”

CECA Scotland Academy



Business

The energy sector will need business support roles of all types, from communication and engagement to administrative support, finance, human resources, and project management, to supply chain, equipment and facilities management.

Across the UHI partnership we can support employers with a wide range of business skills, with many of our courses suitable for people in work, including:

- + Work-based Scottish Vocational Qualifications (SVQs) in Business and Administration.

Explore our full range of business courses:



Co-investing and delivering with employers

Working with the Civil Engineering Contractors Association (CECA) and its industry members, we're developing a talent pipeline for the civil engineering industry in Scotland, with our CECA Scotland Academy in Fort William. Our Civil Engineering Operative course combines employer work experience with a guaranteed interview on successful completion of the course. This course provides a stepping stone into employment, as well as further study options in civil engineering up to degree level within the UHI partnership. We are one of six CECA Scotland Academy partners in Scotland.

- + HNC Business and BA (Hons) Business Management, which can be studied part-time, and online, to fit around work commitments.

- + Our Masters in Business Administration (MBA) includes specialist pathways in the Environment or Renewable Energy, and is ideal for senior employees looking to upskill at postgraduate level.

We also run short courses to help businesses upskill staff in various software applications and packages, as well as leadership and management.

Do you have a specific skills need in this area?

Let us explore how we can help.

Email enterprise.nwh@uhi.ac.uk or speak to a member of the business team.

Research, knowledge exchange and consultancy

The UHI partnership is building a reputation for research excellence across a range of energy topics critical to the future economic development of the Highland and Islands.

Find out more about the UHI Energy Innovation Team



Our research addresses issues surrounding the development and management of energy resources for the future, with a focus on:

- + Environmental survey/measurement/monitoring
- + Marine sensing
- + Renewable energy and the environment
- + Oceanographic, metocean and hydrodynamic understanding
- + Innovative sensors, platforms and measurement techniques
- + Energy systems
- + Marine mammal, fish/fisheries and bird interactions
- + Marine governance, planning and decision support tools
- + Historic environment management and mitigation
- + Safety and training
- + Socioeconomic impact, community energy, and carbon foot-printing
- + Resource assessment and characterisation
- + Hydrogen
- + Sustainable water quality management
- + Wastewater treatment solutions
- + Sustainable aviation
- + Biodiversity, ecology and species conservation

New to knowledge exchange?

It connects research and scholarship to businesses, public agencies and communities, working collaboratively to address unique challenges and opportunities. Funding is available to support knowledge exchange, which can include collaborative research, networking and events, consultancy services, contract research, people exchange, and continuous professional development.



How we've supported the energy sector:

- + **Short-term projects:** We developed novel techniques for drone mapping of seabirds and surface currents to reduce the cost and risk of offshore surveys in the Validating Surface Currents at Offshore Renewable Energy sites (V-SCORES) project.
- + **Medium term projects:** As part of the ECOWind PELAgIO project we've pioneered understanding ecosystem effects of offshore wind, completing two years of measurements around the SSE Seagreen wind farm.
- + **Long term projects:** We're working with Ørsted on the PREDICT initiative to understand fish migration patterns and the potential impact of windfarms on marine ecosystems. This includes a demonstration field campaign alongside the Simply Blue Group and Subsea7 Salamander floating offshore wind farm.

Consultancy services:

Our team the UHI Environmental Research Institute (ERI) in Thurso support **consultancy services** across the marine renewable sector. Clients can gain direct access to senior staff and we have our own survey vessel, the RV ERI Aurora, equipped with ADCP, CTD, echosounder and other instruments.

They also conduct **laboratory analysis** using ICP-OES, LC-MS/MS, GC-MS and SEM instruments to test for and research chemical and physical properties in a wide range of sample types including water, soil, tissues and other materials.

Peatlands

Peatland is a natural carbon store, and their restoration is one of the key areas for the Scottish Government's 2045 net zero target. **UHI Professor Roxane Andersen** is one of the world's leading peatland experts and the **UK's only Professor of Peatland Science**. She specialises in research in peatlands, sustainable land use, and organic matter, and has contributed extensively to the Flow Country Partnership and its work, including its successful bid for World Heritage status.

Did you know? We've developed a range of courses with NatureScot's Peatland ACTION to deliver training to boost skills in peatland restoration, including:

- + Introduction to Peatland Restoration
- + Protected Species on Peatland
- + Introduction to GIS Mapping in Peatland Restoration

Get in touch to explore how research and knowledge exchange could support your business.

Contact the energy innovation team by emailing energy@uhi.ac.uk



UHI STEM outreach programme



The UHI STEM outreach programme is supported with generous donations from offshore wind project developers including West of Orkney Wind Farm, Northland Power, Thistle Wind Partners, Ossian and Buchan Offshore Wind.

Through this programme, our STEM outreach coordinators are:

- + Supporting teachers with materials, equipment and in-school support to build their confidence and knowledge in STEM based subjects. We also provide parents with information about resources and activities they can use at home.
- + Inspiring early years and primary school learners using our bespoke 'Discovery Kits', which contain topic specific content, equipment and resources alongside the lesson plans which are aligned to the Curriculum for Excellence. Our engagement activities are delivered in school by STEM coordinators alongside class teachers at no cost to the school.
- + Working collaboratively with other partners in education, skills and industry, we support STEM networks, sharing knowledge and information to enhance STEM experiences and encourage learners to pursue STEM based skills and careers.
- + We also support a wide range of community events throughout the year with fun and engaging STEM based activities.

Get in touch with our local STEM outreach coordinators.



Through UHI STEM outreach, P7 pupils from Barra took part in the Nautilus programme in May 2024, which applied classroom learning in STEM to the natural environment in and around the island. The pupils created their own monitoring equipment alongside specialist equipment to sample water at sea and in land. The data was then fed into the Carbon Neutral Islands Project.



Newton Rooms supporting STEM outreach are located on our Stornoway and Thurso campuses.

What our students say...

Combining degree level study with employment:

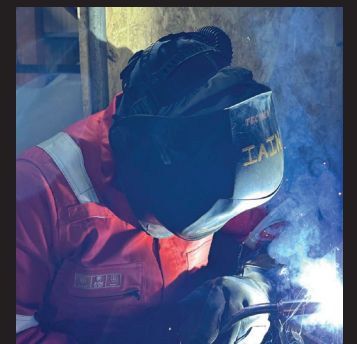
I gained a range of knowledge which has helped me in my career and provided a grounding for different areas. I've found that the real learning happens in the workplace, when you are using equipment, fault finding and digging deeper into systems and this would not be possible without the foundations built from UHI. Being able to get my degree whilst working full time and living at home allowed me to have amazing holidays and experiences which I wouldn't have had if I moved away for university."



Chloe Dunnett studied the BEng (Hons) Energy Engineering and currently works as a Maintenance Technician at Siemens Gamesa on an offshore windfarm.

Following an apprenticeship route:

I would recommend this apprenticeship to anyone looking to enter the engineering sector, learn a trade, and earn while they train. It has been a mix of on-site and college-based learning over three years through an NC in Engineering Systems and SVQ2 and SVQ3 in Performing Engineering Operations. I've gained hands-on experience using grinders, burning touches, plasma cutters, wiring, plating, CAD, lathes, and more, as well as welding coding certifications. It's been great to stay on the island, rather than travel to the mainland for education, plus, the skills you gain open up many different career paths."



Iain Campbell, who works in fabrication and welding for Navantia UK at the Arnish Yard, Stornoway.

Studying flexibly from home:

Studying online enabled me to be home based and flexible with my work. There was a lot of complementary crossovers between my studies and my work. This new knowledge and information helped to ground my studies in real-world practicalities. If you are interested in the sustainable development of communities, from the local to the global, this MSc covers a lot of essential bases."



Neil Gow, who studied our MSc in Sustainability and Rural Regeneration from his home on the Isle of Jura while working on the Scottish Government's Cabron Neutral Islands Project.



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Email enterprise.nwh@uhi.ac.uk

