

Masterday 2024

INFORMATION BOOKLET



Utrecht
University Fund



Preface

Dear reader,

Thank you for attending the Masterday 2024, organised by study associations NWSV Helix and Storm. Over 25 master programmes from universities all around the Netherlands are attending this day. To help you out a bit, you can already find some information about every master programme in this booklet!

If you have any questions, feel free to ask one of the Board members. If questions remain after the Masterday then also feel free to contact Lars (educatief@nswvhelix.nl) or Piet (onderwijs@stormutrecht.nl) via e-mail.

Don't forget to write down your name on the SAC-form when you attend the afternoon!

We that hope you have an informative day and that you find a master programme that suits you!

Sincerely,

Lars van Peij

h.t. Vicesecretary & Commissioner of Educational Affairs of
NWSV Helix

Piet van Leeuwen

h.t. Commissioner of Educational Affairs of Storm

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Innovation Sciences



Innovation creates new opportunities that lead to sustainable economic growth and can help tackle serious societal problems relating to sustainability, climate change and health. During our two-year Innovation Sciences Master's programme, you will learn how to transform new ideas into marketable innovations, and how to manage and promote innovation processes within companies as well as in society at large.

Creating a culture of innovation is one of society's greatest challenges. As an Innovation Sciences student you will analyse the various stages of the innovation process with a view to developing effective strategies for promoting innovation. The aim of this programme is to give you an insight into the nature of technological change and the conditions affecting innovation and knowledge production. It also aims to give you an understanding of the societal uptake of innovations and the role of companies and other stakeholders such as research institutes, governments and citizen initiatives in the wider innovation system.

Sustainable Business & Innovation



Business stakeholders – such as governments, shareholders, business customers, local communities, consumers, employees, and NGOs – are increasingly demanding that companies become more focused on sustainability for themselves and the communities they impact. The Sustainable Business and Innovation programme offers you a challenging multidisciplinary setting in which to become a sustainability change agent. As a sustainability change agent, you will understand how to help business and organisations in their journey toward making societies more sustainable.

During your studies, you will learn about topics such as sustainable development, sustainability innovations, life cycle assessment, ecoefficiency and cleaner production, environmental management systems, sustainability reporting, organisational change, and management for sustainability. The course content is framed by life-cycle thinking, systems thinking, and long-term thinking. This programme is ideal for students who wish to complement a natural science background with knowledge of sustainability social sciences and current business practices.

Energy Science



We place energy systems analysis at the core of our programme. An energy system consists of all the resources, infrastructure and processes necessary to provide energy services to society, such as energy resources, conversion technologies, storage, distribution, and end-use applications. As all these elements interact in many different ways, energy systems are very complex. The development and implementation of novel energy solutions, can therefore only be analysed in the context of the whole system.

The curriculum covers multiple aspects of the energy transition, including many of its academic and societal challenges. The focus is on energy systems at large, while also considering individual energy conversion technologies (conventional, current and future). Although, the programme concentrates on the natural science and technical aspects of the energy transition, the socio-economic context and aspects are also touched upon.

Sustainable Development



The transformation to sustainable and just societies need contributions from everyone – from activists occupying highways and demanding change, to visionaries experimenting to create new solutions and imagine a better future, to historians learning from the past, to scientists creating new insights and informing debates, entrepreneurs creating new business models for circular and sharing economies, to dedicated public servants working to steer governments towards sustainable decisions. All these perspectives matter, and with this Master's programme you are on board with that.

Our programme will help to create a solid common knowledge foundation, while at the same time offering opportunities for some specialization. It is designed to develop a 'T-shaped' profile that equips you with breadth of knowledge across different disciplines - ranging from the (bio)physical to the social sciences - combined with more in-depth expertise and specialization through four tracks. As the programme adopts interdisciplinary and transdisciplinary approaches, you will work with students from all four tracks.

Water Science and Management



Through scientific knowledge and real-life cases, you will learn about topics such as hydrological processes, climate change, water footprinting, cost reduction, health aspects, and water safety. You will also learn about technical developments such as membrane technology, water/energy combinations, and water cycle management. The majority of courses have a water focus, but there are also courses focussed on the sustainable development context in which modern water managers operate. A Research design course is provided as a necessary basis for performing the Master's Thesis, as well as for executing academic water challenges on the job market. The programme combines academic knowledge of natural sciences and technical water management options with process and project skills, culminating in an optional research internship at a water management organisation.

Health and Environment



Health and environment are undeniably strongly related. Global trends, such as climate change, chemical pollution, biodiversity loss, urbanization and deforestation pose grand challenges to society as a whole. What these challenges have in common is that they are serious threats to human, veterinary, wildlife, and ecosystem health. To tackle these challenges an interdisciplinary approach is needed. Therefore we are looking for students with various backgrounds and interests, in e.g. exposure assessment and modeling, One Health and toxicology. Our programme is tailor made, you have a lot of freedom to choose your curriculum, and work on your own research project(s). Are you ready to address these global challenges in this interdisciplinary Master's programme?

Earth, Life and Climate



At present, human action results in major changes in the fragile natural environmental systems, biodiversity and climate. This is a major concern and one of the greatest international societal and scientific challenges for the future.

Topics you will study during this two-year programme include amongst others the origin and evolution of life, major transitions in earth's history, dynamics of sedimentary systems, carbon sources and sinks, biogeochemical and geochemical cycles, climate change and its impact on natural environments such as glaciers, ice sheets, lakes, groundwater, wetlands, estuaries, and oceans. You will learn state-of-the-art reconstruction methods, modelling techniques, and laboratory experiments that has been developed and applied in a wide range of earth and beta science disciplines, such as biogeology, palaeontology, palynology, sedimentology, stratigraphy, environmental geochemistry, organic geochemistry, hydrology, physical geography, geology, biology, climate dynamics, marine sciences and palaeoceanography. You will utilise these skills in your own research project or internship in preparation for an international career in applied or fundamental research.

Geographical Information



Management and Applications

Two aspects make GIMA a unique programme: the blended learning concept and the co-operation between four renowned Dutch universities.

GIMA is a blended learning Master's programme, which means that most of the time you are studying from the place where you think you can study best (e.g. at home, or at the library). Students study full time (2 yrs.) or part time (4 yrs.). For the first half of the programme there are only four short contact periods per year, one at each partner university. During those contact periods (with a duration of two weeks) you are supposed to be present in person, but for the rest of the year you can study through our electronic learning environment from wherever you are. Obviously, the same holds for the individual thesis research project and internship, each of 6 (full time) or 12 (part time) months length in the last half of the programme.

Climate Studies



The question is no longer if our climate will change, but how it will change and how we will adapt to these changes. The master programme Climate Studies focuses on an improved understanding of climate change across the earth and its impact on ecosystems and society. It does not only cover the most important geophysical and biogeochemical processes involved in climate change (the mechanisms), but it also covers the socio-economic aspects of causes and effects, as well as adaptation and mitigation as the main categories of societal response. It combines and integrates the knowledge and expertise from three domains: Earth Sciences, Life Sciences, and Social Sciences. This two-year programme has one year of coursework and one year of research. You can choose from five specializations: The Physical Climate System, Biogeochemical Cycles, Ecological and Agroecological Systems, Human-Environment Interaction, Climate, Society and Economics.

Urban Environmental Management

The world we live in is an increasingly urban one as cities currently account for half the world's population. By 2030, it is expected that three out of every five people will live in an urban environment. Sustainable management of the urban environment has become one of the major challenges of the 21st century as you will learn during the master Urban Environmental Management. This development calls for control of the environmental impacts of urbanisation like growing traffic, increasing waste emissions, deteriorating air and water quality, and growth in energy and resource consumption. This two-year programme has one year of coursework and one year of research. You can choose one out of eight thesis tracks: Urban Environmental Economics, Environmental Policy, Environmental Systems Analysis, Geo-information Science, Land Use Planning, Business Management and Organisation, Urban Systems Engineering, Water Systems and Global Change.

Metropolitan Analysis, Design and Engineering (joint degree)

This two-year master's focuses on sustainable urban development. You learn to create innovative solutions for the challenges that metropolitan regions face in securing environmental change, urban sustainability and the quality of life in cities. It is an interdisciplinary program of both Wageningen University & Research and Delft University of Technology, located at the AMS Institute in Amsterdam.

The program brings together multidisciplinary teams to reflect and work on solutions to questions like: How to keep our metropolises connected? How to aim for the circular city? And, how to safeguard its vitality? You will work on topics including energy and food security, mobility and logistics, water and waste management, health, and wellbeing.

The first academic year consists of courses such as Metropolitan Challenges, Data and Entrepreneurship. These will prepare you for the Living Lab and thesis in the second year. The Living Lab approach will enable you to work on real-life cases within the city of Amsterdam.

Environmental Sciences

Are you up to the challenge of finding innovative approaches to improve the state of the environment and sustainable solutions to the threats it faces? The master programme Environmental Sciences in Wageningen has its roots in the natural, technological and social sciences. Students will gain insight into the socio-economic causes and the characteristics of pollution and degradation of the natural environment, including the effects on human beings, the atmosphere, ecosystems and other organisms. This two-year programme is based on an interdisciplinary approach, has one year of coursework and one year of research. Students learn to develop analytical tools and models, as well as technologies, socio-political arrangements and economic instruments to prevent and control the wicked environmental and sustainability issues like climate change, biodiversity loss and resource depletion. You can choose from four specialisations: Environmental Quality, Environmental Policy and Economics, Environmental Technology or Human-Environmental Systems.

Global Business & Sustainability



Do you aim to make a career out of creating sustainability solutions to tackle societal grand challenges? Business is still not taking enough responsibility. It needs leaders to collaborate with NGOs and government to address challenges like climate change and poverty. Learn to lead the way for new interventions, innovation policies, and other methods to change the state of the system to make an impact.

In the MSc Global Business & Sustainability programme, you'll investigate how you can successfully embed sustainability into the core of local and international business operations. You'll be surrounded by like-minded students and educators – all inspiring each other to forge ahead, share knowledge and build on what you're learning, together. Examples of future job titles are Sustainability Manager, ESG Analyst, Sustainability Consultant. For more information about your future career, please visit our website.

Management of Innovation



Organisations need people who can generate and implement innovative ideas. The MSc Management of Innovation programme helps you to develop the competencies required to fulfil that need.

Learn how to effectively develop an innovation strategy, create an innovation culture, foster creative ideas, manage innovation projects and more. Explore scientific theories, case studies and business challenges. As you advance in your studies, you and your fellow cohort join your professors in applying what you've learned to real societal issues and business situations. You'll also be well prepared for the job market with 93% of graduates from this programme employed within 3 months after graduation. Examples of future job titles are Business Developer, Product Manager, and Innovation Consultant. For more information about your future career, please visit our website.

Health Care Management



Healthcare organisations worldwide are facing challenging issues caused by global trends, such as ageing and lifestyle changes. Good management is vital to solving these increasingly difficult issues in the healthcare sector. The master's programme in Health Care Management equips you to live up to those challenges.

During this internationally oriented master in Health Care Management, you are trained to match knowledge from various academic fields (e.g. human resource management, quality & safety, financial management, logistics) with professional skills to deal with the complexities of contemporary healthcare problems and transitions. During this entire process, you never lose focus on patient demands and needs.

The master's programme offers many opportunities to deepen your knowledge on topical healthcare issues and practise your personal skills as a (future) healthcare manager. For students who want to enhance their practical experience, internships are offered as part of the programme (instead of an elective course).

Health, Economics, Policy and Law

Healthcare systems worldwide face complicated challenges. Policymakers want to retain or improve access to good-quality healthcare, but they also want to keep systems affordable for patients and taxpayers. Meanwhile, healthcare expenditure is increasing, demographics are changing, expectations are higher and expensive new treatments are becoming available.

What are the causes of the problems that systems face? What are possible solutions? Take a multidisciplinary approach that combines the economic perspective with political science and legal thinking. See how different countries balance efficiency and equity in their systems. Investigate the value of new drugs for patients and their consequence for societies. Explore the interplay of economics and population health. Study similarities and differences between higher and lower-income countries. The master's programme is internationally oriented and attracts students from many countries.

Environment and Society Studies

This Master's programme discusses the most pressing environmental challenges of our time. We'll study societal transformations towards sustainable futures. We question and critique current practices and governance. Selection of topics: environmental justice, biodiversity, non-human animals, circular economy, energy and water. You have a choice between four Master's specialisations.

- Sustainable Economies and Corporations

We rethink economic processes to enhance the environmental responsibility of businesses and develop new business models in light of a sustainable future.

- Global Environment and Sustainability

This programme deals with the global level of sustainability transformations and policies intended to make major strides towards a sustainable future.

- Local Environmental Change and Sustainable Cities

How to deal with issues regarding the energy transition, water, mobility, circularity, agriculture and nature conservation in a city or region?

- Environmental Justice and Governance

Environmental justice is a classic theme of the environmental sciences and is becoming increasingly important in our contemporary societies. How can we secure and preserve a healthy environment for all citizens?

Earth Sciences

As our environment is increasingly affected by human pressures, there is a growing need for experts with in-depth knowledge on how to protect, manage and better understand the interactions between human actions and Earth system responses. The Master Earth Sciences offers a unique set of courses tailored to your interests that take you from deep time – millions of years ago – to the present and into the future through scenarios, and from microscopic processes to landscape and global scale dynamics. You will observe such processes in Tenerife's varied landscapes, Peru's high altitudes, and the Dutch coastal dune landscapes. Our field-, laboratory- and computations-based courses will help you become an expert of the Earth system and its management, and you will focus your studies by choosing one of two tracks: Earth System Science or Environmental Management.

Sustainability Science, Policy and Society



Are you passionate about sustainability and want to help solve sustainability problems? The world needs professionals who can recognise, analyse and respond to sustainability challenges. Who can design, conduct and evaluate sustainability assessments together with stakeholders and operate at the interface of science, policy and society. In the Master SSPS, you will learn to do just that. You familiarise yourself with the fundamentals of sustainability development and you learn to design, conduct, and evaluate sustainability assessments. You will also be able to connect with various stakeholder groups and build bridges between people and organisations who do not always speak the same language.

2 different specialisations:

- Policy specialisation

Students will deepen their knowledge on sustainable development from the perspective of public policy-making.

- Business specialisation

Students will deepen their knowledge of the social and environmental impacts of economic activities, and explore what it means for these activities to remain within planetary boundaries.

Sustainable Energy Technology



Become a sustainable technology pioneer who develops and implements novel, sustainable energy technologies and transitions that are needed in tomorrow's world.

With an ever-growing global population and energy demands of industries and consumers rising higher than ever before, we are rapidly depleting earth's non-renewable energy resources. The problem of climate change has raised the demand for engineers to develop and implement sustainable energy technologies. Do you feel called upon to make a valuable contribution to the sustainable energy transition? If so, the Master's in Sustainable Energy Technology at the University of Twente (UT) is the right choice for you.

In this two-year, English-taught Master's, you gain in-depth expertise within the field of energy technology, supplementing it with the broader knowledge and skills needed to achieve real change in our societies' energy systems.

Spatial Engineering

IIVERSI
TWENT

Natural disasters, poverty, food shortage, epidemics, climate change: learn to tackle society's greatest and most complex challenges with the use of spatial data.

Natural disasters, poverty, food shortage, epidemics, climate change. The challenges society is facing today are characterised by enormous complexity. These so-called wicked problems are impossible to solve in a way that is simple or final. The world needs socially committed engineers who won't shy away from complex challenges but feel the urge to contribute to solutions that will make societies worldwide more sustainable and resilient. In this Master's, you will learn to address large-scale and complex societal challenges by combining both technical and socio-economic knowledge with a strong basis of spatial data analysis and modelling.

With the increasing availability of spatial data and technological innovations, the demand for spatial engineers continues to grow. After graduation, you could work for a broad range of organisations in all kinds of fields, including water management, infrastructure, renewable energy, environmental remote sensing, or agriculture and nature conservation.

Watertechnology (joint degree)

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TWENT

Learn to solve global water problems with a multidisciplinary approach.

In the field of water (process) technology, breakthrough technological developments are required. Not only to enable the export ambitions of the water sector but also to solve global threats and challenges in society. Think, for example, of challenges related to water scarcity, water pollution, and sustainable water management. If you are eager to develop innovations in water treatment processes and contribute to water technology solutions for the sustainable use of water, the Master's in Water Technology is right for you.

This Master's is a joint degree, offered by the University of Twente, Wageningen University and the University of Groningen, in collaboration with the Wetsus Institute in Leeuwarden, the European Centre of Excellence for sustainable water technology.

Chemical Science & Engineering

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TWENT

Develop novel chemical processes, materials and molecules and contribute to innovations that benefit our society in areas such as health, water, food, energy and sustainability.

The chemical industry has played a fundamental role in our society and will continue to do so. However, the industry currently finds itself at a turning point. Society demands a more sustainable economy, including the circular use of raw materials. Moreover, advances in materials are rapidly unfolding, paving the way for promising breakthroughs in all kinds of fields, from medicine to energy and food to transportation. These developments require a new approach to many chemical processes and the use of different materials. The Master's in Chemical Science & Engineering (CSE) at the University of Twente (UT) will prepare you for this exciting and advancing role of chemical scientists and engineers.

Environmental & Energy Management

IVERSIT
TWENT

In this 1 year English taught multidisciplinary Master's programme of UT, which takes place in Leeuwarden, Friesland, you will become an expert in the management and governance of three crucial, interrelated natural resources: the environment, energy, and water.

Today's challenges – for example, climate change, resource depletion, and urbanisation – call for professionals who are able to organise, manage, and lead socio-technological change. This combined focus on thinking and doing lies at the heart of this programme. This Master's will provide you with knowledge, skills, and competencies in disciplines like management, public policy, governance, and law. It focuses on the administrative, organisational, and technical causes underlying water, environmental or energy problems – and on strategies for controlling these problems and stimulating sustainable development. You can specialise in the field of energy, environmental, or water management. Upon graduation, you can work in multidisciplinary business, government, consultancy, or research teams.

Complex Systems Engineering and Management



Are you looking for a Master's degree programme in which you learn to design in complex technical environments? But do you want more than 'just' technical skills, such as looking beyond the design of electric vehicles and concentrate on what is needed to implement electric transportation on a large scale? Then take a look at the unique Master's degree programme in Complex Systems Engineering and Management (CoSEM). In the CoSEM Master's programme you will focus on regulations, logistics, behavioural change, financial incentives etc., in order to bring innovations to life. For example, when designing technological innovations, you will deal with matters such as existing regulations, subsidies, distribution channels and infrastructures, as well as interests, cultures and human behaviour. In order to achieve successful innovations, these aspects must be considered and used in your socio-technical design. These kinds of designs always have ethical dimensions and international characters.

Industrial Ecology (joint degree)



Are you interested in (quantitative) sustainability science? Industrial Ecology is an emerging scientific discipline that takes a systemic approach to sustainability problems. An interdisciplinary approach, integrating an engineering, environmental and social science perspective is essential for sustainable development. The Master in Industrial Ecology is a co-operation between Leiden University and Delft University of Technology.

This programme offers talented students from around the world the opportunity to enhance their expertise and work on the grand challenge of achieving global prosperity within planetary boundaries.

Why study Industrial Ecology?

- You will learn concepts, methods and tools to help you identify, design and critically evaluate sustainability solutions and their implementation.
- We offer an international multidisciplinary environment, where all students bring their own specific bachelor knowledge and cultural background. We believe that this multidisciplinary approach is the best way to move forward.
- Collaboration with third parties, such as national or international partner universities, NGOs, industrial partners, or government institutes is encouraged and facilitated.
- You will be inspired by professors from two world-class universities, who are at the forefront of the field of Industrial Ecology.

Innovation Management



Innovation is crucial for businesses, institutions, and societies. Unfortunately, many innovations fail. The Innovation Management program teaches you how to best navigate the challenging trade-offs of innovation, how to design innovative solutions to key societal-, customer-, and business problems, and how to structure and lead innovation processes. Put differently: how to make innovation decisions that successfully balance people, planet, and profit.

Alongside the core of the program, students choose one of five tracks to specialize. Furthermore, the elective space enables students to tailor the program to their interests and future career wishes. The program teaches a unique blend of theories, quantitative and qualitative tools and techniques. Students can gain international experience and/or engage with the award-winning Innovation Space. The graduation project (thesis) deepens students' specific interests by solving a real-life problem in an organization. You create a valuable and future-proof innovation management profile to work in a range of different roles and fields.

Governance of Sustainability



Do you want to be an intermediary between scientific experts, policy makers and politicians in the domain of environmental sustainability? The master programme Governance of Sustainability might be just what you are looking for.

This programme focuses on environmental sustainability. You will obtain in-depth knowledge of both the governance perspective (social science) and the natural sciences. You will learn how to integrate these perspectives to develop governance solutions to complex environmental sustainability challenges such as climate change, biodiversity loss and the transition to a circular economy. In addition, you will learn a variety of skills required to cope with complex sustainability problems and to develop yourself into a future 'change agent' – someone who can apply and communicate natural science insights, while also understanding the governance context.

Sustainable Entrepreneurship



Join a new generation of entrepreneurs and policy advisors! Discover what makes sustainable enterprises emerge, thrive, and be successful.

- Develop leadership and management skills and gain academic and practical knowledge on sustainability;
- Learn how entrepreneurs and businesses contribute to solving complex social problems;
- Work on real-life challenges alongside our partners - entrepreneurs, NGOs and governmental institutions.

In this 1-year MSc programme at Campus Fryslân (University of Groningen), you will learn about sustainability challenges from different perspectives - from a startup entrepreneurs or large organizations that are well-established in their branch, but also from a policy advisor working on the regulations for different levels of government. You will be equipped with leadership and alliance-building skills in order to connect companies and institutions on their way to sustainability.

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