The Smart & Sustainable Solutions admission test

The admission test is used to rank applicants for the Master's programme Smart & Sustainable Solutions.

It checks whether applicants have the background, analytical skills, and way of thinking needed for an interdisciplinary programme combining environmental science, sustainability, data, policy, and digital technologies.

The test focuses on understanding, reasoning, and the ability to work with quantitative and conceptual information, not on memorizing isolated facts.

Structure of the test

The test consists of five parts.

1. Environmental systems

This part checks your understanding of how natural systems work, including:

- climate and greenhouse gases
- the water cycle and hydrology
- soils, vegetation, and ecosystems
- pollution and natural resources

Questions focus on processes and relationships, for example how changes in climate, land use, or emissions affect the environment.

2. Sustainability challenges

This part focuses on real-world sustainability problems such as:

- energy and buildings
- transport and mobility
- food production and land use
- climate risks (floods, droughts, heat waves)
- urban and regional sustainability

You will often be asked to:

- compare different options
- judge which strategies are more effective or more sustainable

3. Policy and global sustainability context

This part checks your awareness of:

- climate change and sustainability as global challenges
- international and European sustainability strategies
- concepts such as net zero, sustainable development, and climate policy

You are not expected to know detailed laws, but you should understand:

- the main goals
- key institutions
- the general direction of sustainability and climate action

4. Quantitative and analytical reasoning (basic math)

This part is based on the type of quantitative reasoning used in environmental sciences and environmental modelling.

It tests your ability to:

- work with formulas, ratios, and percentages
- interpret simple models and equations
- reason about flows, balances, growth, and change
- understand quantities such as rainfall, water volumes, energy use, emissions, or indices

5. Information technology and computing

This part checks basic understanding of how digital systems work, including:

- computers, hardware, and operating systems
- software, data, and databases
- networks, the internet, and cloud services
- digital platforms used in modern organizations

You are not expected to program, but you should understand:

- how data is stored and processed
- how digital tools are used in practice

Expected level

The expected level corresponds to:

- a relevant Bachelor’s degree
- or equivalent professional experience

Useful resources

These resources cover the five parts of the admission test. You do not need to study all of them in detail - they are meant to give you a clear idea of the concepts, level, and style of knowledge expected.

Test area	What to review	Key online resources
Environmental systems	Climate, water cycle, ecosystems, pollution	• **NASA Earth Observatory** - climate, water, Earth systems (NASA Science) • **Our World in Data – Climate Change** - global data and charts (Our World in Data) • **US EPA - Climate Change** - science & impacts (US EPA)
Sustainability challenges	Energy, emissions, food systems, cities, risks	• **Our World in Data - Energy** - energy mix and impacts (Our World in Data) • **Our World in Data - CO_2 & Greenhouse Gas Emissions** (Our World in Data) • **Earth Observing Dashboard** - global environmental change (eodashboard.org)
Policy & global context	Climate policy, net zero, SDGs	• **IPCC** - climate science and policy context (ipcc.ch) • **SDG 13 - Climate Action** - UN sustainability goals (Wikipedia) • **UN Climate Change** - framework and global negotiations (un.org)
Quantitative & analytical reasoning	Ratios, proportions, simple equations, graphs	• **Khan Academy - Algebra & Statistics** - foundational quantitative skills (khanacademy.org) • **Coursera / edX Quantitative Reasoning** - practice and guided learning (coursera.org, edx.org)
Information technology & computing	Computers, data, networks, software, platforms	• **Fundamentals of IT** – *The Modernization of Digital Information Technology* (University of South Florida) (general reference) • **Khan Academy – Computing** – intro to basic IT concepts (khanacademy.org/computing) • **IBM SkillsBuild – Digital Literacy** – practical digital skills (skillsbuild.org)