Year 1 Student Guide
BSc Sustainability (CK010)

https://www.ucc.ie/en/ck010/

What is Year 1 for?

Year 1 is a common entry year. All students take the same core modules, regardless of which stream they will eventually choose. The purpose of Year 1 is to:

- Build a shared foundation in sustainability across environmental, social and economic perspectives
- Introduce you to different ways of thinking and working (science, humanities, business, policy)
- Help you discover your interests and strengths before committing to a stream in Year 2
- Give you flexibility to keep future options open (streams, study abroad, careers, postgraduate study)

Year 1 at a glance

You will take 60 credits in total

Core modules (50 credits):

These are compulsory and taken by all students.

Semester 1 core modules

Sustainability in the context of planetary boundaries
Sustainability grand challenges: from local to global
Sustainability & Global Development

Semester 2 core modules

Ethics & environmental justice
Research and data analysis for sustainability
Fundamentals of environmental & climate sciences
Sustainability, Society & Culture
Sustainable Business & the Circular Economy

Electives (10 credits)

You choose two 5-credit electives from a wide menu, allowing you to explore interests and keep future options open.

The three streams

At the end of Year 1, you will apply for one of the following streams (which begin in Year 2):

Sustainability, Science & Climate Action

Focus on environmental & climate science, energy, ecosystems, data and technical analysis; anchored in College of Science, Engineering & Food Science

Sustainability, Society & Culture

Focus on social, cultural, historical, political and ethical dimensions of sustainability; anchored in College of Arts, Social Sciences & Humanities

Sustainable Business & the Circular Economy

Focus on economics, management, business models, circular economy and governance; anchored in College of Business & Law

Stream places are capped. Allocation is based on student preferences and Year 1 results.

Year 1 Modules
BSc Sustainability (CK010)

SU1001 – Sustainability in the Context of Planetary Boundaries (10 credits)

This module introduces sustainability as a scientific, social, ethical and political concept. Students explore how ideas of sustainability have evolved and why humanity now faces unprecedented environmental challenges. Using frameworks such as planetary boundaries, doughnut economics and the UN Sustainable Development Goals, the module examines how societies can meet human needs while staying within Earth's limits. Site visits and case studies help connect global concepts to lived experience and real-world decision-making.

SU1002 – Sustainability Grand Challenges: From Local to Global (10 credits)

This module explores major sustainability challenges across energy, food, water, materials, cities and economies using a systems thinking approach. Students examine how these systems are interconnected and shaped by trade-offs between environmental protection, economic development and social wellbeing. Through global, national and local case studies — including projects based in UCC — students assess real-world responses to sustainability challenges and reflect on the impact of individual and collective actions.

Final module details will be published in the Book of Modules

SU1003 – Sustainability and Global Development (5 credits)

This module introduces students to the field of global development and its close links with sustainability. Topics include poverty and inequality, human development, food and nutrition security, gender, migration, conflict, and human rights, examined through a global lens. Students explore the roles of governments, international organisations, NGOs and communities, and consider alternative visions of development beyond traditional economic growth models.

SU1004 – Ethics and Environmental Justice (5 credits)

This module examines sustainability through the lens of ethics and justice. Students are introduced to key ethical theories and apply them to real-world environmental challenges such as climate change, biodiversity loss and resource use. Central questions include fairness between generations, responsibilities of decision-makers, and whether nature itself should have moral rights. Case studies help students develop skills in ethical reasoning and critical evaluation of sustainability policies.

SU1005 – Research, Statistics and Data Analysis for Sustainability (5 credits)

This module builds confidence in research, data and evidence-based decision-making for sustainability. Students work collaboratively with real-world datasets to formulate research questions, analyse information, and interpret results using basic statistics and sustainability frameworks.

SU1006 – Fundamentals of Environmental and Climate Sciences (5 credits)

This module provides a foundation in the environmental and climate sciences that underpin sustainability. Students learn about Earth systems, including carbon, nitrogen and water cycles, climate processes, ecosystems and biodiversity, and examine human impacts such as climate change, pollution, land-use change and biodiversity loss.

SU1007 – Sustainability, Society and Culture (5 credits)

This module explores how culture, values and social systems shape responses to sustainability challenges. Drawing on sociological and cultural perspectives, the module considers ethics of care, community resilience, and the role of culture in enabling — or constraining — environmental and social change.

SU1008 – Sustainable Business and the Circular Economy (5 credits)

This module introduces sustainability from a business and economic perspective. Students explore how businesses and economies can operate within environmental limits through concepts such as the circular economy, sustainable production and consumption, corporate social responsibility (CSR) and ESG standards. The module also examines economic trade-offs, growth versus degrowth, food systems, and entrepreneurship, providing a foundation for understanding sustainability in the public and private sectors.

Year 1 Electives
BSc Sustainability (CK010)

Choosing your electives

A broad and diverse range of electives is a defining feature of the BSc Sustainability. Electives allow you to shape your degree, explore different disciplines, and combine scientific, social, economic and cultural perspectives in ways that reflect your interests and future goals.

Your Year 1 electives are an opportunity to:

- Explore a discipline in more depth
- Test whether a particular stream suits you
- Keep doors open for study abroad (this requires taking a language as your 10 credits of electives)

The groupings below are indicative only — you may choose electives from any area. Electives are not used to restrict stream choice. They are designed to support exploration, skill development and informed decision-making.

All students take 10 credits of electives in Year 1 (normally two 5-credit modules). The only critical choice you need to make is **whether to use these 10 credits for language study**.

- If you take languages in Year 1 (and continue in Year 2), you keep the option of international study abroad in Year 3.
- If you do not take a language in Year 1, international study abroad in a non-English-speaking country will not be available.

1. Languages

Students who wish to study abroad in Year 3 in a non-English-speaking country must use their 10 elective credits in Year 1 to take a language, and continue that language in Year 2.
Languages available include French, Spanish, German, Italian, Portuguese and Irish.

2. Economics, Business & Governance

For students interested in markets, organisations, policy and decision-making, these elective options are a strong foundation for the Sustainable Business & Circular Economy stream

- AC1116 Financial Accounting
- EC1112 Economic Data As Evidence
- EC1121 Markets, Governments & the Economics of Social Issues
- MG1004 Principles of Management and Organization
- LW1108 Introduction to the Legal System

3. Health, Society & Well-being

For students interested in health, inequality, social policy and human well-being, these electives emphasise the social determinants of sustainability and are useful for careers related to public policy, health, community and justice

- EH1006 Perspectives on Public Health
- EH1010 Introduction to Public Health
- SC1011 Sociology of Health, Public Health and Health Promotion
- SS1008 Social Inclusion and Health Policy
- SS1846 Environment and Well-Being

4. Environmental & Earth Systems

For students interested in the physical world, environmental processes and spatial thinking, these elective options are useful for climate, land use and sustainability planning and can support the Science & Climate Action and Society & Culture streams

- GG1013 Planet Earth: Exploring Environmental Geography
- GG1014 Human Geographies: Approaching Global Challenges

5. Energy, Technology & Applied Science

For students interested in engineering, energy systems and technical approaches; Particularly relevant for Science & Climate Action stream

- NE1001 Introduction to Energy Engineering

6. Biological, Food & Life Sciences

For students interested in biology, food systems and the life sciences underpinning sustainability, these electives are useful for students considering science-based pathways

- BL1002 Cells, Biomolecules, Genetics and Evolution
- BL1004 Physiology and Structure of Plants and Animals
- MB1001 Introduction to Food and Industrial Microbiology
- MB1003 Microbiology in Society
- FE1030 Introduction to International Food Policy

7. Politics, Policy & Global Affairs

For students interested in international relations, power and global governance.

- GV1218 International Politics