

SEPTEMBER 2025 entry

# Environmental Management and Sustainability



# Flexibility Option to select modules to focus on a specific pathway.

#### Field Courses

Enjoy outstanding, fully-funded residential courses in Years 1 and 2

# Small-group teaching

# Active Learning

Interactive, hands-on learning.
Great for understanding and
developing skills

# Professional Placement Year option

Optional pathway to undertake a 36+ week fulltime 'sandwich' placement/ internship between Year 2 and your final year to gain invaluable professional employment experiences.

# **Distinctive Course Features**

Environmental Management and Sustainability at Worcester

# Latest Technology

Learn to use the latest kit and enhance your employability.

# Friendly and Supportive

We get to know you from the very start and give all the support needed throughout the course.

#### Practical Skills for Employability

Extensive opportunities to develop practical fieldwork and laboratory skills, with a hands-on approach that enhances your employability.

#### Study Abroad

Option to spend a semester or a whole year abroad at one of our partner institutions



### Welcome

Nature is in crisis at a global scale. Individually, we can all make a difference to transform the world into a greener place. One way to contribute to this goal is to deepen your own understanding by studying Environmental Management and Sustainability at Worcester!

Our courses are for those passionate about the environment, taking your values and beliefs and matching them with the opportunity to acquire skills for a future career solving environmental problems. By studying modules in how to assess, interpret and manage the environment, you can play your part in giving nature a chance by reducing the human impact on ecosystems, moving us to a more responsible and healthier use of Earth's precious resources, and becoming an advocate for sustainable practices.

At Worcester, smaller class sizes mean more interactivity, greater support and a real sense of belonging. Our students are immersed in practical, hands-on learning from day one, graduating with the key skills that employers demand. Please visit our website for the latest course information and Open Day details. You will be warmly welcomed into our community of Worcester students who care deeply about the future of the planet we all call home!

With best wishes,

John

Dr John Dutton

Course Leader, Environmental Management and Sustainability j.dutton@worc.ac.uk

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#### Did you know?

No two Environmental or Sustainability degrees are the same. Course content and approaches to teaching and assessment vary considerably. When choosing where to study, it is important to look at the details to check that the course is a good fit for you.

# Sustainability

Of the four pillars of sustainability, the primary focus of our course is the environmental pillar. We also consider the human, social and economic pillars. Many of the UN's Sustainable Development Goals (SDGs) are embedded throughout our course. This knowledge and understanding, underpinned by specialist laboratory and field skills, means our graduates are ideally placed to become tomorrow's leaders in the environmental sector.

#### **Benefits**

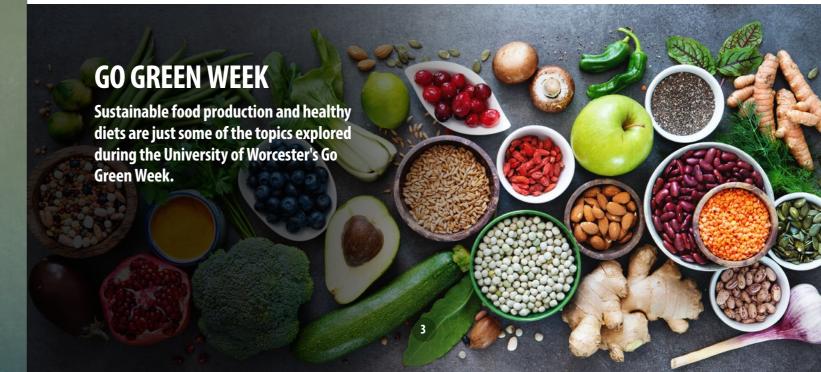
- Understand the global environmental challenges facing our world, including the complex and intricate relationships between people and the environment
- Develop skills and competencies to pursue sustainable visions of the future, both personally and professionally
- Sustainability knowledge and skills are increasingly in demand by employers across the corporate and public policy sectors.

#### **At Worcester**

- Wide range of sustainability content covering many of the 17 SDGs
- Teaching informed by staff research into sustainability (e.g. planning sustainable cities, development in sub-Saharan Africa, monitoring environmental change)
- Authentic 'real world' sustainabilitybased assessments (e.g., 'mock' planning inquiries, conference debates, consultancy reports)
- Links with external organisations engaged in sustainable development, within modules and through placement opportunities
- Get involved in sustainability activities, such as 'Go Green Week'







# Our course

Courses in Environmental Management and Sustainability are not all the same. Our small class sizes means more interactivity, more support, and a real sense of belonging. At Worcester, you are not just another face in the crowd.

#### **Our course options**

Environmental Management and Sustainability BSc (Hons) (3 years)

Environmental Management and Sustainability with Professional Placement Year BSc (Hons) (4 years)

Environmental Management and Sustainability with Foundation Year BSc (Hons) (4 years)

Environmental Management and Sustainability with International Year BSc (Hons) (4 years)

Environmental Management and Sustainability with Foundation Year and Professional Placement Year BSc (Hons) (5 years)

#### **Distinctive features**

- Small-group teaching in a friendly, supportive atmosphere
- Highly interactive, with access to the latest technology
- Local and regional fieldwork in most modules
- Fully funded residential field courses in Years 1 and 2
- Develop strong practical fieldwork and laboratory skills
- Option to spend a semester or year studying abroad
- A strong employability emphasis throughout
- Option to select modules to focus on specific 'pathways' of most interest to you
- Option to do a Professional Placement Year

#### **Course Evaluation Survey 2024**

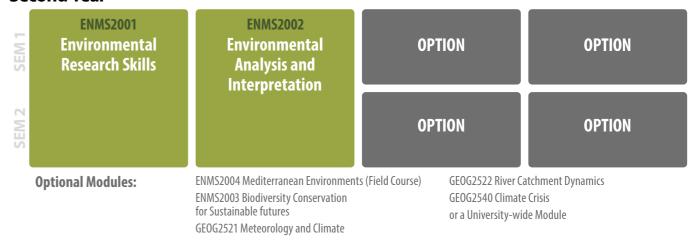
'The teaching staff are very encouraging and supportive'

#### First Year



instead of a module shown above in the grey boxes.

#### **Second Year**



#### Placement or International Year (for those on the 4-year course)

ENMS3000 Professional Placement (Sandwich) Year

#### **Final Year**



Modules: ENMS3006 Corporate Environmental Sustainability
ENMS3008 Professional Work Placement
ENMS3009 Mediterranean Environments (Field Course)
(excluded combination with Level 5 version)

GEOG3530 Sustainable Development in Sub-Saharan Africa GEOG3532 Rural Planning for Conservation

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# Practical Skills

A key feature that sets our course apart from others is the way in which fieldwork and laboratory work is integrated throughout. Our commitment to teaching practical skills for employability and further study is second to none.

#### **Benefits**

- **▼** Fieldwork requires you to apply theory to the complexities of the 'real world'
- Develop specialist and transferable skills
- **Enhance employability**
- Inspires curiosity and learning
- Enjoyable!

#### **At Worcester**

- Local and regional fieldwork in most modules
- Two fully funded residential field courses to UK and European destinations
- Supportive small group teaching
- Highly interactive, with access to the latest technology



#### **RESIDENTIAL FIELD COURSE VENUES**

In October 2023, we took our first year students to Bannau Brycheiniog (the Brecon Beacons, Wales). Here we explored the environmental impact of historic mining activities and examined carbon sequestration, amongst many other topics. This trip helps students find their feet, both academically and socially.

In June 2024, students progressing into second year investigated the **Mediterranean biome in Provence** (south of France). Topics examined included sustainable resource use, biodiversity conservation, wildfires, and the environmental impact of damming rivers for hydroelectric power schemes. Fieldwork included visits to the Camargue National Park and the Crau Plain.

# Access the latest technology

It is one thing for a department to possess the latest technology. It is quite another for this software and equipment to be routinely available to undergraduate students. But that is exactly what you will find at Worcester.

#### **Benefits**

- Experience and proficiency with the latest technology strengthens your CV.
- Enables more varied and interactive approaches to teaching and assessment

#### **At Worcester**

- Small group teaching allows a practical, hands-on approach
- Develop specialist skills in industrystandard earth observation and GIS software through applied, 'real world' exercises
- Learn how to fly drones and collect, process, and analyse data
- Excellent range of equipment and software for field and laboratory investigations

#### **Hydrological Equipment**

Electromagnetic flow meters; Acoustic Doppler Current Profiler; Sontek 2D Flowtracker; ISCO water samplers; YSI multi parameter environmental sondes

#### **River Monitoring Stations**

Three monitoring stations on the Leigh Brook, Bow Brook and the River Salwarpe, connected through a telemetry network

#### **Trail Cameras**

Forty trail cameras, Browning Elite HP5 SpecOps BTC 8E HP5, Browning Advantage SpecOps BTC 8A and Moultrie M0990i, for remote, non invasive surveying and monitoring of larger mammals.

## Unmanned Aerial Systems (UAS)

Fleet of UAS, including rotary and fixed wing drones; the newest drones can collect very high detail aerial imagery, plus thermal imaging and LiDAR data

#### GIS and Earth Observation Software

Access to industry standard software (e.g. ArcGIS Pro, ArcGIS Online, QGIS, Agisoft Metashape, Google Earth Engine, Trimble eCogntion)

#### **Meteorological Equipment**

Portable pocket weather stations; rain gauges; rugged temperature loggers; two Campbell weather loggers; mobile particle counters; passive samplers

#### **Laboratory facilities**

Including: FT IR and NIR Spectrometers for micro plastic analysis; a Spectrophotometer for nutrient analysis; an Agilent Microwave Plasma Atomic Emission Spectrometer for heavy metal analysis.





We prefer authentic assessment to formal exams.
Students engage in real world tasks, applying the knowledge, skills, and experiences valued by employers.
This approach is in keeping with the applied, hands-on approach of our courses.

#### **Benefits**

- Applied, authentic assessments provide insights to career options and supports employability
- Assessment variety maintains student interest and promotes engagement

#### **At Worcester**

- Only one exam and one in-class test.
  All other assessments are
  by coursework.
- Engaging assessment types that reflect real-world tasks (e.g. portfolios, reports, presentations, magazine articles)
- Many assessments are applied, designed to prepare you for your future career (e.g. consultancy reports, Environmental Impact Assessment evaluations, strategy development, mock job interview)
- Exemplary feedback provided on marked assignments, helping you to develop and reach your potential.

Code	Module Title	Essay	Portfolio	Poster	Presentati	Reflective	Report	Resea Write.	Exams /T
ENMS1001	Environmental Investigations	•					•		
ENMS1002	Management of Ecological Resources		3		•	200		•	•
ENMS1003	Global Environmental Issues							•	
ENMS1004	Surveying Species & Habitats		•	455		100	top (		
ENMS1005	An Introduction to Sustainability		•		•				
ENMS2001	Environmental Research Skills	27					7	•	•
ENMS2002	Environmental Analysis & Interpretation				•			•	
ENMS2003	Biodiversity Conservation for Sustainable Futures		He	4				•	
ENMS2004	Mediterranean Environments (Level 5)	•			•				
GE0G2540	Climate Crisis	$\Pi$		•	1 3		•		
GE0G2521	Meteorology & Climate						•		
GE0G2522	River Catchment Dynamics		4	45		3.3	•		
ENMS3000	Professional Placement Year (Optional)		•		•				
ENMS3001	Dissertation		1			95		1	
ENMS3002	Env. Impact Assessment & Sustainable Dev.								
ENMS3003	Environmental Restoration			-		THE S	1		1-5
ENMS3004	Environmental Pollution				•		•		
ENMS3006	Corporate Environmental Sustainability		To A	1	1	9.1		To be	
ENMS3008	Professional Work Placement				•		•		
GE0G3520	River Conservation & Management						•		
GE0G3530	Sustainable Development in Sub-Saharan Africa				•		•		
GE0G3532	Rural Planning for Conservation						•		

# Modules

#### FIRST YEAR (LEVEL 4)

Year 1 provides you with the underpinning knowledge and skills in environmental analysis, ecology and sustainability on which you build in Years 2 and 3.

#### **ENMS1001 Environmental Investigations**

- » Develop skills in field surveying, including using GPS and drones to record and map the environment.
- » Collect field samples and analyse using state-of-the-art equipment and laboratories.
- » Learn how to analyse, interpret, and present a range of environmental data.
- » 4-day fully funded Residential Field Course to the Brecon Beacons.

#### **ENMS1005 An Introduction to Sustainability**

- » Develop a deep appreciation of sustainability in practice from a series of sustainability practitioners across various sectors.
- » Learn to critically analyse, assess, and reflect on current sustainability issues and apply this learning through novel, real world assessments
- » Work with 70 different organisations and take a leading role in planning, implementing, and evaluating a range activities for the University's 'Go Green Week.'

#### **ENMS1002 Management of Ecological Resources**

- » Understand the interactions between animals and plants and their environment.
- » Develop taxonomic skills in plant and animal identification.
- **»** Evaluate the role of ecosystem services and natural capital in the sustainable management of ecological resources.
- » Visits to local Nature Reserves and Sites of Special Scientific Interest (SSSI).

#### **ENMS1003 Global Environmental Issues**

- **»** Explore the role of environmental management to mitigate a range of environmental problems.
- » Investigate the environmental consequences resulting from the continued exploitation of natural resources.
- » Student debates on controversial environmental topics e.g. fracking.
- » Field trips to a landfill site and Anaerobic Digestion plant.

#### **ENMS1004 Surveying Species & Habitats**

- » Receive training in a range of surveying techniques, including GPS mapping and visualisation.
- » Advance use of taxonomic skills in plants, reptiles, birds, and mammals.
- » Investigate the ecological value of different habitats.
- » Explore the concept of indicator species.



Our courses are informed by research and current developments in the discipline, and feedback from students, external examiners and employers. Modules do therefore change periodically in the interests of keeping the course relevant and reflecting best practice. The most up-to-date information will be available to you once you have accepted a place and

registered for the course. If there are insufficient numbers of students interested in an optional module, this might not be offered, but we will advise you as soon as possible and help you choose an alternative. This is no different to the situation at any other university.

#### **SECOND YEAR (LEVEL 5)**

#### **ENMS2001 Environmental Research Skills**

- » Develop research proposals to explore questions around environmental management and sustainability.
- » Work in groups to complete a research project of your choice.
- » Learn how to analyse data and present findings to a professional standard.
- » Enhance your employability: CVs, cover letters, and interviews.

#### **ENMS2002 Environmental Analysis & Interpretation**

- » Advance your field and laboratory skills through valuable hands-on experiences assessing real-world problems.
- » Identify and evaluate the nature and extent of human impacts on the natural environment.
- » Learn how to critically evaluate and discuss the findings of your own research.

#### **ENMS2003 Biodiversity Conservation for Sustainable Futures**

- **»** Evaluate the importance of biodiversity in sustainable environmental management.
- » Investigate the link between biodiversity, sustainable livelihoods, and mental health.
- » Lectures and field visits with sector professionals.

#### **ENMS2004 Mediterranean Environments Field Course**

- » Fully funded Residential Field Course to the Provence-Alpes-Côte d'Azur region, South of France.
- » Compare and contrast Mediterranean environments with those in the UK.
- » Visits to the Camargue National Park, the Crau Plain Natura 2000 Reserve, The Luberon Biosphere Reserve

#### **GEOG2521 Meteorology and Climate**

- **»** Examine the role of weather and climate in forming the physical environment.
- » Explore the underlying processes influencing global climates and meteorological phenomena at various spatial scales.
- » Topics range from large scale atmospheric circulation patterns and global climatic zones to the urban heat island effect.

#### **GEOG2522 River Catchment Dynamics**

- Study the processes that shape river landforms and the characteristics of river flow regimes.
- » Develop skills relevant to a career in river science through learning how to measure river flow and assess water quality through fieldwork and laboratory practicals.
- » Access data remotely from the University's river monitoring stations and use GIS to design a river monitoring network.

#### **GEOG2540 Climate Crisis**

- >> Examine the science underpinning the climate crisis and its impacts, from historical records through to future projections.
- >> Explore how the complex interplay of science, politics, and the media has shaped responses to the climate crisis.
- » Participate in a mock UN Climate Conference, developing a real sense of the challenges to achieving global consensus for climate action.

#### **Optional Professsional Placement Year**

#### **ENMS3000 Professional Placement Year**

- The Professional Placement Year provides an additional opportunity for you to enhance your employability. This is aligned with our aim to develop students that graduate with the confidence to enter the workplace and make a difference.
- » During a Professional Placement Year, you will be able to apply skills learned during your course and develop new skills. This will include gaining transferable (soft) skills in addition to the more technical skills required of the discipline. Consequently, students taking a Professional Placement Year become more employable.



<sup>\*</sup> Field course destinations are well-established but may vary

#### **FINAL YEAR (LEVEL 6)**

#### **ENMS3001 Dissertation**

- » Focus on a topic of your choice in Environmental Management and Sustainability.
- » An excellent opportunity for you to harness your skills and apply your learning to explore an aspect of your course in greater detail.
- » You will be allocated a dissertation supervisor who will support you as needed in achieving your goals. Time for your dissertation is allocated across two semesters, but you can also start your research in June prior to commencing your final year in September.

#### ENMS3002 Environmental Impact Assessment and Sustainable Development

- » Explore the current Environmental Impact Assessment process within the LIK
- » Debate 'development' versus 'biodiversity and conservation'.
- >> Examine the contribution of the EIA process to sustainable development.
- >> Evaluate the success of planning frameworks in delivering environmental sustainable development.

#### **ENMS3003 Environmental Restoration**

- » Explore species reintroductions and rewilding in the UK and internationally.
- » Evaluate processes by which contaminated land can be restored.
- » Examine novel 'restoration' and habitat creation including green roofs and urban green infrastructure.
- » Debate the role of environmental restoration and habitat creation in sustainable environmental management.

#### **ENMS3004 Environmental Pollution**

- » Advance your field and laboratory skills with a focus on environmental pollution.
- » Examine a range of topics related to pollution of the atmosphere, hydrosphere, and geosphere.
- » Investigate the impacts of pollutants on the environment and human health.



#### **ENMS3006 Corporate Environmental Sustainability**

- » Critically analyse Corporate Environmental Sustainability case studies.
- >> Examine the role of ethical and fair trading in environmental sustainability.
- » Evaluate environmental management systems used by businesses e.g. ISO 14001.
- » Debate best practices in Corporate Environmental Sustainability.

#### **ENMS3008 Professional Work Placement**

- » An opportunity to undertake a 100 hour work placement in a professional setting.
- » Apply skills and knowledge learnt during your degree to the workplace.
- » Develop new skills including transferable (soft) skills and more technical skills typical of the discipline.
- » Create a Professional Development Portfolio and enhance your CV.

#### **GEOG3530 Sustainable Development in Sub-Saharan Africa**

- » Examine the ideas, concepts, and practical experiences that have shaped our understanding of sustainable development in Africa.
- » Take a fieldtrip to Malawi or Ethiopia virtually.
- Take on the role of farmers, government, or NGOs, and present your strategy for the sustainable development of your virtual field trip study area.

#### **GEOG3520 River Conservation and Management**

- » Learn about environmentally-sustainable river management practices, with a particular focus on nature-based solutions (e.g. natural flood management and river restoration and rehabilitation)
- » Develop fieldwork skills by learning how to conduct a River Habitat Survey and analyse the results using specialist computer software.
- » External speakers from a range of river management organisations provide key insights for students considering a career in the water industry.

#### **GEOG3532 Rural Planning for Conservation**

- » Engage with the key processes of change at work over time in the British countryside and understand the policy interventions made to try to conserve landscapes and wildlife.
- » Experience how to use your knowledge and understanding in an applied way that is highly career-relevant.
- » Learn through fieldwork on day visits to high-value environments how conservation policies have operated in practice, together with reflection about the effectiveness of their outcomes.

# Professional Placement Year

This optional sandwich year between the second and final year of the course provides you with a fantastic opportunity to enhance your employability by undertaking a full-time, 36 week (minimum) paid placement/internship.

The nature of any placement is down to you. This allows you to explore topics of interest and gain valuable insights into career avenues following graduation. Potential opportunities for your placement include environmental consultancy, working in environmental management and sustainability roles for an organisation, and working in environmental laboratories.

During the Professional Placement, you will be able to apply skills learnt during your course and develop additional skills. This will include gaining transferable (soft) skills in addition to the more technical skills required of the discipline/placement. As a consequence, by undertaking a Professional Placement Year, you become more employable.

To apply for this course, you should select UCAS code F852. Note that if circumstances change, you can switch to the non-placement programme at any time prior to the start of the Placement Year. If you would rather complete your degree within three years but still gain additional work experience, there is also the option to take a Professional Work Placement module in your final year of study.



### Geography **Environmental Management and** Sustainability Our small class sizes mean more interactivity, more support, and a real sense of belonging. At Worcester, you are not just another face in the crowd. Small-group teaching in a friendly, supportive atmosphere Highly interactive, with access to the latest technology Local and regional fieldwork in most modules Fully funded residential field courses Option to spend a semester or year abroad A strong employability emphasis throughout

Find out more at an Open Day. 18



# Meet the team

#### **Academic Staff**



**Dr John Dutton** Ecology, Biodiversity, Conservation, EIA



**Prof Alan Dixon Environment and** Development



**Prof Nick Evans** Protected Areas, Agricultural Change, Landscapes



**Dr Sian Evans** Sustainability, Gender



Dr Cheryl Jones Natural Hazards, GIS, Geology



Dr Beverley Adams-Groom Palynology



**Prof Ian Maddock** Hydrology and **River Conservation** 



**Dr Matt Smith** Biogeography, Environmental Science



**Dr Fleur Visser** GIS, Earth Observation, Fluvial Geomorphology



**Dr Heather Barrett** Sustainable Cities, Planning

#### **Support Staff**



**James Atkins** GIS, Geophysics and Surveying



**Dom Howard** Fieldwork and GIS



**Dr Rebecca Terrry** Biology Technician



**Heather Taylor GIS and Laboratory Facilities** 



**Noel Egginton Environmental Science** 



