

Scotland Summer School Class Schedule (as of April 7, 2024)

Please note that this schedule is subject to change without prior notice.

Pre-Programme Support
Each Monday from 17 July to 5 August. :English language refresher training via Zoom
Saturday, August 10th: Arrival Day in Aberdeen
Sunday, August 11th:Orientation
Week 1
<ol style="list-style-type: none">1. Orientation and RGU Campus Tour2. Introduction to Innovation and Sustainability<ol style="list-style-type: none">a. workshop session where students will work on a group project to identify solutions for one or more of the UN Sustainable Development Goals (UNSDG)3. Introduction to Solar Energy<ol style="list-style-type: none">a. This session will cover an introduction to Solar Energy and its current role and future potential in the global electricity supply; the fundamentals of solar energy and conversion pathways; and the fundamentals of solar photovoltaic effect and photovoltaic systems.4. Introduction to Blue Economy and Sustainable Oil & Gas Production<ol style="list-style-type: none">a. This session will introduce the blue economy, including the offshore oil and gas industry and will explore a technological pathway to mitigate carbon emissions. It will cover who owns oil and gas resources, the key stakeholders in global oil and gas operations, revenue generation and operational risks5. Introduction to Green Energy<ol style="list-style-type: none">a. This session will focus on the energy transition and the role of renewable energy technologies. Renewable energy generation, transportation and storage will be discussed, including the challenges of integration of renewable electricity into the electricity network.6. Introduction to Carbon Capture Storage and Utilisation<ol style="list-style-type: none">a. This session will provide students with a basic understanding of the principles, technologies, and applications of carbon capture utilisation and storage (CCUS) in mitigating greenhouse gas (GHG) emissions and addressing climate change.7. Introduction to Wave and Tidal Energy<ol style="list-style-type: none">a. This session will provide a basic knowledge and understanding of ocean waves and tides as an energy resource. The technologies and the current global opportunities and challenges associated with wave and tidal energy generation and conversion will be discussed.

- 8. Introduction to Hydrogen Energy
 - a. This session will provide an overview of the strategic importance of hydrogen and its role in energy transition.

Week 2

- 1. Introduction to Wind Energy
 - a. This session will provide students with basic knowledge and understanding of the concepts and principles applicable to wind energy extraction. The design, and operation of wind turbines under different environmental conditions will be discussed and the students will gain an awareness of the role of wind energy in decarbonising global economies.
- 2. Energy Simulator
 - a. Students will undertake practical training in RGU's state of the art energy simulator.
- 3. Offshore Health and Safety
 - a. This session will explore previous industry incidents and their impact on the evolving safety profession within the offshore energy sector. Students will consider the Piper Alpha Disaster along with other key incidents.
- 4. Introduction to Geothermal Energy
 - a. This session aims to provide students with a foundation in the fundamentals of geothermal energy and a working knowledge of the scientific, technological, and business aspects of the geothermal energy industry.
- 5. Visit to Balmoral Group
 - a. The students will visit Balmoral Group's industry-leading product design and manufacturing facility that includes laboratory, design engineering, production, and testing facilities focused on the offshore energy sector
- 6. An Introduction to Autonomous Underwater Vehicles (AUV) and Remotely Operated Vehicles (ROV) and Visit to TechnipFMC-
 - a. This session will consist of a brief theoretical introduction to Autonomous Underwater Vehicles (AUV) and Remotely Operated Vehicles (ROV) and their applications and operation.
- 7. Presentation Skills
 - a. This session will be dedicated to practicing the oral project presentations and for students to make preparations with their RGU Mentors.
- 8. Social Acceptance of Green Energy Technologies
 - a. This session will give an overview of the key aspects and dynamics of social acceptance to green energy technologies.
 - b.

Week 3

- 1. Visit to Orkney (Sunday to Thursday)
 - a. Students will travel to Orkney to meet with organisations that have worked in the field of renewable energy for a number of years and have considerable practical experience.

2. Guest Lecture

- a. This will be a presentation by Aberdeen City Council on Hydrogen Use in Aberdeen followed by Visit to the Aberdeen City Hydrogen Energy Storage (ACHES) Facility.

Week 4

1. Visit to the Floating Offshore Wind Innovation Centre

- a. The Floating Offshore Wind Innovation Centre (FLOWIC) is the UK's first innovation centre focused purely on the development of floating offshore wind technology.

2. Presentation Skills

- a. This session will be dedicated to practicing the oral project presentations and for students to make preparations with their RGU Mentors.

3. Renewable Energy Management

- a. This session aims to provide the students with an understanding of the role, function and nature of organisations involved in technical, financial, commercial and contractual activities associated with renewable energy.

4. Presentation Skills

- a. This session will be dedicated to practicing the oral project presentations and for students to make final preparations with their RGU Mentors.

5. Shell Carbon Capture and Storage Workshop

- a. This interactive workshop will introduce the students to a real CCS project. It will take them through the screening, appraisal, development, and execution stages of the project. Students will be presented with the challenges that young graduates working in integrated teams face during their careers. These are challenges that require a breadth of thought as well as technical excellence and they will have to balance economic, social, and environmental considerations. Sustainable development and teamwork are also key elements of the workshop.

6. Guest Lecture

- a. The speaker and content for this lecture will come from the RGU's Energy Transition Institute, who will present on 'Building a better and greener world – opportunities for Japan'.

7. Project Presentation

- a. Students will deliver their project presentation to an Industry Panel

Saturday, September 7th: Highland Game Visit

Sunday, September 8th:Hotel Check-out