



COURSE CATALOGUE 2024-2025

2024-2025 | University College Venlo

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General Information

Curriculum Requirements

	Courses (5 credits each)	Skills courses (2,5 credits each)	Projects (5 credits each)	total (credits)
Core	4	4 compulsory introductory	2 compulsory introductory	40
General education	4, distributed over the alternate concentration and humanities courses. Min 1 humanities Min 1 alternate concentration			20
Concentration (Social / Life)	14 courses; max 4 introductory min 4 advanced	6 skills trainings; intermediate or advanced	3 projects; max 2 intermediate min 1 advanced	100
Capstone	1 Capstone			20
Total	22 courses 110	10 skills trainings 25	5 projects + Capstone 45	180

Core adjustments as of 2024-2025

There are two main and one minor adjustments in the curriculum core.

- VCO1004 Globalisation has been replaced with VCO1005 Information Literacy.
- VPR1003 Research Methods II: Applied Academics and VPR1004 Research Methods II: Lab Skills have been replaced with VPR1005 Research Methods II: Qualitative Research.
- VSK1002 Research Methods I is renamed to VSK1002 Research Methods I: Quantitative Research.

IMPORTANT: As of Academic Year 2024-2025 only the new Core course will be offered. For students who have passed the 'old' core courses, these results will be valid until graduation. Students who have failed the 'old' Core course, have to take the new Core course as mentioned above to meet the graduation requirements.

Disclaimer

The course and skills descriptions provided herein are for the guidance of students of University College Venlo and every effort is made to ensure their accuracy. However, University College Venlo reserves the right to make variations to the content and pre- and co-requisites, to discontinue courses and to merge or combine courses without prior notice. This course catalogue is under continuous development, new courses are added regularly. Suggestions can be proposed to the Education Programme Committee.

Courses per period

Course Code	Module	Level	Course Title	Period
VCO1001	Course	1000	Modelling Nature	1
VHU2002	Course	2000	History of Knowledge	1
VSC1101	Course	1000	Introduction to Biology	1
VSC1201	Course	1000	Introduction to Public Health	1
VSC2205	Course	2000	Nutrition and Metabolism	1
VSC2208	Course	2000	Sensory Science	1 (NEW)
VSC3101	Course	3000	Gut Microbiology	1
VSC3206	Course	3000	Nutritional Pharmacotherapy	1
VSC3502	Course	3000	Planetary Health	1 (NEW)
VSS1101	Course	1000	Introduction to Psychology	1
VSS1201	Course	1000	Introduction to Business Administration	1
VSS2105	Course	2000	Social Psychology	1
VSS3502	Course	3000	EU Environmental Food Law & Policy	1 (NEW)
VSK1001	Skills Training	1000	Introduction to Academic Skills	1
VSK2004	Skills Training	2000	Academic Writing	1
VSK2013	Skills Training	2000	Nutritional Assessment	1 (NEW)
VSK2015	Skills Training	2000	Lab Skills: Good Laboratory Practice	1 (NEW)
VSK2016	Skills Training	2000	Advanced Logic	1
VCO1005	Course	1000	Information Literacy	2 (NEW)
VHU2001	Course	2000	Normative Dimension of Sustainability	2
VSC1303	Course	1000	Introduction to Statistical Methods and Data Analysis	2
VSC1401	Course	1000	Introduction to Chemistry	2
VSC2103	Course	2000	Pharmacology and Toxicology	2
VSC2104	Course	2000	Molecular Biology	2
VSC2204	Course	2000	Public Health Policy Making	2
VSC2207	Course	2000	Plant Biology and Agriculture	2
VSC3204	Course	3000	Food Safety	2
VSC3207	Course	3000	Sports Nutrition and Physiology	2
VSS2101	Course	2000	Psychology of Eating	2
VSS2203	Course	2000	Finance and Investments	2 from 5
VSS3101	Course	3000	Performance Psychology in Sports and Business	2 from 5
VSS3301	Course	3000	Social and Environmental Entrepreneurship	2
VSK1002	Skills Training	1000	Research Methods I: Quantitative Research	2
VSK2003	Skills Training	2000	Lab Skills: Biomolecular Techniques	2
VSK2009	Skills Training	2000	Leadership Skills	2
VSK2010	Skills Training	2000	Creativity & Concept Development of New Business	2
VSK2012	Skills Training	2000	Integrated Sustainability Assessment of Climate Change	2
VSK2014	Skills Training	2000	Interviewing I	2 (NEW)
VPR1005	Project	1000	Research Methods II: Qualitative Research	3 (NEW)
VPR2001	Project	2000	Writing a Research Proposal	3 from 6
VPR2002	Project	2000	Academic Debate	3
VPR2005	Project	2000	Interviewing II	3 (NEW)
VPR3004	Project	3000	Project Management	3

VCO1003	Course	1000	World Orientation: An Introduction to Cultural Studies	4
VHU1002	Course	1000	Digital Technology and Culture	4
VSC1501	Course	1000	Sustainable Development: Human Impact on the Earth System	4
VSC2102	Course	2000	Homeostatic Principles	4
VSC2106	Course	2000	Brain and Action	4
VSC2201	Course	2000	Epidemiology of Food; The Relationship Between Food and Health	4
VSC2401	Course	2000	Biochemistry	4
VSC2501	Course	2000	Climate Change	4 (NEW)
VSC3102	Course	3000	Healthy Life Cycle	4 from 2
VSC3201	Course	3000	Clinical Nutrition	4
VSC3202	Course	3000	Health Education and Communication	4
VSC3501	Course	3000	Sustainable Food Production	4
VSS2206	Course	2000	Supply Chain Management	4 from 1
VSS3102	Course	3000	Taste	4
VSK1000	Skills Training	1000	The Applied Researcher I	4
VSK2002	Skills Training	2000	Lab Skills: Protocol Design	4 from 1
VSK2007	Skills Training	2000	Risk Communication & Crisis Management	4
VSK2011	Skills Training	2000	Influencing and Negotiation Skills	4
VSK3101	Skills Training	3000	PEERS - Undergraduate Research I	4
VCO1002	Course	1000	Philosophy of Science	5
VHU1001	Course	1000	Ethics	5
VSC2105	Course	2000	Microbiology	5
VSC2108	Course	2000	Human Pathobiology	5 (NEW)
VSC2203	Course	2000	Food Technology and Processing	5
VSC2209	Course	2000	Global Health Nutrition	5 (NEW)
VSC2305	Course	2000	Intermediate Statistical Methods and Data Analysis	5
VSC3203	Course	3000	Food Innovation	5 from 1
VSC3208	Course	3000	Food and Disease	5
VSC3302	Course	3000	Bioinformatics	5 (NEW)
VSS1503	Course	1000	Foundations of EU Law and Policy	5 (NEW)
VSS2102	Course	2000	Behaviour Change	5
VSS2301	Course	2000	Entrepreneurship	5
VSS3202	Course	3000	Consumer Behaviour	5 from 4
VSK1004	Skills Training	1000	The Applied Researcher II	5
VSK2006	Skills Training	2000	Clinical Lab Skills	5 from 1
VSK2008	Skills Training	2000	Visualization and Data Storytelling	5
VSK3004	Skills Training	3000	Science Communication I	5
VSK3005	Skills Training	3000	Food Product Development	5 (NEW)
VSK3102	Skills Training	3000	PEERS - Undergraduate Research II	5
VPR1002	Project	1000	The Applied Researcher III	6
VPR2004	Project	2000	Strategic Marketing and Practice	6
VPR3002	Project	3000	Think Tank	6 from 3
VPR3003	Project	3000	Science Communication II	6 (NEW)
VPR3103	Project	3000	PEERS - Undergraduate Research III	6
VCA3000	Bachelor Thesis	3000	Capstone	Semester

Core Courses

VCO1001 Modelling Nature

1000 Core Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Alie Boer, de, University College Venlo, FSE, Maastricht University

Contact: a.deboer@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

This course provides an introduction to theorizing and modelling. It is relevant for a wide range of other courses that are offered at UCV, but it does require some experience in academia. **It is therefore recommended that students take the course in their second or third semester.**

Objectives

Upon completing this course, students:

- Will be able to recall and describe the fundamental characteristics of models used in different disciplines in the natural and social sciences, including their purpose, variables and limitations;
- Can demonstrate comprehension of the underlying principles of modelling by analysing and interpreting relationships between variables within different types of models used in natural and social sciences;
- Will show their understanding of modelling by critically analyzing real-world examples and applying relevant general models and acquired modelling techniques to predict outcomes or explain phenomena encountered in their daily lives.

Description of the course

Models allow us to approach complex questions in systematic ways, for instance, by predicting weather conditions, the patterns of bird flight formations or the results of presidential elections. Such questions are present everywhere and it is through modelling that we can try to find some answers. Modelling helps us to break down what we are studying into variables, understand relations or correlations between them and even predict the future. However, we always need to be aware that models have specific limitations, and we have to use them wisely.

The core course Modelling Nature is aimed at familiarising students with model systems that are used within the different disciplines of Sciences and Social Sciences. Following a broad introduction to models and modelling, cases will address different types of models in e.g. life sciences and behavioural sciences in more depth. Case studies will illustrate the usefulness of these models in various contexts. Students will be exposed to different models used both in academia and everyday thinking, to foster a thorough understanding of natural and social phenomena. Throughout the course, students are encouraged to link models to specific situations and examples from their daily life.

Literature

Jaccard J. and Jacoby J. (2020). Theory Construction and Model-Building Skills – A Practical Guide for Social Scientists, 2nd edition. New York: The Guilford Press.

Additional materials (original research articles and relevant knowledge clips) will be made available on Student Portal.

Instructional Format

Lectures, workshops and tutorial meetings

Assessment

- 60% of grade: Written final exam (open questions).
- 40% of grade: Written assignment.

VCO1002 Philosophy of Science

1000 Core Course

5 ECTS, Spring Semester, Period 5

Course Coordinators

Remco Havermans, University College Venlo, FSE, Maastricht University

Contact: r.havermans@maastrichtuniversity.nl

Pre-requisites

✓ None

Recommendations

It is strongly recommended not to take the course in your first semester.

Objectives

To familiarize students with the philosophical foundations of scientific method.

Description of the course

This course deals with the question: What is science? We will start with common sense ideas that science is based on observation, and that this is what distinguishes it from other types of belief. From there we will move to more sophisticated positions like critical rationalism, the so-called historical and sociological turn in the theory of science. In the last part of the course we will focus on problems in the social sciences. Typical issues in this course are: what is the role of observation in science? What is a scientific explanation? What roles do theories and experiments play in science? What is the nature of scientific progress? Can we rationally decide between scientific viewpoints? How do the social sciences explain human behaviour? What is the role of social science in society?

Literature

Chalmers, D. (1999). What is This Thing Called Science?
E-Readers.

Instructional Format

Tutorial group meetings and lectures.

Assessment

An essay and a test with open questions.

VCO1003 World Orientation: An Introduction to Cultural Studies

1000 Core Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

Given the extensive reading load, including many classics, and the required abstract thinking level, it is advised to not take this course in the first 6 months of your study.

Objectives

- You can recall cultural concepts and models relevant to understanding how culture influences our actions and thinking in six different fields of studies (e.g. Kleinman's explanatory model; Douglas grid-group theory).
- You can explain how culture influences our actions and thinking in six different fields of studies (health, food, business, globalization, human rights, and risk perception).
- You can use the theoretical and empirical knowledge retrieved from academic sources to argue for or against a perspective on a current societal issue.
- You can orally discuss a current societal issue in a two person debate using theoretical and empirical knowledge studied in the course.

Description of the course

This course takes an approach that surpasses boundaries between disciplines and methods, problems and perspectives. We will focus on understanding how culture and cultural differences contribute to some of the current problems and phenomena observed in six disciplines (health, food, business, globalization, human rights, and risk perception). In each week of the course we will focus on the relation between culture and one of the six fields. Questions that will be tackled include: What is culture? How does globalization influence culture and identity? Why are some people so persistent in using non-western forms of healing/ treatment within a biomedical treatment dominated country? Is food culture by definition the result of an autonomous shift in consumer views/tastes or can a change in food culture be produced? How can culture explain differences in risk perception?

Literature

An e-reader will be provided which contains numerous literature sources per task.

Instructional Format

Tutorial group meetings, recorded knowledge clips, on-campus lectures, and discussion boards.

Assessment

Online debate (incl. writing a factsheet/template in advance) and final written exam.

VCO1005 Information Literacy

1000 Core Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Miriam Urlings, Food Claims Centre Venlo, Maastricht University

Contact: mje.urlings@maastrichtuniversity.nl

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

Students will learn to:

- Detect misinformation (“bullshit”)
- Recognize good and bad reasoning
- Develop a skeptical mind
- Use appropriate data for different research questions (qualitative and quantitative)
- Think like a scientist: recognize biases and assumptions in processing information
- Understand different types of truths and untruths/recognize true and untrue information

Description of the course

A key aspect of studying at university and later on working at university level, is the correct and critical appraisal of scientific as well as non-scientific information. This course will teach about different aspects of information literacy, such as judging the value of an argument, recognizing misinformation and fallacies in reasoning (e.g. confirmation bias, hindsight bias, heuristics). Both qualitative and quantitative data and documents will be studied, to learn that different research questions require different types of data and value the provided information in a correct way. To be well prepared for the future, the course will also pay attention to the growing amount of information provided via artificial attention, bringing new challenges in correctly valuing information.

Key words:

- Skepticism
- Critical thinking
- Argumentation
- Data literacy
- Information literacy
- Inductive and deductive reasoning

Literature

TBA

Instructional Format

TBA

Assessment

TBA

Humanities Courses

VHU1001 Ethics

1000 Humanities Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

Students will:

- Critically analyze the social, economic, and environmental factors that influence the ethical dimensions of scientific research and technological innovation
- Understand key ethical frameworks and apply them to practical concerns and problems of science and technology
- Develop and defend positions regarding the ethics of scientific discoveries, scientific research, and the use of a variety of new and emerging technologies

Description of the course

We live in a fast-paced and ever-changing world in which scientific and technological practices raise many ethical concerns. Building on the theme that science and technology have both beneficial and detrimental aspects, this course explores the ethical dimensions of a multitude of scientific and technological practices and innovations such as food technologies, cloning, genomics, synthetic biology, nanotechnology and big data analyses. We will focus on both current ethical controversies in science and technology as well as long-standing debates. We will ask and discussion questions such as, should research be conducted on animals, and if so, under what conditions? What ethical issues arise as a result of our increasing use of computers? What are scientists' responsibilities regarding risky technologies? To what extent, and how, should the public be involved in scientific practices? Instead of providing easy answers to these questions, this course will provide concepts and theories for thinking about ethical issues systematically and coherently, and for developing justifiable positions about them.

Literature

Understanding Ethics, by Torbjörn Tännsjö

E-Reader

Instructional Format

PBL format

Assessment

Paper (65%)

Presentation (35%)

VHU1002 Digital Technology and Culture

1000 Humanities Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Charles van Leeuwen, Literature & Art, FASoS, Maastricht University

Contact: charles.vanleeuwen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

The aims of this course are to familiarize students with topics relevant for digital culture and society such as:

- Different uses of digital media in the fields of work and communication, surveillance technologies, mental health, social media, digital information management and digital learning.
- The relation between technological development, user practices, ethical questions, and technomoral change as e.g., netactivism and participation, mediation of perception, digital intimacy and digital fears, digital literacy, health literacy and sustainability.
- Relevant topics related to digitalization as e.g. ethics, surveillance and privacy will be discussed.

Description of the course

Students in this course will be introduced into the broad field of digital media and culture and discuss in detail computer based practices (both from the humanities and qualitative social sciences). The topics discussed range from transformations in our digital cultures based on technological developments from societal debates to user practices and ethical considerations in the context of new emerging technologies. While popular debates usually focus on general discussions on the impact of digital technologies, this course will deal with the complexity and diversity of our contemporary culture.

Over the course of the past decades digital devices have become omnipresent in our societies. Every day we type on computers, make calls with our mobile phones, log in to numerous websites and social networks. Perhaps more importantly, we are able to keep extensive, precise records of our everyday lives. From internet cookies, tracking apps to video camera surveillance feeds, along with the information users, companies and governments store in clouds, more and more data is generated and archived. In the digital age, information circulates faster and faster, sometimes without the knowledge of the parties from which the data originate. The consequences have been differently valued. The optimistic account stresses the new media's inherent possibilities for active cultural and social participation beyond the reach of existing political or commercial institutions. Participation is a term discussed when we follow discussions about the use of social media to support processes of democratisation.

When we investigate the use and abuse of user data and surveillance strategies both from governments and marketing institutions exploitation of users is central in the debate. We willingly help to spread information on social media, often without an awareness of the politics involved. The cultural transformations of and through digital technologies, the impact they have on their users and ways users shape digital technologies will be investigated in this course.

For each professional, it will be important to understand how different groups make different use and sense of digital technologies. One day it may be your task to introduce your students, patients, customers, citizens, readers, etc. into the use of specific digital tools, and to mediate conflicts about their functionalities, design and social and cultural impact.

Literature

The literature is available online and via the reference list of the University Library.

Instructional Format

PBL, tutorial group meetings and lectures, viewing of 2 movies (2 documentaries).

Assessment

Short presentation in class (30%), and a final essay of 2000 (+/- 10%) words at the end of the course (70%). To prepare for the final essay a few feedback moments will be offered (feedback on the topic and research question, feedback on the outline/structure of the essay and a review session for peer feedback and feedback from the coordinator (outlines/drafts to be handed in are not graded).

VHU2001 Normative Dimension of Sustainability

2000 Humanities Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

Through this course, students will:

- Learn to identify key theoretical approaches to studying socio-environmental problems;
- Critically evaluate claims and research regarding environmental justice;
- Apply key concepts to analyze and make sense of environmental problems in every-day life;
- Understand the contingent nature of social responses to environmental problems.

Description of the course

This course will explore the relationship between environmental sustainability and social justice. We will explore the historical development of discourses and actions including but not limited to environmental justice, sustainability, and resilience. Through these theories and discourses, we will explore the possible tension between economic growth and environmental degradation, analyze environmental movements, and evaluate claims made by researchers, activists, and politicians about the connections between environmental harms and social factors such as gender, class, age, and race. To do so, we will make use of a broad range of disciplines, including philosophy, economics, sociology, urban studies, and environmental studies. Specifically, we will look at the social contexts and impacts of environmental problems such as waste management, land use, air quality, flooding, food security, and climate change.

Literature

E-reader

Instructional Format

PBL format

Assessment

Presentation

Final Paper

VHU2002 History of Knowledge

2000 Humanities Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

VCO1002 Philosophy of Science

Objectives

- Identify and analyze key theories and debates in historiography;
- Understand key historical explanations of the genesis, movement, and changing of scientific ideas and knowledge;
- Interpret primary and secondary historical sources;
- Apply historiographical insights to analyze the political, cultural, and economic contexts of scientific and technological change

Description of the course

Why do specific people in certain social contexts come up with novel explanations of the world? To what extent does technological change explain historical and scientific progress? How has the nature of discovery changed over the course of history? What determines the consequences of new ideas? How do scientific innovations relate to other societal institutions, such as religion, the economy, and the state? The course explores these and related questions by analyzing the dynamic relationships between scientific thought, technological innovations, and broader social contexts of religion, art, politics, and morality. We will do this by paying attention to both large, structural changes in scientific institutions as well as micro-histories of particular discoverers and innovators credited (or not credited) with developing new theories, technologies, and ways of thinking. At the same time, we will learn about the 'history of history', or what historians call historiography. With a focus on issues of science and technology, we will cover different approaches to history and discuss how these afford us different types of understandings of the past. Throughout the course, we will utilize concepts from history and philosophy of science, science and technology studies, cultural studies, and related disciplines to shed light on our guiding question: what is the history of knowledge?

Literature

E-Reader consisting of primary and secondary sources

Instructional Format

PBL sessions (two per week) for the first 3 weeks; the final 3 weeks run as a 'book club'

Assessment

Midterm exam (30%)

Final Paper (70%)

Life Sciences Courses

VSC1101 Introduction to Biology

1000 (Life) Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

Students with a highschool level biology background are advised to contact the coordinator prior to registering for this course.

Objectives

- To gain insight into the basic human biological concepts.
- To gain insight into the structure and function of tissues and organ systems.
- To increase appreciation and knowledge of the science of life.
- To understand the basic concepts of evolution and its mechanisms.
- To provide students with the sound basic knowledge required to enter more detailed courses in life sciences

Description of the course

The Introduction to Biology course offers you a comprehensive view of man as a biological species. This course begins with an introduction to key concepts in biology, from molecular and cellular features to the concept of evolution, including genetics and physiology. The six main topics will be: chemistry and molecules of life; the living cell; genetics; evolution and diversity; structure and function of tissues and organ systems; and human nutrition and digestion.

Literature

- Eric J. Simon, Jean L. Dickey, Jane B. Reece (2015) *Campbell essential biology with physiology* /. – (5th ed.). Boston : Pearson. OR
- Starr, C., Evers, C. A., & Starr, L. (2021). *Biology : today and tomorrow : with physiology* (6e ed.). Cengage.

Instructional Format

Lectures and tutorial group meetings will be organized to deal with the different biology subjects.

Assessment

A group mini project and a mid-term exam.

This module may be a prerequisite/recommended for:

Homeostatic Principles, Pharmacology and Toxicology, Molecular Biology, Microbiology, Food Technology and Processing, Nutrition and Metabolism, Plant Biology and Agriculture, Clinical Nutrition, Biochemistry, Human Pathobiology, Food and Disease

VSC1201 Introduction to Public Health

1000 (Life) Science; Social Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Dennis de Ruijter, Department of Health Promotion, FHML, Maastricht University

Contact: d.deruijter@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To provide students with knowledge and understanding of what Public Health encompasses; that Public Health can intervene on several ecological levels (individual, interpersonal, organization, community, society); what the main aims of public health are (disease prevention, health protection, health promotion); and how it has developed over the years.
- After this course, students will have gathered experience in the application of their knowledge and understanding about Public Health; they will also have developed basic skills on how to use available evidence to find solutions for a public health problem and on reporting these solutions.
- Learning skills: After this course students will be able to find their way in the available literature, to follow developments in public health in a critical and efficient way, integrate the different professional perspectives and to collaborate in small teams and critically reflect on personal work as well as on the work of others.

Description of the course

Public Health is the multidisciplinary field of research, practice and policy that aims at promoting health and preventing disease. The aim of this course is to provide a vivid view on public health and to provide insight in: its fundamentals, its methods and the organizations involved in public health. Various aspects of public health such as healthy eating will be addressed from an ecological perspective in which we distinguish between individual, family, organizational, community/environmental and global level. You will study the role of public health on every distinct level and ask yourself if public health interventions should be aimed at the individual, the collective or the environment. What is the role of public health for the chronically ill? How can public health target the family? How can we protect/promote health in the occupational setting and what about health, prevention and public health in developing countries? How can we explain socio-economic health differences and does the built environment play a role in public health problems? Further, you will work in small groups on a nutrition-related public health challenge and you report your findings in a report and a mini symposium.

Literature

- Detels, R. , Gulliford, M. , Abdool Karim, Q. , & Tan, C. C. (2021). *Oxford textbook of global public health* (7th edition). <https://doi.org/10.1093/med/9780199661756.001.0001/med-9780199661756>
- Specific literature that is available in an e-reader

Instructional Format

Lectures and tutorial meetings (PBL)

Project activities in teams

Assessment

Paper, exam with open ended questions and mini symposium

This module may be a prerequisite/recommended for:

Public Health Policy Making, Health Education & Communication, Food Safety

VSC1303 Introduction to Statistical Methods and Data Analysis

1000 (Life) Science; Social Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Miriam Urlings, Food Claims Centre Venlo, Maastricht University

Contact: mje.urlings@maastrichtuniversity.nl

Josine van Dienen, Faculty of Medical and Clinical Psychology, Tilburg University

Contact: j.a.y.vandienen@tilburguniversity.edu

Pre-requisites

- ✓ None

Recommendations

A mathematical background of at least the VWO (or equivalent) level.

- This module is a prerequisite for follow-up module VSC2305 Intermediate Statistical Methods and Data Analysis
- Knowledge of basic and advanced inferential statistics is a prerequisite for many Dutch Master programmes

Objectives

- To provide students with advanced knowledge basic inferential statistics

Description of the course

This course “Introduction to Statistical Methods and Data Analysis”! This course intends to prepare students to deal with solving problems encountered in research projects, decision making based on data, and general life experiences beyond the classroom and university setting. Students will learn statistical concepts and techniques that play a role in summarizing and describing observed variables, as well as generalizing the statistical results to the entire population.

In the first part of the course the focus is on descriptive statistics, in which students will learn how to summarize observed data. During the second part of the course the focus is on statistical hypothesis testing. Lastly, students will get acquainted with basic statistical techniques that are used to analyze observed data. In terms of teaching activities, the course has lectures, tutorials to the study the theory in relation to realistic cases, R workshops to practice in conducting statistical analyses and journal clubs to practice interpretation of statistical information as reported in academic publications.

Literature

- Andy Fields; Discovering Statistics Using R; Sage Publications Ltd

Instructional Format

Lectures

Tutorial meetings (case discussions, R workshops and journal clubs)

Assessment

- Oral presentation
- Final open book exam

VSC1401 Introduction to Chemistry

1000 (Life) Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Cyriel Mentink, FSE, Maastricht University

Contact: cyriel.mentink@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To have an understanding of the nature of atoms, their electronic structure and its chemical consequences, and their organization in the periodic table of the elements.
- To have the ability to recognize various classes of chemical compounds and to understand their basic physical and chemical properties.
- To obtain an understanding of the basic physical chemistry of fundamental importance to most natural and chemical processes.
- To be familiar with the essentials chemicals mechanisms of reaction, using a few relevant examples.
- To have sufficient background for further, more advanced, courses in chemistry, biochemistry and the life sciences.

Description of the course

From the battery of our phones, the food we eat, to our very thought processes, every aspect of our lives relies on chemistry. This course introduces some key concepts in organic- and bio-chemistry like. We will discuss topics such as the nature of atoms, their electronic structure its chemical consequences; the most important atomic bonds; important chemical reactions and processes and the chemical and physical conditions in which these reactions occur. This course provides a, hopefully, proper introduction for those who want to study chemistry but will also help students gain a deeper understanding of biological processes.

Literature

Paula Yurkanis Bruice, Organic Chemistry. 8th Edition. 2017. Pearson.

Instructional Format

Lectures and tutorial group meetings

Assessment

Participation, two assignments, final exam

This module may be a prerequisite/recommended for:

Biochemistry, Lab Skills: Protocol Design

VSC1501 Sustainable Development: Human Impact on the Earth System

1000 (Life) Science; Social Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Su-Mia Akin, University College Venlo, FSE, Maastricht University

Contact: su-mia.akin@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To gain a basic understanding of the (various perspectives on the) concept of sustainable development and some of the main related ideas, concepts and theories.
- To gain insights into (the limits to) our immense global human impact on the earth's systems and the underlying drivers of these unsustainable trends
- To explore ideas about how to achieve a more sustainable society.

Description of the course

Today it is acknowledged that achieving sustainable development at the local, regional and global scale is one of the greatest challenges for the 21st century. But in many cases the term 'sustainable development' functions as little more than a vacuous buzzword. So what does sustainable development actually mean? How unsustainable is our global society at the moment? Are we contributing to irreversible climate change? Are we already passing dangerous global environmental tipping points? Why are humans acting in such unsustainable ways? And, of course, what are sustainable ways forward?

This course aims to enhance student's understanding of 'sustainable development', based on the notion that human development can only be sustainable when environmental boundaries are respected. The course introduces the main concepts, ideas and theories related to the term sustainable development. Students will gain insights into (the limits to) humanity's immense impact on the earth's systems and the underlying drivers of these unsustainable trends. Furthermore, sustainable development requires an understanding that inaction has consequences. Students will explore ideas about how to achieve a more sustainable society. As part of the examination students will link theories/concepts/ideas discussed in the course to a self-selected case study (a promising way forward towards sustainability) in a poster presentation.

Literature

Students are not required to buy a specific book

Instructional Format

Lectures and tutorial meetings

Assessment

Group presentations and written exam.

This module may be a prerequisite/recommended for:

Climate Change, Sustainable Food Production, Planetary Health, Social and Environmental Entrepreneurship

VSC2102 Homeostatic Principles

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Andries Gilde, Dept. Physiology, FHML, Maastricht University

Contact: a.gilde@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

Students should have highschool level knowledge of biology (IB Biology) or follow Introduction to Biology first.

Objectives

- To acquaint students with the different mechanisms for homeostatic control.
- To Provide insight in:
 - Human cellular organization
 - Functional organization of the body
 - Membrane Physiology
 - Cardio-vascular function
 - Skeletal and muscle function
 - Pulmonary ventilation and regulation
 - Kidney function
 - Fluid and electrolyte balance
 - Gastrointestinal fluid resorption and control
 - Neuronal-endocrine regulation

Description of the course

Mathematics is seen as the father of science, Physiology is the mother. Physiology attempts to explain the physical and chemical factors that are responsible for the origin, development, and progression of life. Human physiology investigates the mechanisms of the human body making it a living being (Guyton). In the healthy human body it is of the utmost importance that the working conditions for all cells are kept "constant". In this respect it is noteworthy that essentially all organs and cells of the human body perform functions that help to maintain this constant nature or homeostasis by using feed-back mechanisms. We will begin by discussing the physiology of the cell, and the function of the cell membrane. Continuing, we will discuss cardiovascular physiology, respiratory, fluid and salt balance, followed by the autonomic nervous system and the endocrine system and ending with gastrointestinal physiology, control and feedback. At the end of the course it has become clear to the student that all organ systems in the body maintain homeostasis by a joined effort.

Literature

Multiple sources provided by UM/UCV libraries including textbooks on: Physiology, Biochemistry, Physics, Pathology, Internal Medicine, etc. The use of on-line Study-Tools in Access Medicine (access provided by UB).

Instructional Format

Tutorial meetings and a summarizing lecture

Assessment

Written exam and a presentation on a physiological subject of choice.

This module may be a prerequisite/recommended for:

Sports Nutrition and Physiology, Clinical Nutrition

VSC2103 Pharmacology and Toxicology

2000 (Life) Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Gertjan den Hartog, Department of Pharmacology and Toxicology, FHML, Maastricht University

Contact: gj.denhartog@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

Students should have highschool level knowledge of biology or follow Introduction to Biology first.

Objectives

Students can...

- Explain pharmacodynamic, pharmacokinetic and toxicological principles.
- Examine how pharmaceuticals and toxic substances are handled by the body.
- Individually present the appraisal of a case that is related to a specific compound, in which the compound's dynamics and kinetics are analysed and potential solutions to the given case are discussed.

Description of the course

To understand what active compounds, either natural or synthetic, from foods or drugs, can do in the body, you need to understand how these substances act and how the body handles these compounds. Within this course, the principles of actions of bioactive substances (pharmacodynamics) and how the body handles these bioactive substances through the processes of absorption, distribution, metabolism and excretion (pharmacokinetics) will be studied. The principles of toxicology, how toxic substances affect biological systems, will be introduced. You will learn how to use these principles by studying real life cases of using medicinal products and intoxications, and you will analyse a specific case yourself.

Literature

- Rang H.P., Ritter J.M., Flower R.J., Henderson G. (2016). Rang and Dale's Pharmacology (8th ed.), London: Elsevier Churchill Livingstone.
- Timbrell, J.A. (2008) Principles of Biochemical Toxicology (4th ed.), Boca Raton, FL: CRC Press.
- Original research articles.

Instructional Format

Lectures and tutorial meetings

Assessment

- Case presentations
- Written exam

This module may be a prerequisite/recommended for:

Food Safety, Nutritional Pharmacotherapy

VSC2104 Molecular Biology

2000 (Life) Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Herman Popeijus, Human Biology, FHML, Maastricht University

Contact: h.popeijus@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology or equivalent

Recommendations

Interest in biology at molecular level

Objectives

- To give insight into the basics of molecular biology
- To provide the basics of gene expression and gene control
- To provide the theory behind genetically modified organisms

Description of the course

The general aim of this course is to obtain knowledge about the molecular processes in cell signalling and control of gene expression. Topics include intracellular signalling pathways; chromatin structure and remodelling and finally genetic modifications.

Literature

Molecular Biology of the Cell, Alberts or equivalent books

Instructional Format

Lectures and tutorial meetings

Assessment

Midterm (30%) and end term examination (70%); closed questions and open ended questions

VSC2105 Microbiology

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Herman Popeijus, Human Biology, FHML, Maastricht University

Contact: h.popeijus@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology or equivalent

Recommendations

Interest in microbiology.

Objectives

- To provide students with basic knowledge of bacteria, fungi and viruses
- To give insight into the world of microbes and viruses including a few examples from human perspective

Description of the course

In this course the students obtain basic knowledge of microbiology, i.e. of bacteriology, virology and environmental and applied microbiology. You study the characteristics of a selection of micro-organisms in relation to their related infectious diseases.

Literature

Microbiology: An Introduction, Tortora, Gerard J/Funke, Berdell, R/Case, Christine L

Instructional Format

Lectures and tutorial meetings

Assessment

Midterm (30%) and end term examination (70%); closed questions and open ended questions

This module may be a prerequisite/recommended for:

Gut Microbiology

VSC2106 Brain and Action

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

The course is open for all students, however, a back ground in biology is recommended.

Objectives

- To make students familiar with the basic division, anatomy, and functions of the central and peripheral nervous system.
- To gain knowledge of the workings and anatomy of the brain's most important structures and functions.

Description of the course

Humans mostly go through their lives without paying much attention to their actions such as breathing, eating, and even learning. Our brain seems to take care of us in an almost effortless way by planning, initiating, and executing our actions and by regulating our somatic homeostasis. The course Brain and Action is concerned with exactly how the nervous system does so. The course deals with the scientific study of the central and peripheral nervous system as well as with some of the latest developments in neuroscience. Via problem-based learning tasks, both anatomy and functions of important neurological structures are examined.

Questions that will be raised during the course are, e.g.: How does the brain develop? How do brain cells communicate? How does the brain control our movement? What happens in Alzheimers or Parkinsons disease? How do environmental factors such as light and food impact our brain? Etc.

Literature

Bear, M.F., (2016). Neuroscience: Exploring the brain (4th ed.). ISBN-13: 978-0781778176, scientific articles, online resources.

Instructional Format

Lectures and tutorial meetings

Assessment

A presentation and an exam

VSC2108 Human Pathobiology

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

None

Objectives

- To develop an understanding of the patterns of response of cells and tissues to disturbances of homeostasis that may lead to diseases
- To understand pathologic changes and responses in the myocardium, blood vessels, respiratory tract
- To describe the pathobiology of selected diseases

Description of the course

This course intends to introduce students with a non-medical background to the basics of human pathobiology. It will start with an overview of the general pathological processes such as cell injury, cell death, cell survival, inflammation, and tissue degeneration. Subsequently, common diseases of the respiratory and cardiovascular systems as well as metabolic disorders will be discussed. Special attention will be devoted to the pathological changes contributing to the development of vascular dysfunction. Where applicable biochemical and molecular mechanisms will be explored and the applicable pharmacotherapeutic approaches discussed.

Literature

TBA

Instructional Format

TBA

Assessment

TBA

VSC2201 Epidemiology of Food; The Relationship Between Food and Health

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Simone Eussen, Department of Epidemiology, FHML, Maastricht University

Contact: simone.eussen@maastrichtuniversity.nl

Pre-requisites

- ✓ VSK1002 Research Methods I: Quantitative Research

Recommendations

None

Objectives

- To obtain knowledge on foods and nutrients, and recommended intakes
- To obtain knowledge on different dietary assessment methods
- To gain insight in the relation between diet and risk of important chronic diseases, such as cancer, cardiovascular disease, and mental health disorders

Description of the course

The foods we consume each day contain thousands of specific nutrients and chemicals. Students will be introduced in nutritional epidemiology by lectures, tutorial groups, practical trainings and self study. The course will focus on different methods to measure dietary intake, as well as on the relation of diet with most relevant chronic diseases.

Literature

Willett W. Nutritional Epidemiology. ISBN978 0 19 975403 8.

This material is available in the Reading Room, UM-Library

Additional literature will be provided during the course

Instructional Format

Lectures, tutorial meetings, and practical trainings

Assessment

Critical reflection (30%) and final exam with open questions (70%).

This module may be a prerequisite/recommended for:

Food Innovation, Healthy Life Cycle

VSC2203 Food Technology and Processing

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Henk-Jan Meijer, HAS University of Applied Sciences

Contact: H.Meijer@has.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

Highschool level knowledge of biology, chemistry and physics

Objectives

Gain knowledge in the background of industrial food production, distribution and retail.

Understanding of food preservation and processing.

To gain knowledge of and comprehension in:

- The safety and shelf life of food products.
- The industrial processing of foods products.
- The functionality of additives used in foods.
- Influence of storage and processing on properties of food.
- Interactions between different components of food.
- How organoleptic and nutritional properties are affected during the processing of raw materials.
- How packaging can contribute to the preservation of food products.

Description of the course

All foods consist of a so-called matrix in which microbial, enzymatic, chemical and physical reactions will occur during shelf life, processing and/or changing ingredients. The matrix is meant as a manner to describe the structure of a specific food that identifies that type of product.

Adding, removing or replacing ingredients usually will have many effect in this matrix and will lead to changes in the quality of the food, such as for example sensory quality, nutritional value, shelf life, price, safety attributes, etc.

This course will also highlight the different processes used in the food industry which also have an impact on the food quality aspect.

Literature

Parker, R., & Pace, M. (2017). Introduction to food science & food systems (2nd ed.). Australia: Cengage Learning.

Instructional Format

Lectures, tutorial meetings, practical work at HAS University of applied sciences and a group assignment

Assessment

Group presentation and report of group assignment, written final exam

This module may be a prerequisite/recommended for:

Food Innovation, Sustainable Food Production

VSC2204 Public Health Policy Making

2000 (Life) Science; Social Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Milena Pavlova, Health Services Research, FHML, Maastricht University

Contact: m.pavlova@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

VSC1201 Introduction to Public Health

Objectives

- To give students insight into the dynamics of public health policymaking. Key concepts are: policymakers; agenda building; the political construction of health problems; policy beliefs; policy narratives; strategies and impact of interest organizations
- To give students insight into the governance structure of health systems: Key concepts are: governance rules; the problem of collective action; governance gap; anarchy, hierarchy, network; multi-level governance; centralization and decentralization; global governance.
- To give students insight into the moral, rational, conflictual and institutional dimension of public health policymaking. Key concepts: moral dilemmas, the science-policy relationship; uncertainty reduction strategies; power balance; policy as rational choice and negotiated agreement; conflict resolution strategies; institutional continuity and change.

Description of the course

Particularly since the early 19th century state interventions in the field of public health have significantly increased. Examples of state expansion in public health are health laws, health standards on food products, mass vaccination programs, the regulation of the provision and financing of health care and interventions to control the spread of infectious diseases. At the same time, private organizations representing the interests of the food industry, the tobacco industry, the pharmaceutical sector and big tech giants, to mention a few examples, seek to influence and penetrate into the public health field. These developments have contributed to the transformation of public health systems into what they are today: complex systems directed at the protection and promotion of public health with multiple interests that may coincide but also conflict with each other. The general trend points to a continuous extension of control in public health which evokes pertinent questions about the role of science, morality, politics and power in public health policymaking

Literature

- An e-reader with original articles will be available at the start of the course.
- H. Maarse – Health Policy Analysis (e-book)

Instructional Format

Lectures and tutorial meetings

Assessment

- Each student is required to write an individual paper on a self-selected topic regarding the policy and politics of a public health problem (weight: 50%)
- Written test at the end of the course (weight 50%)

VSC2205 Nutrition and Metabolism

2000 (Life) Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Kahlile Youssef Abboud, University College Venlo, FSE, Maastricht University

Contact: k.youssefabboud@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology or equivalent

Recommendations

VSC2401 Biochemistry

Objectives

After finishing the course, students will be able to:

- Distinguish macronutrients and micronutrients.
- Comprehend digestion and define the role of macronutrients and micronutrients in metabolism.
- Identify and describe the main metabolic pathways and how they are regulated.
- Recognize the different tissues that store substrates and describe how the storage and release of substrates are regulated in fed and fasting states.
- Apply the obtained knowledge to predict metabolic regulation on exercise, diseases and different nutritional status.

Description of the course

Nutrition is a multidisciplinary science that covers the role of food in health and disease. The food we eat directly affects metabolism. Advances in nutritional biochemistry have increased the focus of nutrition on several metabolic pathways in order to improve understanding of how nutrients influences health and the development of diet related diseases. In this course, the student will become familiar with the chemical structure and metabolism of nutrients such as carbohydrates, proteins, lipids, vitamins and minerals. Once they are obtained by diet, the student will be able to comprehend the processes that turn nutrients into available energy and how our body uses the different sources of energy. How fasting and fed states affect metabolism, catabolism and anabolism? The sensation/feeling of satiety is led by the release of a hormone called leptin. What if we have impaired action of leptin? What energy sources do our body use when we are fasted, or just after a meal? In which conditions our adipose tissue becomes a source of energy? All these transformations occurs by the orchestrated action of several hormones and enzymes. These and other functions of our metabolism will be covered by this course. The student will learn how diet, lifestyle and health states can affect our metabolism, physiology and overall health.

Literature

- Ferrier, D. R. (2017). *Biochemistry* (Seventh, Ser. Lippincott illustrated reviews). Wolters Kluwer. Retrieved April 10, 2023, from INSERT-MISSING-URL.
- Kennelly, P. J., Botham, K. M., McGuinness, O. P., Rodwell, V. W., & Weil, P. A. (Eds.). (2023). *Harper's illustrated biochemistry* (32nd ed., Ser. A large medical book). Mcgraw-Hill Education. Retrieved April 10, 2023, from INSERT-MISSING-URL.
- Nelson, D. L., & Cox, M. M. (2013). *Lehninger principles of biochemistry* (6th ed.). Freeman - Macmillan.
- David A. Bender (2004) *Introduction to nutrition and metabolism*. 3rd ed. Taylor & Francis e-Library.
- Original research articles.
- Review articles

Instructional Format

Lectures and tutorial meetings

Assessment

The learning outcomes of this course will be assessed by two means.

- A written final exam (with open and multiple choice questions); and
- An oral presentation.

This module may be a prerequisite/recommended for:

Sports Nutrition and Physiology, Food Innovation, Healthy Life Cycle, Food and Disease

VSC2207 Plant Biology and Agriculture

2000 (Life) Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Carmen Padilla Díaz, University College Venlo, FSE, Maastricht University

Contact: c.padilladiaz@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

None

Objectives

- To give insight into the plant kingdom and its significance for mankind, through agriculture and the exploration of natural resources.
- To provide students with a solid understanding of plant evolution, development and function in relation to their environment.
- To acquaint students with crop improvement challenges and methods in the context of sustainable food supply.

Description of the course

During this course you will gain insight in the importance of plants for life on earth and their unique adaptations to their environment. The course will illustrate major aspects of plant evolution, morphology and function. Special attention will be paid to domestication and to the methods by which plants have been adapted for agriculture to function as a major resource for food and beyond. The latter will include an outlook on plant biotechnology and emerging technologies.

Literature

Original research articles.

To be complemented by:

Botany: An introduction to Plant Biology, Seventh Edition James D. Mauseth - ISBN: 9781284157352.

Instructional Format

Lectures and tutorial meetings

Assessment

Case presentation and final exam (open questions and multiple choice)

VSC2208 Sensory Science

2000 (Life) Science Course; Social Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

At the end of this course students are able to:

- Understand the fundamental mechanisms of sensory perception and neural processing that influence how individuals perceive and interpret various sensory stimuli.
- Design and implement sensory evaluation tests used in product research, such as discrimination tests, descriptive analysis, and hedonic testing.
- Select and apply the appropriate sensory evaluation methods to answer specific research questions that can help to develop, improve, or solve problems present in products.
- Critically analyze sensory data using the appropriate statistical methodologies to enable informed decisions in the food industry that improve the products and ultimately results in better consumer experiences.

Description of the course

Sensory science is an interdisciplinary field of inquiry for measuring and understanding human responses to product features and attributes as perceived by the senses, such as sight, smell, taste, touch, and hearing. In this course you explore the physiology of sensory perception, the science behind sensory evaluation methods, and the application of these techniques with a focus on (but not limited to) its applications in food research (new product development, benchmark testing, quality assessment, etcetera). Through a combination of theoretical knowledge and practical applications, you will gain a comprehensive understanding of how sensory science contributes to the development, improvement, and marketing of (food) products.

Literature

Lawless, H. T., & Heymann, H. (2010). *Sensory Evaluation of Food: Principles and Practices*. Springer.

Meilgaard, M. C., Civille, G. V., & Carr, B. T. (2016). *Sensory evaluation techniques*. CRC Press.

Instructional Format

Lectures, PBL tutorials and workshops

Assessment

Weekly assignments, final project results presentation and possibly an exam

VSC2209 Global Health Nutrition

2000 (Life) Science Course; Social Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Karin Lenssen, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

Students will be able to...

- discuss global health nutrition issues in critical need for attention and identify determinants of nutrition inequities and global food security.
- distinguish nutritional needs of different vulnerable groups (e.g., mothers, infants, adolescents) and related adverse health outcomes of global public health relevance.
- differentiate between existing governmental and non-governmental organisation involved in global health nutrition and their responsibilities.
- review existing policies and action frameworks on global health nutrition issues.
- apply existing knowledge and theories on future challenges that may impact the field of global health and global nutrition therewith distinguishing between the different regions of world and relating relevant policies to this.
- explain how global health nutrition interventions are planned and discuss what factors may obstruct successful implementation.
- describe a current global health nutrition issue to a non-expert audience and demonstrate how nutrition interventions could prevent, manage, and/or eliminate said issue.

Description of the course

When it comes to nutrition, the global health perspective provides interesting insights. Where one region of the world is trying to fight an obesity pandemic, another part of the world has trouble feeding the population with nutritious food. Very different problems, but both with severe outcomes. In the course global health nutrition, you will dive into the topic of nutrition and health around the globe. By identifying the vulnerable groups, existing problems and previously executed interventions we will improve the understanding of the differences around the world. By combining this knowledge with existing governmental bodies and policies, you will learn to also view these known issues from the governance side. And what about the future? We already know some things that are coming towards us (climate change), but what if it is suddenly here (crisis management).

You will approach the topics within nutrition and global health from an interdisciplinary perspective. As in traditional public health, you will combine biology, epidemiology, behaviour change and politics.

Literature

A literature list will be provided on Canvas

Instructional Format

Lectures & tutorials

Assessment

Group paper (30%) and presentation (20%), Individual mid-term exam (50%)

VSC2305 Intermediate Statistical Methods and Data Analysis

2000 (Life) Science; Social Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinators

Miriam Urlings, Food Claims Centre Venlo, Maastricht University

Contact: mje.urlings@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1303 Introduction to Statistical Methods and Data Analysis

Recommendations

Knowledge of basic and advanced inferential statistics is a prerequisite for many Dutch Master programmes

Objectives

- To provide students with advanced knowledge on inferential statistics

Description of the course

During “Introduction to Statistical Methods and Data Analysis” students were already made acquainted with the basics of inferential statistic and simple statistical techniques to analyze data. Adding to the statistics learned during the introduction course (period 2), the current course will guide you through intermediate-level statistics. Several methods you will learn about are simple and multiple linear regression, analysis of variance, logistic regression and factor analysis. With these techniques a broad range of statistical analyses of data can be conducted. In addition, you will learn how to apply these topics in statistical software. In terms of teaching activities, the course has lectures, tutorials to the study the theory in relation to realistic cases, R workshops to practice in conducting statistical analyses and journal clubs to practice interpretation of statistical information as reported in academic publications.

Literature

- Andy Fields; Discovering Statistics Using R; Sage Publications Ltd

Instructional Format

Lectures

Tutorial meetings (case discussions, R workshops and journal clubs)

Assessment

- Oral presentation
- Final open book exam

VSC2401 Biochemistry

2000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Gertjan den Hartog, Department of Pharmacology and Toxicology, FHML, Maastricht University

Contact: gj.denhartog@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1401 Introduction to Chemistry

Recommendations

VSC1101 Introduction to Biology

Objectives

- To acquaint students with the molecular structure of important biomolecules...
- To provide students with knowledge on reaction mechanisms and kinetics
- To give insight into the mechanisms of enzyme action

Description of the course

This course will review a number of molecular components that make up cells: amino acids and proteins, carbohydrates, nucleotides and nucleic acids, and lipids. In the second half of the course the focus will shift to the description of (bio)chemical reactions, their mechanisms and factors that influence their rate. The final topic of the course will be enzymes and how these proteins speed up essentially all of the thousands of biochemical reactions that take place in the cell.

Literature

Victor W. Rodwell, David A. Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil. Harper's Illustrated Biochemistry. (accessible via Access medicine:

<http://accessmedicine.mhmedical.com/book.aspx?bookid=1366>

Bettelheim: Introduction to General Organic and Biochemistry

Also useful: Garrett and Grisham: Biochemistry 5th edition (or newer).

Additional literature will be handed out during the course.

Instructional Format

Lectures and tutorial meetings

Assessment

Presentation

Final test

VSC2501 Climate Change

2000 (Life) Science Course; Social Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

TBA

Contact: campusvenlo-osa@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1501 Sustainable Development: Human Impact on the Earth System

Recommendations

None

Objectives

- To explore historic, current and future changes in our climate system.
- To review the uncertainties underlying (the modeling of) future climate change
- To examine some key impacts of climate change on human societies and natural systems.
- To explore climate mitigation and climate adaptation strategies (incl. Paris Agreement).

Description of the course

Does it infuriate you when people consider the greenhouse effect to be a bad phenomenon? Do you know your 'RCP2.6' from your 'RCP8.5'? How about the relative importance of carbon dioxide and methane in terms of radiative forcing? Or the difference between climate-friendly and climate resilient? No? Join the club. Very few people understand the nuts and bolts of climate science. And that is a real shame, because climate change is considered to be the greatest environmental threat humanity has ever faced. The Intergovernmental Panel on Climate Change (IPCC) states that the human influence on the climate system is clear. Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions, while the need for adaptation to this new reality is increasingly being recognized.

The course will provide students with a sound understanding of the key drivers and processes of climate change. We will discuss the state-of-the-art climate science, examine some key impacts of (future) climate change, and explore what can be done to address the problem.

Literature

TBA

Instructional Format

TBA

Assessment

TBA

VSC3101 Gut Microbiology

3000 (Life) Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Niels van Best, Medical Microbiology, Infectious Diseases and Infection Prevention, FHML, Maastricht University

Contact: n.vanbest@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC2105 Microbiology

Recommendations

Not suited for freshmen

Objectives

- To acquaint students with microbiology of the gastrointestinal tract;
- To give insight in the role of the gut microbiota in health and disease;
- To provide students with tools to use the acquired knowledge to develop functional foods that positively modulate the gut microbiota.

Description of the course

This course is a sequel to Microbiology, and focuses on the microorganisms of the intestinal tract, including bacteria, fungi and viruses. It deals both with the microbiome of the healthy gut and on the role of microorganisms in a range of diseases. Furthermore, ways to influence the gut microbiome with food components, amongst which pre- and probiotics, are discussed.

Literature

- Gut microbiome as a clinical tool in gastrointestinal disease management: are we there yet? Quigley EM. *Nat Rev Gastroenterol Hepatol*. 2017 Mar 30. doi: 10.1038/nrgastro.2017.29.;
- special focus issue of Gut Microbes on the impact of diet on gut microbiota composition and function;
- The Human Intestinal Microbiome in Health and Disease. Lynch SV, Pedersen O. *N Engl J Med*. 2016 Dec 15; 375(24):2369-2379.;
- Impact of maternal nutrition in pregnancy and lactation on offspring gut microbial composition and function. Chu DM, Meyer KM, Prince AL, Aagaard KM. *Gut Microbes*. 2016 Nov; 7(6):459-470.;
- Towards microbial fermentation metabolites as markers for health benefits of prebiotics. Verbeke KA, Boobis AR, Chiodini A, Edwards CA, Franck A, Kleerebezem M, Nauta A, Raes J, van Tol EA, Tuohy KM. *Nutr Res Rev*. 2015 Jun; 28(1):42-66. doi: 10.1017/S0954422415000037.
- Prescott's Microbiology/ 12th Edition by Joanne Willey and Kathleen Sandman and Dorothy Wood (ISBN 9781264088393)

Instructional Format

Lectures and tutorial meetings

Assessment

Midterm exam = opinion/review paper; final exam = open questions

VSC3102 Healthy Life Cycle

3000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Karin Lenssen, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

- ✓ One of the following courses: VSC2201 Epidemiology of Food, VSC3208 Food and Disease, VSC2205 Nutrition and Metabolism, VSC3201 Clinical nutrition, VSC3207 Sports Nutrition and physiology.
- ✓ One of the following courses: VSS2102 Behaviour change, VSS2105 Social Psychology, VSC3202 Health education and communication, VSS3101 Performance psychology in Sports and Business

Recommendations

None

Objectives

- To acquaint students with the notion that many processes (including their interactions) may influence one's health throughout the life cycle
- To provide more in-depth insight into some important processes that underlie an (un)healthy life cycle

Description of the course

Throughout their lives, humans are exposed to various factors that influence their physical and mental health. Some of these factors are detrimental to health while others have important benefits. The course takes an interdisciplinary perspective, focusing not only on biological, but also some psychological and social factors that determine a healthy life – from conception to old age. Examples of questions that will be addressed include: How does psychological stress experienced during pregnancy influence the infant's health as it grows up? Do dietary supplements help us lead longer and healthier lives? Why do we age, and can we slow down the ageing process?

Literature

- Dan Buettner (2008) *The Blue Zones: 9 Lessons for Living Longer From the People Who've Lived the Longest*
- Additional scientific literature provided by fellow students

Instructional Format

Lectures and tutorial meetings; facilitation

Assessment

Task preparations (group assignment), knowledge clip (individual) and final paper (individual)

VSC3201 Clinical Nutrition

3000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Peter Joris, Department of Nutrition & Movement Sciences, FHML, Maastricht University

Contact: p.joris@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

VSC2102 Homeostatic Principles, VSC3208 Food and Disease

Objectives

- To examine the impact of dietary and lifestyle factors on age-related diseases in humans
- To understand how nutrition prevents diseases by exploring underlying mechanisms
- To critically evaluate a research article discussing dietary interventions in health/disease
- To explore how the impact of diet on health can be studied in a metabolic research unit

Description of the course

In this course, the role of dietary and lifestyle factors to prevent age-related diseases in humans will be considered, as well as underlying mechanisms. In addition, it will be addressed how this knowledge can be translated into different forms of dietary support in a clinical setting. Specific attention will be given to a relevant article discussing dietary intervention trials. Examples from real-life situations will be used, while a visit to the research unit in Maastricht will be scheduled.

Literature

- Students are not required to buy a specific book
- Original research articles will be used

Instructional Format

Different instructional formats will be used, including traditional tutorial meetings, a journal club to discuss a research paper, interactive lectures, and a visit to the research unit in Maastricht.

Assessment

- A final written exam consisting of open questions relating to all parts discussed during the course, including the tutorial meetings, journal club, lectures, and research visit.
- A scientific assignment that will be presented and discussed at the end of the course during a special mini-symposium to your fellow-students and the course coordinator.

VSC3202 Health Education and Communication

3000 (Life) Science; Social Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinators

Jeroen Bruinsma, Department of Health Promotion, FHML, Maastricht University

Contact: jeroen.bruinsma@maastrichtuniversity.nl

Pre-requisites

- ✓ VSS2102 Behaviour Change or
- ✓ VSS2105 Social Psychology

Recommendations

For this course knowledge of (health) behavior and behaviour-change is required, since it is the core of this course. If your knowledge is limited make an effort to read into these subjects. The course focusses on the planned and systematic development of a health promotion programme using the Intervention Mapping approach and therefore the book on Intervention Mapping (see literature) includes two chapters (2 and 3) about theories of behavior and the environment that can be of help in this respect. Having participated in course VSC1201 Introduction to Public Health is beneficial, but not a prerequisite.

Objectives

This course will learn you:

- The systematic development of health promoting interventions that focus on both individual-level behaviour change and changing the environment;
- To systematically develop a theory-based health promoting intervention by following the six-step Intervention Mapping approach (i.e., the focus will be on the developmental stage; step 1 to 4).
- To integrate theory, empirical evidence, and creativity in the development process.

Description of the course

Unhealthy behavior is a main cause of avoidable disease and mortality. In the course 'Introduction to Public Health', you already learned that public health is influenced by factors at different environmental levels, namely the individual, interpersonal, organizational, community, and policy level. In turn, public health is best achieved by intervening beyond individual-level behavior. For instance, by changing the physical environment, the organization of care-facilities or law and legislation. This course is about planning such health promotion interventions in a systematic way. Specifically, by means of the Intervention Mapping approach. This is a versatile planning framework that is used for intervention development, implementation, and evaluation. This course will focus on the developmental phases (step 1 and 4) and briefly touch on implementation (step 5) and evaluation (step 6). By following a stepwise approach, you will develop a blueprint of an intervention using behavior change methods by working together in small groups.

Literature

A copy of the Intervention Mapping book will be available in the UCV library (and digitally). The book provides all the information that is required to develop, implement, and evaluate health promotion interventions. This book is not only useful during this course, but also in case you are planning to engage in a Master program that includes studying human behavior. It is also useful to snowball for relevant references on behavior change initiatives. Therefore, we strongly recommend students who have special interest in the topic of this course to buy the book: Planning Health Promotion Programs: An Intervention Mapping Approach, 4th edition (2016) by L. Kay Bartholomew Eldredge, Christina Markham, Robert A.C. Ruiter, Maria E. Fernández, Gerjo Kok, and Guy S. Parcel.

Instructional Format

The course consists of:

- One weekly interactive practical's where you meet an expert in the field and work in small groups on your intervention (3 hours);
- One weekly tutorial where your group will pitch the work and receives feedback from the teachers (2 hours).

Assessment

A presentation of the proposed intervention and a paper that includes your intervention plan based on the Intervention Mapping approach. The quality of the weekly pitch and the development of you presentation skills are also part of the final grade.

VSC3203 Food Innovation

3000 (Life) Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

At least to have taken two of the recommended courses.

Recommendations

Some other courses that could be handy for this course are:

VSS2101 Psychology of Eating

VSC3208 Food and Disease

VSC2203 Food Technology and Processing

VSC2205 Nutrition and Metabolism

VSC2208 Sensory Science

VSS3202 Consumer Behaviour

VSC3204 Food Safety

VSC3501 Sustainable Food Production

Objectives

Students can...

- Determine what food innovation entails by recognising food innovations in the market
- Deconstruct in detail the process of food innovation by identifying the factors and drivers to create new food products.
- Outline and justify the steps and decisions that need to be taken to systematically innovate in food by composing a food innovation framework.
- Simulate the use of a food innovation framework by proposing a food product derived from it.

Description of the course

What is food innovation? What is it required to innovate in one of the most competitive industries, yet one with the shortest budgets in R&D?

These are some of the questions that we will analyze in this advanced level course. We will start by clarifying the concept of innovation and how it can be applied to food.

The course focuses on the development of innovative food concepts that are also attractive to consumers. We will work in intensive tasks that will help you to appraise the most important steps for generation of ideas that end up in new food product developments. You will have to make use of your creativity, but also of the knowledge gained to this point during your bachelor to create a food innovation framework that could help you to reproduce the steps to create food products that can be successes in the market and that provides clear benefits to consumers.

Literature

Literature will be published on Canvas.

Instructional Format

Workshops, tutorials and lectures

Assessment

Weekly assignments that will outline and construct a food innovation framework, final presentation of the framework, and possibly a final exam.

VSC3204 Food Safety

3000 (Life) Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Alie Boer, de, University College Venlo, FSE, Maastricht University

Contact: a.deboer@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC2103 Pharmacology and Toxicology **and/or** VSC1201 Introduction to Public Health

Recommendations

None

Objectives

Students will be able to...

- Critically assess policy objectives and existing regulatory frameworks governing food safety at local and (inter)national levels, identifying strengths, weaknesses and areas for improvement.
- Evaluate, design and justify risk management strategies to mitigate food safety hazards across the entire food supply chain, including production, storage, distribution and consumption.
- By integrating interdisciplinary knowledge from different fields related to food safety, propose innovative solutions to address emerging food safety challenges, considering evolving factors such as technological advancements, globalisation and changing consumer preferences.

Description of the course

With consumers demanding both safer products and more information about the products they consume, the responsibility of the government and the industry to ensure the safety of foods is becoming more important. This course focuses on the different aspects concerning safety in all stages of food production and consumption. Therefore safety issues concerning the production, storage and distribution of foods as well as the control of these aspects with standards and regulations will be studied. Food safety hazards such as contamination, food authenticity and food defence issues will also be addressed.

Literature

Original research articles

Instructional Format

Lectures, site visit or guest lecture, and tutorial meetings

Assessment

- Written exam (50%)
- Individual reflections (25%)
- Debate (25%)

VSC3206 Nutritional Pharmacotherapy

3000 (Life) Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Koen J.P. Verhees, PhD, University College Venlo, FSE, Maastricht University

Contact: koen.verhees@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC2103 Pharmacology and Toxicology

Recommendations

VSC2104 Molecular Biology

Objectives

- To provide general knowledge on pharmacotherapy for various diseases.
- To give insight in the possibilities to optimize pharmacotherapy with dietary components (nutrition) and food supplements.

Description of the course

The course will start with an introduction on the role of reactive oxygen species (ROS) and oxidative stress in (chronic) disease. Subsequently, pharmacotherapeutical options for various diseases like cardiovascular diseases (hypertension, heart failure), lung diseases (asthma, COPD) and diabetes will be discussed. Furthermore, during this course the adaptive response in cells, inducing either repair mechanisms or enhanced protection after exposure to (low) doses of a toxicant will be investigated. In all these processes the role of nutrition and nutritional components (e.g. food supplements) on the efficacy and safety of the pharmacotherapy will be the common thread running through the course.

Literature

- B. Halliwell and J.M.C. Gutteridge. Free Radicals in Biology and Medicine, 5th Edition. Oxford University Press (2015);
- A. Bast and J.C. Hanekamp. Toxicology: What Everyone Should Know: A Book for Researchers, Consumers, Journalists and Politicians. Academic Press, Elsevier (2017);
- H. P. Rang, J. M. Ritter, R. J. Flower, and G. Henderson. Rang and Dale's Pharmacology, 8th Edition. Churchill Livingstone, Elsevier (2015);
- Original research articles.

Instructional Format

This course will consist of lectures and tutorials.

Assessment

The assessment will comprise writing a mini-review and a final exam (open questions).

VSC3207 Sports Nutrition and Physiology

3000 (Life) Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC2102 Homeostatic Principles

Recommendations

Prior to starting this course, it is recommended to complete one of the following courses: VSC3208 Food and Disease, VSC2205 Nutrition and Metabolism, VSC3201 Clinical Nutrition

Objectives

- To characterize the response to exercise in various organs and systems of a human body
- To understand how training facilitate exercise performance in resistance and endurance athletes;
- To understand how macronutrients maintain energy supply during physical activity;
- To understand the influence of the particular nutrients and dietary strategies on energy metabolism and to elaborate how diet can be used in practice to enhance exercise performance.

Description of the course

“Sports Nutrition and Physiology” is a cross-disciplinary course during which you will learn how the human body reacts to exercise, which adaptations develop with resistance and endurance training, and how nutrition can be used to accommodate sports performance. During the tutorials, responses of the cardiovascular, respiratory and musculoskeletal systems to a single exercise bout will be discussed. Also, the principles of exercise training and training-related adaptations in various organs and systems will be addressed. Students will acquire knowledge on the process of energy transfer which facilitates muscle work during exercise. They will also build an understanding of the dietary strategies and nutritional supplementation which can be used to support energy supply during exercise and, thus, enhance performance in various sports. The knowledge obtained during this course will increase one’s understanding of why a right balance between nutrition and physical activity is needed to ensure optimal health in recreational athletes.

Literature

A combination of basic books and E-reader will be used

Instructional Format

Lectures and tutorial meetings

Assessment

A presentation and a written exam

VSC3208 Food and Disease

3000 (Life) Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Ellen Blaak, Department of Human Biology, FHML, Maastricht University

Contact: e.blaak@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology

Recommendations

VSC2205 Nutrition and Metabolism

Objectives

To gain knowledge and insight in:

- Nutrition (macro and-micronutrients), bioactive substances, anti-oxidants
- Macronutrient digestion, partitioning and utilization
- The main diet-related chronic diseases
- Dietary recommendations
- Novel and functional foods and their impact on human metabolism
- Multifactorial problems like obesity and diabetes and cardiometabolic diseases, insight in the role of organs, including the gut microbiome, adipose tissue, liver and muscle, as well the interorgan crosstalk in their etiology
- Impact of diet, lifestyle in the prevention of chronic metabolic diseases (mainly diet), including the role of energy restriction and intermittent fasting, non-caloric sweeteners and precision nutrition
- Basic principles of the measurement of dietary intake, dietary status, energy expenditure, substrate oxidation and insulin sensitivity

Description of the course

This course covers briefly the basics of normal nutrition for optimal health outcomes and focusses on evidence-based diets in the prevention of chronic metabolic diseases. Participants will learn the fundamentals of nutrition science, nutrient partitioning, storage and utilization. Focus will be on the role of diet and dietary intervention in the prevention of chronic metabolic diseases like obesity, diabetes and cardio-metabolic diseases.

Literature

This literature section only involves basic textbooks, more specific articles will be provided in the course manual.

Basic literature:

- Insel P. - *Nutrition* – 6th edition - Jones and Bartlett publishers
- Hall, J and Guyton A - *Guyton and Hall Textbook of Medical Physiology* – 13th edition
- McArdle W.D., Katch F.I., Katch V.L - *Exercise Physiology: Nutrition, Energy and Human Performance* - 8th edition
- Frayn, Keith N - *Metabolic regulation: a human perspective* – 3rd edition - Wiley-Blackwell Oxford 2010
- Silverthorn, Dee Unlaub - *Human Physiology: An Integrated Approach* – 8th edition - Pearson
- Bray, G.A. & Bouchard, C. - *Handbook of obesity* – 3rd edition

Instructional Format

Lectures and tutorial meetings, practical assignment to o present a metabolic pathway , how this pathway relates to obesity and type 2 diabetes and how it can be modulated by diet

Assessment

Course exam contains 10 open questions and accounts for 75% of end grade. An assignment including the presentation on a metabolic pathway accounts for 25% of the end grade.

VSC3302 Bioinformatics

3000 (Life) Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1101 Introduction to Biology **OR** VSC2104 Molecular Biology **AND**
- ✓ The Applied Researcher I, II, III

Recommendations

None

Objectives

- To understand fundamental principles of bioinformatics for modern molecular biological research.
- To explore biological databases and to navigate and utilize common biological databases such as NCBI, UniProt, and PDB.
- To describe the basic principles and concepts underlying bioinformatics, including sequence analysis, structural analysis, and systems biology.
- To analyze genomic data using bioinformatics techniques to identify genes, promoters, and regulatory elements.
- To visualize and interpret bioinformatics data effectively using appropriate software tools.
- To explore limitations of bioinformatics output and methods.

Description of the course

Bioinformatics is the interdisciplinary research area at the interplay between computer science and biological science. The course will give an overview of bioinformatics programs and databases used in today's world to tackle new challenges in the genomic era. Computational tools necessary for the genomic research will be introduced and applied to practical exercises.

Modern biology research employs some application of mathematical, statistical and computational tools to synthesize recorded data and integrate different types of information to answer particular biological questions. To be able to follow the course successfully, students are required to have a basic understanding of biological terms, such as nucleic acids, amino acids, genes, transcription and translation.

Literature

TBA

Instructional Format

The course will include 6 tutorial meetings, and 6 lectures. The tutorial meetings will utilize a combination of students presentations and common discussions following the PBL educational system. The lectures will take place on campus.

Assessment

The assessment of the course is designed as follows:

Type of assignment	Weight	Type of assessment
Weekly presentations on practical exercises	20%	Group assessment
Advanced modelling assignment - paper	40%	Individual assessment
Take home exam on a case	40%	Individual assessment

VSC3501 Sustainable Food Production

3000 (Life) Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

TBA

Contact: campusvenlo-osa@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1501 Sustainable Development
- ✓ VSC2203 Food Technology and Processing
- ✓ OR motivation letter with evidence for knowledge on basic sustainability concepts

Recommendations

Our food system is not designed to adapt to major disruptions like climate change and temporary crisis like Covid 19. But, farmers, entrepreneurs, and academics are rethinking food systems to forge a new path forward. Traditional farming methods like permaculture and using native plants on the one hand and new technologies like CRISPR and vertical farming on the other are promising parts of the solution. Changing our eating habits and implementing alternative proteins in global supply chains are big challenges. There are skeptics about each of these different approaches, but the future of a sustainable food system depends on bringing these ideas together.

Objectives

This course addresses the challenge of making our global food production sustainable. After attending the course, students should be able to:

- Identify and evaluate factors along the food supply chain that make the system unsustainable.
- Identify and evaluate concepts that support the sustainable development of food production.
- Expressing and presenting recommendations and active support measures for sustainable development in a target group-oriented manner.

Description of the course

This course assumes a basic understanding of the concept of sustainability and related scientific models. We discuss the situation of today's global food production system and analyze the factors that make it unsustainable. We consider different concepts of changing the structure of the system with a distinction between restructuring and disruption. In addition to the lectures, which provide insights into research projects and subject areas, individual models are discussed week after week. Each course participant chooses their own topic to deepen and explains the underlying sustainability model and an application. In addition to a pitch, a written work and a video are made to spread the topic.

Literature

Mandatory readings :

- Simons L. (2015). Changing the Food Game. Greenleaf Publishing limited.
- Nierenberg D., (2018). Nourished Planet, Sustainability in the global food system, Barilla Center for Food and Nutrition, Island Press.

Recommended books:

- Robertson M. (2017). Sustainability Principles and Practice (2nd.ed.), Routledge.
- De Zwarte I., Candel J. (2020). 10 Miljard Monden. Prometheus Amsterdam.
- Baldwin C.J. (2015). The 10 Principles of Food Industry Sustainability, Wiley Blackwell.
- Collinson P., Young I., Antal L., Macbeth H. (2019). Food and Sustainability in the Twenty-First Century, Berghahn, New York, Oxford.

Original research articles are recommended during the course.

Instructional Format

Lectures and tutorial meetings

Assessment

Pitch of individual topic

Report (paper) of individual topic

Video (presentation) and discussion

VSC3502 Planetary Health

3000 (Life) Science Course; Social Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Pim Martens, University College Venlo, FSE, Maastricht University

Contact: p.martens@maastrichtuniversity.nl

Pre-requisites

- ✓ VSC1501 Sustainable Development: Human Impact on the Earth System **OR**
- ✓ VSC2501 Climate Change

Recommendations

None

Objectives

At the end of this course, we expect you to be able to:

- Discuss Planetary Health as part of the broader discussions about the Anthropocene and Planetary Boundaries;
- Understand the basic mechanism and the underlying connection between the health of our Planet, Nature, Animals and Humans;
- Identify the key physical and mental health impacts related to functioning of Earth's natural systems;
- Explore different perspectives on Planetary Health, including indigenous perspectives;
- Discuss planetary-health friendly and resilient systems, and potential adaptation strategies, including (intergenerational) inequities and vulnerabilities ;
- Identify strategies that foster hope and collaborative action to mitigate or adapt to climate change;
- Develop an Integrated Systems Perspective of Planetary Health, which requires to explore methods and concepts such as Nature Based Solutions.

Description of the course

Human populations are healthier than ever before, but to achieve this we have exploited the planet at an unprecedented rate. On our current trajectory, we will put even more pressure on the Earth's natural systems. The so-called Great Acceleration of human activities and associated environmental impacts has significantly changed our natural systems and the human relationship with these systems. We are faced not only with climate change, but also with declining biodiversity, shortages of arable land and freshwater, pollution, and changing biogeochemical flows. We are dramatically affecting our global food production system, the quality of the air we breathe and of the water we drink, our exposure to infectious diseases, and even the habitability of the places where we live. There is increasing evidence of the diverse impacts of global environmental changes that are affecting global health on a large scale. Climate change, for example, has been referred to as "the biggest global health threat of the 21st century".

These changes in our global environmental systems pose significant challenges in view of sustainable development. They profoundly affect the earth's life-support systems and raise fundamental questions how human beings (of: humans) relate to their natural environment and to other species. Hence, from a sustainable development perspective we need to meet the needs of the present, while safeguarding Earth's life-support system on which the health and wellbeing of current and future generations depends. By the end of this course, you will be able to deconstruct the concept of planetary health, reflect on the central role of planetary health in the sustainable development debate, and assess some of the key methodological challenges (incl. interdisciplinary cooperation) in the field. This course is of key relevance

to the Earth system concentration; it is essential to further your understanding of how humans interact with and depend on the Earth System.

Literature

TBA

Instructional Format

TBA

Assessment

TBA

Social Sciences Courses

VSS1101 Introduction to Psychology

1000 Social Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Emmy van den Heuvel, University College Venlo, FSE, Maastricht University

Contact: emmy.vandenheuvel@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- You can define what psychology is exactly.
- You can illustrate how psychological concepts (e.g., love, intelligence) can be transformed into something that can be measured and studied.
- You can name, list, and distinguish key ideas within psychology.
- You can explain and reflect on psychological ideas and research.

Description of the course

"It pays to keep an open mind, but not so open your brains fall out." – Carl Sagan

The American Psychological Association (APA) defines psychology as the scientific study of mind and behavior. This course aims to elucidate what the APA means by this. Psychologists wish to understand how and why we think, feel, perceive, and act in a certain way. Psychological research results quite often defy conventional wisdom and insights from psychology have proven useful for other fields such as management and marketing, law and justice, education, and (mental) health. This introductory course will cover topics ranging from the workings of the brain to consciousness, from intelligence to abnormal behavior, and from elementary sensations to idiosyncratic beliefs. It will tackle questions like: Do we have free will? Can we trust our own memory? Are men better in math than women?

Literature

The relevant literature references will be provided through KeyLinks, and are listed in the syllabus.

Instructional Format

Lectures and tutorial meetings.

Assessment

Three writing assignments and a final exam (open/essay questions).

This module may be a prerequisite/recommended for:

Entrepreneurship, Performance Psychology in Sports and Business, Taste

VSS1201 Introduction to Business Administration

1000 Social Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Peter Bollen, Organisation and Strategy, SBE, Maastricht University

Contact: p.bollen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To introduce students to topics in business administration. In addition, the course prepares students for courses in marketing, organization, finance, strategy, supply chain management and accounting.

Description of the course

Business administration studies problems within the firm and relates to problems in the fields of marketing and logistics, finance, accounting and information management and organization and strategy. This course introduces students in the various topics that are related to business administration so that students have basic knowledge for the more specialized courses in marketing, organization, finance, strategy, supply chain management and accounting. The integration of the knowledge on these topics will take place by running a management simulation that covers all stages of setting up and running a business (Market place live).

Literature

- E-reader.
- Course material on the Market Place simulation.

Instructional Format

Tutorial group meetings and team work.

Assessment

A midterm test, participation, reflective paper and ranking in the market place management simulation.

This module may be a prerequisite/recommended for:

Supply Chain Management, Entrepreneurship, Social and Environmental Entrepreneurship

VSS1503 Foundations of EU Law and Policy

1000 Social Science Course

5 ECTS Spring Semester, Period 5

Course Coordinator

Rick Schumans, International and European Law, Law, Maastricht University

Contact: rick.schumans@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To learn basic concepts of EU law and EU decision-making
- To gain insight in key EU policy fields and their legal instruments
- To gain a practical understanding on the relationship between the EU, the Member States, and the individuals

Description of the course

This course provides an understanding on how the EU has evolved since it was established and how its actions affect individuals in important aspects of their daily life. Students will learn the legal foundations of the EU, the institutions that compose it, and their respective powers. After the study of the basic elements and actors of EU law, the course will address the regulation of relevant areas of activity, such as free movement of goods and persons, non-discrimination, environmental policy, migration policy.

Literature

Helen Wallace et al, Policy-Making in the European Union (OUP, 8th Ed., 2020), available as an e-book at UM Library

Instruction format

Lectures and tutorial meetings

Assessment

Written assignment and a written final exam

This module may be a prerequisite/recommended for:

EU Environmental Law and Policy

VSS2101 Psychology of Eating

2000 Social Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Emmy van den Heuvel, University College Venlo, FSE, Maastricht University

Contact: emmy.vandenheuvel@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To provide insight into the various psychological influences on eating behaviour
- To provide insight into how the psychology of eating can be studied
- Critically analyzing in pairs a provided topic related to psychology of eating

Description of the course

Whether we eat, and how much we eat, is not just a mere consequence of the presence or absence of hunger and satiety hormones. Psychological processes too have powerful influences on eating behaviour. During this course, you will learn about a wide variety of these psychological influences. We will cover questions such as: Why do we like certain foods and dislike others? How does our social environment affect our eating behaviour? Why do we eat more from larger plates? How does our brain respond to the sight of tasty food? Why do some people overeat whereas others don't? What are eating disorders?

Literature

Different articles and sources will be provided through KeyLinks, and are listed in the syllabus.

Instructional Format

Lectures and tutorial meetings.

Assessment

A video presentation (assignment in pairs) and a final take-home exam.

This module may be a prerequisite/recommended for:

Taste, Food Innovation

VSS2102 Behaviour Change

2000 Social Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Emmy van den Heuvel, University College Venlo, FSE, Maastricht University

Contact: emmy.vandenheuvel@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- You can name and describe various psychological theories of behaviour and motivation.
- You can explain and argue how different theories can be applied to change people's behaviour.
- You can compare and contrast the main theories and ideas regarding behaviour change.
- You can apply theories and ideas to understand behaviour across different domains.

Description of the course

Many people occasionally engage in undesirable behaviours, such as eating too much junk food, stealing other people's food, spending too much time lunching at work, or restrain eating out of fear for weight gain. People are often aware of the potentially negative consequences of these behaviours, but knowledge alone rarely motivates behaviour change. During this course you will learn about how to change health behaviour for the better. We will cover questions such as: Why is it so difficult to change our behavior, despite our best intentions? How can we effectively change unwanted, unhealthy, or psychopathological behaviours? We will look at how individual, social, and environmental factors may contribute to behaviour change.

Literature

The relevant literature references will be provided through KeyLinks, and are listed in the syllabus.

Instructional Format

Lectures and tutorial meetings.

Assessment

An intervention plan report about a potential need for behaviour change, and weekly assignments for every task (writing exam questions).

This module may be a prerequisite/recommended for:

Performance Psychology in Sports and Business, Healthy Life Cycle, Health Education and Communication

VSS2105 Social Psychology

2000 Social Science Course

5 ECTS, Fall Semester, Period 1

Course Coordinator

Josine van Diesen, Tilburg School of Social and Behavioral Sciences, Tilburg University

Contact: j.a.y.vandiesen@tilburguniversity.edu

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- You can recall and explain basic social psychological theories and models (e.g. attribution theory; bystander effect) that explain how people's thoughts, feelings, and behaviour are influenced by the implicit or explicit presence of other people.
- You can deduce the relevance of some early experiments or readings (e.g. Sherif et al. (1998); Schachter (1951)) for the development of specific social psychology research areas.
- You can describe a specific social psychological theory and/or model and apply your knowledge about it to examples given to you.
- You can identify and choose academic sources that will give you additional, deeper understanding of a specific social psychological theory/concept beyond the compulsory reading and apply it correctly to example(s) chosen by yourself.
- You can describe orally a social psychological theory and/or model and explain how it relates to current/ everyday life example(s).
- You can demonstrate that you have read and grasped part of the compulsory reading by formulating a new question for your fellow students which requires them to recall, describe and/or comprehend at least two of the compulsory sources.

Description of the course

People do not exist on their own but are inherently social. Within these social structures people influence others and are in their turn influenced by others. There are highly visible forms of influencing other people's behaviour, like talking a friend into going bungee-jumping ("Come on, we will all go, you don't want to spoil this, do you?"). But social influence can also be more covert and can go beyond behavior, involving thoughts and feelings. In this course you study different social psychological concepts, theories and models and you apply them to current examples. Next to reading about classical themes from social psychology, such as conformity and cognitive dissonance, some more recent themes such as prejudices, stereotypes, and the influence of social media on how we (a) present our 'self' to others and (b) the types of social relationships that are formed.

Literature

- Hewstone, M., Stroebe, W., & Jonas, K. (2015). *An introduction to Social Psychology* (6th Ed). Chichester: Wiley. ISBN: 978-1-118-82353-8.
- Also an e-reader containing different academic articles.

Instructional Format

Lectures and tutorial meetings

Assessment

- A written individual assignment that you complete in cooperation with group members
- A group assignment
- A (group) presentation

This module may be a prerequisite/recommended for:

Performance Psychology in Sports and Business, Healthy Life Cycle, Health Education and Communication

VSS2203 Finance and Investments

2000 Social Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Sjoke Merk, Finance, SBE, Maastricht University

Contact: j.merk@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To understand how to invest
- To understand and apply the basic valuation tools
- To analyse financial articles published in newspapers like Financial Times, the Wall Street Journal, Bloomberg, and the Economist
- To be aware of the main developments in the world of finance and the financial markets, i.e. fintech, sustainable investments and cryptocurrencies
- To think logically and analytically, apply mathematical techniques to a variety of problems, and critically evaluate these techniques by means of discussing real-life cases

Description of the course

Ever wondered how to grow your wealth through smart investments? Join this course to unlock the secrets of successful investment management. Explore cutting-edge theories and practical strategies tailored for today's dynamic global markets. Gain the skills to navigate complex challenges such as financial crises, geopolitical shifts, and trade tensions. Let's embark on a journey to financial empowerment together. Corporate finance deals with the investment and finance decisions made by the management of companies in the pursuit of profit maximization. A company can finance its investments by means of borrowing money from banks, by issuing bonds and/or through the stock market. The course explores aspects of corporate finance, examining how companies interact with the financial markets and how managers' decisions affect the value of their company's shares, bonds, etc. These types of decisions influence the expected return and risk of the company. The course gives a broad overview of important issues in corporate finance and combines insights from economics, business, and psychology. The economic side of corporate finance deals with the maximization of shareholder wealth. To this end managers aim at securing the greatest possible return in exchange for accepting the smallest amount of risk. The course is largely based on real life cases that we discuss in an interactive manner. To conclude, the goal of this course is to develop financial skills for making corporate and personal investment and financing decisions. Topics include discounted cash flow and other valuation techniques; risk and return; capital asset pricing model; corporate capital structure and financial policy; capital budgeting; and other exotic investment vehicles like cryptocurrencies, stock options, etc.

Literature

- Berk & De Marzo, Corporate Finance, Pearson Prentice Hall

Instructional Format

PBL, lectures, and tutorial meetings

Assessment

Midterm exam, final case, and participation

VSS2206 Supply Chain Management

2000 Social Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Bart Vos, Marketing & Supply Chain Management, SBE, Maastricht University

Contact: b.vos@maastrichtuniversity.nl

Pre-requisites

✓ None

Recommendations

None

Objectives

Students understand core supply chain concepts and theories and use them in relation to the wider business environment. Students can solve practical problems using tools and techniques, and interpret the outcome to advice on collaborations in supply chains. Students learn to analyse ethical and sustainable issues in supply chains that affect their daily lives and make choices to reflect these considerations.

Description of the course

This course is an introduction course into supply chain management, in particular we will focus on how supply chains in for example the food, fashion and health care industry are designed. Students will acquire a solid foundation in the topics of both logistics management and supply chain management. While a strong internal operations function is vital to a firm's survival, it is not sufficient. Firms must also understand how they link with their supply chain partners, including customers, distributors, manufacturers, and suppliers. In this course, we will cover a wide range of topics such as supply chain strategy, collaboration, purchasing, logistics, inventory, ethics and sustainability. Students learn directly about these concepts from a textbook and application to cases and exercises, and additionally work on a team project to analyse a part of a supply chain.

Literature

Christopher, M. (2022). *Logistics & supply chain management*. Sixth edition. Pearson UK. ISBN: 978-1292416182

Instructional Format

Lectures and tutorial meetings

Assessment

Group project, Participation, and Individual assignment.

VSS2301 Entrepreneurship

2000 Social Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Martin Carree, Organisation, Strategy and Entrepreneurship, SBE, Maastricht University

Contact: m.carree@maastrichtuniversity.nl

Pre-requisites

VSS1101 Introduction to Psychology **OR** VSS1201 Introduction to Business Administration

Recommendations

None

Objectives

- You are able to explain and illustrate the unique qualities of the entrepreneurial process.
- You are able to explain and illustrate the unique qualities of entrepreneurs.
- You are able to explain how entrepreneurial opportunities are discovered and created.
- You are able to explain how entrepreneurship is related to economic development and ecosystems.
- You are able to explain how entrepreneurs link value creation to value appropriation.

Description of the course

In this course you will be introduced to some of the key insights on entrepreneurship that academics in the social sciences have produced. You will search the literature to unravel what drives entrepreneurs and the entrepreneurial process. We will focus on new venture gestation: the initial stages of the process that may result in a new company to emerge. Throughout the course you will explore how entrepreneurs not only rely on generic business management principles, but also how they cope with the uncertainty, risk, scarcity of time, capital and other resources that is inherent to all entrepreneurial venturing. Perhaps you will conclude that many entrepreneurs are in fact not really good managers (good entrepreneurs will compensate for this by hiring better managers). We start the course by explore the process dynamics of entrepreneurial activity and the importance of entrepreneurship for the society/economy. We then will explore the origins of entrepreneurial opportunity, review how entrepreneurs screen and develop the opportunities that they discover, and you will unravel how entrepreneurs seek to appropriate the returns from their enterprising behaviour. You will learn that entrepreneurship is quite distinctive from "management." It is also a phenomenon that is studied by many disciplines. Sociologist, psychologists, economists (working inside and outside business schools) have studied entrepreneurship, and their findings provide an important intellectual foundation to this course (and to entrepreneurial practise). Perhaps surprisingly, in most economic theory the entrepreneur is neglected. However, several economists have pointed to the increasingly important role of entrepreneurs in modern economies. It is not a course in which you prepare the start of a new venture. Nevertheless, you may expect the course to inspire you to start exploring opportunities that you could pursue next to, or after your studies.

Literature

We provide a list of scholarly articles that can be used in this course. All readings can be obtained free of charge through the UM library.

Instructional Format

Tutor Group sessions will help you explore the relevant literature and to learn how scholarly findings can help you to explain, understand and/or predict enterprising behaviour. Case discussions will help you to explore how (well established and more recent) scholarly insights can be used to inform entrepreneurial decision-making.

In addition to the literature and case discussions, there is a group project on a business opportunity in some country/region resulting into a group presentation. A(n individual) business consulting project is connected to this group project.

Assessment

Take home exam plus consulting essay plus group presentation plus participation/cases.

This module may be a prerequisite/recommended for:

Social and Environmental Entrepreneurship

VSS3101 Performance Psychology in Sports and Business

3000 Social Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

One psychology course at the bachelor level or in possession of a waiver (also see recommended).

Recommendations

If you want to be eligible for a waiver, you should be highly motivated to follow this course and willing to put in extra effort.

Objectives

After this course

- You grasp key performance psychology principles for sports, business, and high-pressure domains.
- You can apply confidence, motivation and goal-setting theories like self-determination and SMART goals in real-life sports or business scenarios.
- You can assess techniques for enhancing performance, including confidence-building and emotion regulation.
- You can analyze and strategize against psychological barriers like stress and anxiety that hinder optimal performance.
- You can, together with a fellow student, constructively use an AI-tool to analyse a performance psychology question/scenario and critically analyse the output.
- You can synthesize course information and apply performance psychology concepts to real-life examples, discussing them in an engaging manner.
- You can reflect critically on your performance, identifying barriers and formulating a personal improvement plan.

Description of the course

“Success is a journey, not a destination” (Arthur Ashe)

In this course students increase their insight on how people increase their mental toughness and overcome problems that impede them from performing at their best. They will become acquainted with some of the psychological processes and skills that are associated with people’s ability to tap into their potential. Specific topics covered will focus on psychological factors and skills on the individual level. Topics studied will include mental imagery, focusing, confidence, coping with anxiety and setbacks, and the psychology behind the use of performance enhancing drugs. While most of the examples in the course manual to illustrate the concepts and trigger discussion come from the sport or business field, there is ample of room in the course to apply the gathered knowledge to other areas requiring people to perform (e.g. rehabilitation/ patients; emergency careers (such as first-aid doctors, fire fighters), education etc... Students will have vast opportunities to decide on what they want to learn about the performance psychological concepts/theories introduced in the course.

Literature

Some articles will be provided. However, you have to search for articles yourself as well.

Instructional Format

Tutorial meetings, recorded and on-campus lectures

Assessment

Assessments are scheduled during two moments (approx. half-way and at the end):

- Think-Pair-Share activity resulting in a critical presentation using AI (individual/group assignment)
- Writing a mid-week Performance Psychology blog, including one person reflection post (individual assignment)

VSS3102 Taste

3000 (Life) Science; Social Science Course

5 ECTS, Spring Semester, Period 4

Course Coordinator

Remco Havermans, University College Venlo, FSE, Maastricht University

Contact: r.havermans@maastrichtuniversity.nl

Pre-requisites

- ✓ VSS2101 Psychology of Eating

Recommendations

VSS1101 Introduction to Psychology

Objectives

- You can name and identify anatomical structures and their functions regarding taste and smell perception.
- You can describe and explain the causes and consequences of taste and smell dysfunction.
- You can understand and apply techniques measuring how well anyone can taste or smell.
- You can explain how and why certain environmental cues influence flavour perception.
- You can reflect on how sight, touch, and hearing contribute to one's overall experience of flavour.
- You can argue and explain how learning and memory determine the development of flavour likes and dislikes.

Description of the course

This course covers the latest insights in the psychology of the sense of taste. Through problem-based learning tasks and portfolio workshops, we examine the sense of taste and how it relates to food selection and intake. Various topics will be addressed, such as the importance of integrated gustation and olfaction in taste perception, the dynamics of taste acuity, the consequences of taste changes, taste disorders and their impact on psychological well-being, and the role of memory and context in taste perception.

Literature

No compulsory literature

Instructional Format

Lectures and tutorial meetings

Assessment

A portfolio containing a variety of assignments pertaining to different formats of science communication (e.g., blog, podcast, infographic, social media stories or essay) and a midterm written assignment reflecting on all the topics covered in the course.

VSS3202 Consumer Behaviour

3000 Social Science Course

5 ECTS, Spring Semester, Period 5

Course Coordinator

Matthias Wibrál, General Economics, SBE, Maastricht University

Contact: m.wibrál@maastrichtuniversity.nl

Pre-requisites

✓ none

Recommendations

None

Objectives

- Learn to use theories from (behavioural) economics, marketing and psychology to understand and predict people's choices
- Understand how companies and governments can use these theories to reach their desired goals
- Become acquainted with empirical methods used to identify the behaviour and preferences of consumers

Description of the course

In this course we explore how consumers make decisions and how companies and governments use that information. We will explore, among other things, how people decide which insurances to buy – if any, how consumers deal with decisions that have consequences over time, and how we can stimulate ethical consumption. After the course you can explain, why are there so many brands of toothpaste, why cellphone plans are so complicated, why you are obliged to buy medical insurance, why people say they will buy Fairtrade products, but don't, and more. In addition to theories and empirical findings we will also discuss the empirical methods used to investigate these questions.

Literature

No book, papers will be assigned.

Instructional Format

Lectures and tutorials

Assessment

Participation including presentations and a final paper.

VSS3301 Social and Environmental Entrepreneurship

3000 Social Science Course

5 ECTS, Fall Semester, Period 2

Course Coordinator

Abel Diaz Gonzalez, Organisation, Strategy & Entrepreneurship, SBE, Maastricht University

Contact: abel.diazgonzalez@maastrichtuniversity.nl

Pre-requisites

At least one of the following courses:

- ✓ VSS1201 Introduction to Business Administration
- ✓ VSC1501 Sustainable Development: Human Impact on the Earth System
- ✓ VSS2301 Entrepreneurship

Recommendations

Students should be in at least their third semester to take this course

Objectives

On the successful completion of this course you should be able to:

- Critically reflect on social and sustainable entrepreneurship theory and practice
- Identify and evaluate social and sustainable entrepreneurship opportunities
- Develop a strategy for a social/ sustainable enterprise
- Conduct primary research and analyse primary and secondary data in the field of social and sustainable entrepreneurship
- Prepare and present documentation to pitch a novel enterprise idea
- Learn to cope with the chaos and complexity of doing social and sustainable entrepreneurship in the real world.

Description of the course

Interest in the concept of social and sustainable entrepreneurship has been sparked over the last two decades due to frustration with inefficient, ineffective and failed action of government and philanthropic bodies, as well as the socially destructive behaviour of many businesses. An explicit and central social/sustainable mission, innovation, creativity and a strong market orientation are the distinguishing features of social and sustainable entrepreneurship. Social and sustainable entrepreneurs are committed to furthering a social and/or sustainable mission, and rank social, environmental or cultural impact on a par with, or above, profit. At the intersection of business, government and not-for-profit organisations, these social and sustainable entrepreneurs are now visible and having an impact on a global scale.

This course will provide you the opportunity to learn how you can apply your knowledge and skills to address complex sustainability problems. This course is structured around experiential problem-based learning, providing you the opportunity to synthesise theory and practice as you develop an idea for your own social/sustainable enterprises. Topics will include: critically reviewing concepts; user centred-design of social and sustainable enterprises; frameworks for understanding and strategizing; understanding and reporting social and environmental impact; and cross-sector collaboration.

Literature

eReader with papers & Harvard Business cases (You need to pay for your cases, 1prox. €15).

Instructional Format

Lectures, workshops and tutorial meetings

Assessment

- A. Participation (10% of final grade) - Weekly
- B. Facilitation (20% of final grade) – 50-minute session
- C. Individual Video Pitch (Problem/Opportunity) (20% of final grade) – 90 second video
- D. Group Pitch (25% of final grade) – 8-minute pitch + Pitch Deck
- E. Social/Sustainable Enterprise portfolio – group assignment (25% of final grade)

VSS3502 EU Environmental Law and Policy

3000 Social Science Course

5 ECTS Fall Semester, Period 1

Course Coordinator

TBA

Contact: campusvenlo-osa@maastrichtuniversity.nl

Pre-requisites

None

Recommendations

VSS1503 Foundations of EU Law and Policy

Objectives

- To learn the basic features of EU environmental law
- To learn about key fields of EU environmental policy and their legal dimension
- To gain practical insights about the everyday impact of EU legal and policy decisions in relation to the environment.

Description of the course

This course addresses the role that the EU plays in environmental protection. The first sessions will tackle the EU competences in environmental policy and law-making, its aims, principles and strategies. After the study of the basic elements of EU environmental law, the course will address relevant themes, such as water, nature, pesticides, emissions, and environmental quality objectives; with a special emphasis on how these environmental regulatory conditions affect food production. The course will also reflect on the application and enforcement of EU environmental legislation.

Literature

Combination of academic articles and policy documents

Instruction format

Lectures and tutorial meetings

Assessment

Class presentation and a written final exam

Skills Trainings

VSK1000 The Applied Researcher I

1000 Core Skills Training

2.5 ECTS, Spring Semester, Period 4

Course Coordinator

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

At the end of this skills-training...

- Students have improved their ability to identify and select relevant (scientific) sources, which they can use to support their research question.
- Students have become aware of the importance of analysing a real-life problem sufficiently in order to formulate an adequate research question and hypotheses.
- Students have learned important lessons on systematic, critical, and ethical research.
- Students have learned to design and plan a realistic research project and are able to convey the importance and feasibility of the research project in a written research proposal.
- Students have improved relevant soft skills (planning, communication, team working).

Description of the course

The Applied Researcher I is the first part of a three period research project, in which student groups will work on a research problem provided and supervised by a UM researcher. Before the start of the project students are given the opportunity to designate their preference for a specific problem. Study fields include e.g. Food Innovation, Psychology, Public Health, Marketing/Health Claims,... The problems provided challenge students to study an issue that is still not fully understood and the answer to the problem has applied implications.

In this project period the focus will lie on analyzing the problem and on coming up with a feasible research plan that sets the foundation for the data collection phase (The Applied Researcher II) and the analysis-writing up results phase (The Applied Researcher III).

Literature

Students will be provided with a small number of content literature that is related to their research focus. In addition, some general literature resources are recommended. However, for the most part students are expected to search for and identify credible and relevant sources by themselves.

Instructional Format

Research mentor meetings with the assigned supervisor, lecture(s), workshop(s), presentation.

Assessment

Written fact sheet (individual assignment) and ethical review application form (group assignment).

VSK1001 Introduction to Academic Skills

1000 Core Skills Training

2.5 ECTS, Fall Semester, Period 1

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

Students are able to:

- Identify and explain the ethic and core skills that are part of an academic and the difference with applied sciences.
- Theorise on a specific topic and draw up a thesis statement and an argument structure.
- Apply a structured approach to research and gather scientific literature from databases.
- Communicate through academic writing of a researched theoretical topic with appropriate referencing.
- Provide, receive and make use of feedback through the peer-review process.
- Avoid committing plagiarism and other cases of intellectual theft on their own academic work to prevent fraud.

Description of the course

Although your start at an academic programme is in many ways a continuation of your educational career, we know that the transition to university may provide you with unique challenges. This skills training aims to equip you with the basic tools which will help you succeed at university. From scientific curiosity to critical thinking, we will explore all the characteristics that make us academic colleagues and how that differentiates from other scientific areas. After this skills training, you will be equipped with a unique set of skills that you will practice along your career. We will use various educational formats including lectures, workshops, in class discussions and peer-feedback.

Literature

Advised: Fowler, H. R., & Aaron, J. E. (2015). The Little Brown Handbook (13th ed.). New York: Pearson Longman. (Earlier editions can also be used)..

Additional: Additional Literature may be found in the reference list.

Instructional Format

Workshops, lectures and tutorial group meetings, during which students will do small group exercises.

Assessment

Several written assignments.

VSK1002 Research Methods I: Quantitative Research

1000 Core Skills Training

2.5 ECTS, Fall Semester, Period 2

Course Coordinators

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

Intended Learning Outcomes:

- To describe the empirical cycle and recall the different research steps.
- To explain the purpose of a research question and hypotheses.
- To formulating a research question and hypotheses using appropriate wording based on their selected study design.
- To search for and critically read research publications relevant to their chosen topic.
- To design a theoretical framework to investigate a research question.
- To select an appropriate study population for their selected topic.
- To recognize different forms of study designs, their advantages and disadvantages.
- To recognize the concepts of validity and reliability in research and reflect on these in their selected topic.
- To practice how to give and receive feedback.

Description of the course

Students will be introduced in research methodology by lectures, assignments and self-study. Students will learn why theoretical backgrounds are important to develop hypotheses that can be tested, will learn how to select a suitable study population, how to define and choose appropriate exposure and outcome measures fitting the hypotheses and what this means for internal and external validity. In order to enhance learning, students need to apply this by writing the introduction and part of the research methods of a study proposal on one of the topics provided by the staff and to peer review each others work.

Literature

- Kumar R. Research Methodology – a step-by-step guide for beginners. ISBN9781446269978
- Additional literature will be provided during the course
- Material is available in the Reading Room, UM-Library, as E-reader or as Online Sources.

Instructional Format

Lectures and practical skills trainings

Assessment

Weekly homework assignments (40%) and final concept publication in which students apply what they have learned during the course (60%).

This module may be a prerequisite/recommended for:

PEERS

VSK1004 The Applied Researcher II

1000 Core Skills Training

2.5 ECTS, Spring Semester, Period 5

Course Coordinator

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

- ✓ VSK1000 The Applied Researcher I

Recommendations

None

Objectives

At the end of this skills-training...

- Students have acquired experience in the collection and recording of data, such as implementing a measurement method and statistical package skills.
- Students have become acquainted with the skills needed to analyze research data.
- Students are able to conduct some basic descriptive and inferential statistics using R.

Description of the course

The Applied Researcher II is the second part of a three period research project, in which students will work in small groups to research a problem. Students continue working on the project that they started in the Applied Researcher I. In the current period the focus will lie on gathering the data needed in order to answer the research question(s) formulated and developing analytical skills using the program R.

Literature

No essential reading list is provided. Students are expected to search for and identify credible and relevant sources by themselves.

Instructional Format

Research mentor meetings with the assigned supervisor, lecture(s), workshop(s)

Assessment

R exam (individual assignment)

Written reflection report (individual assignment)

VSK2002 Lab Skills: Protocol Design

2000 Skills Training

2.5 ECTS, Spring Semester, Period 4

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

VSC1401 Introduction to Chemistry

VSK2015 Lab Skills: Good Laboratory Practice

Objectives

At the end of this course students are able to:

- Analyse a problem, formulate research questions, and generate a hypothesis for a lab experiment.
- Design an experiment to test the hypothesis, select appropriate control groups, write a protocol, and plan the activities to be executed in the lab.
- Incorporate safety protocols, biohazard handling, and ethical considerations in laboratory research. Conduct laboratory experiments with precision, accuracy and professionalism demonstrated through use and execution of advanced laboratory techniques.
- Assess and conclude over experiment's results to answer a given research question and outline the conclusion in a scientific report.

Description of the course

This is a skills training that aims to generate scientific curiosity in the student. It focuses on the development of experimental protocols in laboratory settings with the aim to equip students with the necessary skills and knowledge to design, implement, and analyze experiments in various disciplines within the sciences.

This skills training creates an environment that gives the opportunity to formulate your research questions regarding a specific problem to develop a protocol that makes use of different abilities and skills to handle laboratory equipment in a safe and precise manner. Accuracy, focus, and constant questioning will be part of this course to finally obtain solutions to different practical challenges presented during the different sessions.

Literature

Literature will be provided for each task individually. Besides, you will need to look for your own sources according to the research question.

Instructional format

Laboratory sessions.

Assessment

Prelab preparation, lab journal control, and practical reports

VSK2003 Lab Skills: Biomolecular Techniques

2000 Skills Training

2.5 ECTS, Fall Semester, Period 2

Course Coordinator

Herman Popeijus, Human Biology, FHML, Maastricht University

Contact: h.popeijus@maastrichtuniversity.nl

Pre-requisites

- ✓ VPR1004 Research Methods II: Lab Skills **OR**
- ✓ VSK2015 Lab Skills Good Laboratory Practice or equivalent **OR**
- ✓ VSK2203 Lab Skills Protocol Design

Recommendations

Interest in biology and laboratory experiments

Objectives

At the end of this course students are able to:

- Perform calculations required in bio-molecular biology.
- Perform proper laboratory skills (use of micro-pipets; balance; photo spectrometer).
- Explain, understand and perform a basic bio-molecular experiment.
- Explain and understand the theoretical background behind DNA-Isolation, Restriction analysis, photo spectrometry and DNA gel electrophoresis.
- Obtain useful data from basic photo spectrometry in various experiments.
- Apply and understand DNA gel electrophoresis and restriction analysis.
- Understand and perform thin layer chromatography (TLC).
- Properly follow the experiments using a laboratory journal.
- Report and reflect on the data obtained from a laboratory experiment.

Description of the course

This skills training focuses on developing students' skills in bio molecular laboratory techniques and associated calculations. Through a combination of theory, hands-on experiments, and data analysis, the course aims to prepare students for conducting research in molecular biology.

By completing this course, students gained the theoretical knowledge and basic bio molecular laboratory skills necessary to conduct molecular biology experiments.

Literature

Practical Skills in Biomolecular Sciences, ISBN-13: 978-0132391153

Instructional format

Laboratorial meetings.

Assessment

- Preparations / labjournal (fail, pass, good)
- 1 short practical report (fail, pass, good)
- Basic laboratorial calculations (40%) and open ended questions (60%)

VSK2004 Academic Writing

2000 Skills Training

2.5 ECTS, Fall Semester, Period 1

Course Coordinator

Adam Simpson, Language Centre, UB, Maastricht University

Contact: a.simpson@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

During this advanced writing course, students will

- Deepen academic writing skills appropriate for academic exchanges: understanding how to report on approaches, conduct a short literature review (individual) and write a research proposal (individual)
- Learn to use the analysis of the data to support a scientific hypothesis, as well as correct use of grammar and spelling
- Learn relevant paraphrasing and summarizing techniques
- Practise how to cite properly together with how to write proper references
- Give and receive feedback on academic writing.

Description of the course

This course is designed to assist students in polishing their academic writing skills. You will more than likely have already written a number of papers for various courses before attending this course; therefore, this course will not review the very basics of writing or grammar. Rather, this skill's training course will focus on advanced levels of different types of writing to help students look deeper into style while writing in grammatically correct English, and re-visit successful means of argumentation in an academic context.

Literature

Recommended: Fowler, H. R., & Aaron, J. E. (2004). *The Little, Brown Handbook* (9th ed, or higher). New York: PearLongman. Any other course hand-outs or materials will be provided via Student Portal

Instructional format

Tutorial (6) meetings.

Assessment

Paper 1 and 2 each count for 50%

VSK2006 Clinical Lab Skills

2000 Skills Training

2.5 ECTS, Spring Semester, Period 5

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To apply main principles of Good Clinical Practice in clinical research;
- To perform and assess basic anthropometric and cardiorespiratory measurements;
- To understand basics of electrocardiography, spirometry, exercise testing;
- To perform a basic evaluation of electrocardiogram and spirogram;
- To perform a basic assessment of the exercise tests.

Description of the course

Clinical Lab Skills introduces basic techniques which are used in clinical practice to assess functions of the organ and systems of the human body. During the training, you will learn how to perform basic anthropometric measurements in humans, which methods can be used to assess body composition, how cardiovascular function and fitness level can be measured. Furthermore, students will build expertise on basic interpretation of electrocardiograms, heart rate variability and lung function testing. During the tutorials importance of the informed consent process and application of the Good Clinical Practice in studies involving human participants will be discussed. Overall, students will acquire and improve their skills to perform clinical research.

Literature

A combination of basic books and E-reader will be used. Moreover, the students will have to search and select the articles themselves.

Instructional format

Educational workshops with practical trainings

Assessment

Clinical lab journal, which includes home preparations, practical reports and reflections

VSK2007 Risk Communication & Crisis Management

2000 Skills Training

2.5 ECTS, Spring Semester, Period 4

Course Coordinator

Jaap C. Hanekamp, University College Roosevelt

Contact: hjaap@xs4all.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

During this skills training, students will learn to approach risk communication from different disciplines:

1. risk assessment
2. risk psychology
3. sociology

Also to practice risk communication taken into account personal and social perception and acceptance and background, different opinions about risk issues.

Description of the course

Most scientific research about risk is based on the likelihood that something will happen and the impact what this will have: on humans, animals, the environment or climate for example. Think of a foodborne illness, the development of AI-robots that are smarter than ourselves, or the plastic soup in our oceans. But risk = chance x effect is not the whole message. Risks are rooted in society and are therefore closely connected with the life and especially the values and perceptions of the society-members, on which they base their risk-acceptance.

Scientific risk assessment can be perceived as an equivalent of 'fake' messages about risk issues on the internet or social media. Who can be trusted and who absolutely not, who can do what to take control of the risk. These are all elements of the course 'the strategy of risk communication'. Students will learn about the six building blocks of the strategy, which are rooted in behavioural economics, sociology, risk-ontology and psychology. Together they give insight in that a risk is more than probability/severity, knowledge that is necessary to connect the scientific outcomes to the society you are working for.

Literature

TBA

Instructional format

Six meetings: 30 minutes theoretical considerations and background, exercise training based on actual cases.

Total duration each week: two hours.

Assessment

Development of a risk communication strategy based on two actual cases

VSK2008 Visualization and Data Storytelling

2000 Skills Training

2.5 ECTS, Spring Semester, Period 5

Course Coordinator

Kay Schröder, Data Visualization, Zuyd University of Applied Sciences

Contact: kay.schroeder@rwth-aachen.de

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- Students understand what is meant by data storytelling.
- Students have become acquainted with differences visualization methods/techniques that are used in data storytelling.
- Students have learned to think critically about how to combine data, visuals and narrative into an effective visual representation.
- Students have learned how to develop an infographic.

Description of the course

Google's Chief Economist Dr. Hal R. Varian stated in 2009 "the ability to take data—to be able to understand it, to process it, to extract value from it, to visualize it, to communicate it—that's going to be a hugely important skill in the next decades." This course will focus on the last steps in this process, namely how to give numbers a clear and convincing visual voice; how to share understanding visually. Visuals are processed 60,000 times faster than words alone and remembered by 80% of the people (contrary to 20% for reading). Data storytelling is a structured approach for communicating data insights, and it involves a combination of three key elements: data, visuals, and narrative. In this skills training students will get an introduction into how one combines the right visuals and narrative with the right data, as this drives change in real life. People hear statistics, but they feel stories. Great data storytelling allows someone who's never heard of data science to understand what information one wants to transmit.

Literature

- Storytelling with data: a data visualization guide for business professionals, Cole Knaflic, Wiley, 2015, Hoboken, New Jersey, ISBN:1119002257
- The Visual Display of Quantitative Information, Edward R. Tufte, Graphics Press, 2001, Cheshire, Conn, ISBN:9780961392147
- Tamara Munzner: Visualization Analysis & Design, CRC Press, Boca Raton USA, 2014

The required books for this course can be found in the Campus Venlo Library. All literature may also be accessed via the reference list: <http://referencelist.library.maastrichtuniversity.nl/>.

Alternative resources may be found via the University Library: <http://library.maastrichtuniversity.nl/>

Instructional format

Lectures and Hands on Sessions

Assessment

Develop a Data Story and write a report + weekly case assignments

VSK2009 Leadership Skills

2000 Skills Training

2.5 ECTS, Fall Semester, Period 2

Course Coordinator

Karin Lenssen, de, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

At the end of the skills training, students...

- can distinguish different leadership styles and reflect on their own style of leadership;
- have recognized the interrelationship between organizational culture and leadership and reflect upon their own leadership behaviour in groups;
- have identified their core qualities and reflected upon how these influence their communication as a leader;
- can execute effective verbal and non-verbal active listening skills and reflect on how their ability to listen affects their leadership skills;
- can differentiate between conflict styles and have discovered their personally preferred conflict style with its advantages and pitfalls;
- can reflect on ethical leadership and appraise the value of authenticity and charisma for ethical leadership behaviour.

Description of the course

The idea that leadership is an innate quality that is possessed only by a few people in the world, is not considered valid anymore. In truth, leadership can be studied and learnt through discussion, exercises and being open to different opinions. In which situations is what type of leadership required? How are group dynamics influencing leadership? What skills are necessary for a leader? And what about your personal skills: which skills do you want to (further) develop and what aspects suit you less? Which leadership style is most effective for you? This skills training is aimed to inspire you and further develop your personal leadership skills and is relevant for students at any level of leadership skills development.

Literature

Materials available on Student Portal.

Instructional Format

Interactive Workshops and Educational Games; Self Reflection; Peer Feedback

Assessment

- 70% of grade: weekly assignments in portfolio
- 30% of grade: final assignment in portfolio

VSK2010 Creativity & Concept Development of New Business

2000 Skills Training

2.5 ECTS, Fall Semester, Period 2

Course Coordinator

Roy Broersma, Centre for Entrepreneurship and Innovation, SBE, Maastricht University

Contact: r.broersma@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

VSS2301 Entrepreneurship

Objectives

- To be able to apply creativity techniques to problem solving
- To understand how creativity can be used to transform technology into product concepts.
- To be able to draft business concepts and business models that result from technology product ideation.

Description of the course

A key role of corporate R&D-labs is to translate novel technology into new products and new business. Customer feedback may also trigger product and business development. Envisioning how novel technology can be used to develop and market new products is an inherently creative process that should not only be mastered by business developers, but also by scientists and technologists.

This course is focused on developing your competence at two important tasks for the creation of new business: [1] discovering (technological) opportunities, [2] developing product, business concepts and business models.

Creativity plays an important role in several, if not all, aspects of what makes organisations work and flourish. Creative problem solving is therefore an essential skill for those that expect to find employment as scientists in industry and academia. It is also valuable to those that eventually may become corporate or self-employed entrepreneurs.

During this skills course we will touch upon important aspects of creative problem solving. But, most of all, we will provide you with insights that will help you to develop your own creative skills. The starting point of the training is our belief that creativity is an ability that, to a certain extent, can be learned and trained. We will follow different paths to help you investigate your own creativity skills and to find the best way to improve them.

Literature

- Reader with papers & cases

Instructional Format

Workshops

Assessment

1. A midterm assessment, which consists of an evaluation of a Keynote/PowerPoint presentation of ideation outcomes;
2. A final individual assessment, which consists of a combined project & reflection paper

VSK2011 Influencing and Negotiation Skills

2000 Skills Training

2.5 ECTS, Spring Semester, Period 4

Course Coordinator

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To develop effective negotiation skills to achieve integrative, 'win-win' outcomes
- To identify negotiation strategies and learn how and when to apply them
- To navigate diverse and challenging personalities, communication styles, and differences in bargaining power

Description of the course

This course is aimed at developing analytic and communication skills that are necessary for successful negotiations. Students will learn different negotiation styles and models, and will use these to develop skills across three stages of negotiation: preparation, negotiation, and evaluation. The course will encourage students to approach conflicts and disagreements as possible win-win rather than zero-sum scenarios, and students will learn specific techniques in pursuit of this goal. For instance, students will develop skills to best prepare for negotiations, facilitate negotiation processes, bargain with difficult partners, and manage cross-cultural elements of conflicts.

Literature

- Fisher, Roger, William Ury and Bruce Patton. 2012 (1999). *Getting to Yes: Negotiating Agreement Without Giving In*. Random House Business.
- Diamond, Stuart. 2018 *Getting More: How You Can Negotiate to Succeed in Work and Life*. Currency.
- Voss, Chris and Tahl Raz. 2016. *Never Split the Difference: Negotiating as If Your Life Depends on It*. Harperbusiness.

Instructional Format

Weekly meetings involving negotiation simulations

Assessment

Two reflection papers regarding simulations

Oral exam: final negotiation simulation performance

VSK2012 Integrated Sustainability Assessment of Climate Change

2000 Skills Training

2.5 ECTS, Fall Semester, Period 2

Course Coordinator

Pim Martens, University College Venlo, FSE, Maastricht University

Contact: p.martens@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- Understand the concept of Integrated Assessment (IA)
- Understand how various IA tools and methods are used
- Get hands-on experience in using several IA tools (e.g. models, scenarios, games)

Description of the course

An interdisciplinary study skill in Integrated Assessment methodologies and concepts as an approach to address complex societal issues associated with the challenge of sustainable development.

Integrated Assessment is an iterative, continuing process, where integrated insights from the scientific and stakeholder communities are communicated to the decision-making community, and experiences and learning effects from decision-makers form one input for scientific and social assessment. This complex, intuitive, and value-laden process operates at a variety of levels and scales. Multiple diverse approaches are needed, varying from analytical methods (such as Integrated Assessment models) to participatory methods (such as focus groups).

Theory is mixed with practice through lectures, discussions, IA sessions and games.

Literature

All material (problem descriptions and supporting literature) will be provided during the course and made available through the Student Portal. There is no specific textbook.

Instructional Format

Lecturing, computer-based group practicals, research-based learning.

Assessment

Graded IA exercises.

VSK2013 Nutritional Assessment

2000 Skills Training

2.5 ECTS, Fall Semester, Period 1

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Kahlile Youssef Abboud, University College Venlo, FSE, Maastricht University

Contact: k.youssefabboud@maastrichtuniversity.nl

Pre-requisites

✓ None

Recommendations

None

Objectives

- To introduce students to the basic principles and techniques of measurement of dietary intake of various nutrients
- To learn how to assess energy balance in human subjects
- To understand the value of anthropometric measurements and clinical assessment in health risk assessment
- To introduce students to holistic assessment of the nutritional status and principles of dietary advising

Description of the course

In this skill training, you will learn how to measure intake of nutrients, how to evaluate nutritional status and assess energy expenditures in human subjects. During the practical sessions you will be introduced to the principles of assessment of the dietary intake of macro- and micronutrients by means of food diaries and dietary recall method, learn how to evaluate body composition and how to estimate the level of physical activity. Moreover, principles of dietary advising as well as the possibilities of nutritional coaching offered by the modern mobile applications will be discussed. This skills training is relevant for students interested in nutrition, dietetics and lifestyle coaching.

Literature

TBA

Instructional Format

TBA

Assessment

TBA

VSK2014 Interviewing I

2000 Skills Training

2.5 ECTS, Fall Semester, Period 2

Course Coordinator

Karin Lenssen, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

✓ None

This course is only to be taken together with VPR2005 Interviewing II

Recommendations

None

Objectives

- Recognise when to use which conversation technique;
- Connect and apply conversation techniques to various purposes;
- Recognise and explain different interviewing formats for different purposes;
- Develop experience- and theory-based conversation strategies;
- Prepare qualitative research based on a given case.

Description of the course

Whether it is for diagnose someone or trying to understand people's behaviour or success, interviews can be a rich source of information. However, when is a specific type of interview the best fit for the purpose that you have in mind? How to conduct such an interview? And how can you use all the information that is already out there? This skills training will introduce you to a selected number of interview techniques, that can be used in different settings, focussing on motivational interviewing and scientific interviewing. Within workshops, you will practice to prepare and conduct different interviewing techniques. This skills training aims to inspire you to make optimal use of interviews in future work.

Literature

Materials available on Canvas

Instructional format

Workshops

Assessment

Research plan (research question and interview script) (25%), conducted scientific interviews (25%), conversation strategy plan (50%)

VSK2015 Lab Skills: Good Laboratory Practice

2000 (Life) Science Skills Training

2.5 ECTS, Fall Semester, Period 1

Course Coordinator

Koen J.P. Verhees, PhD, University College Venlo, FSE, Maastricht University

Contact: koen.verhees@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

At the end of this course students are able to:

- Understand the origins and importance of Good Laboratory Practice, as well as its key elements and requirements.
- Use laboratory equipment and materials to conduct basic laboratory experiments with care, precision, and efficiency.
- Document activities performed in the lab, such as followed procedures, planning, and raw data records.
- Assess the experimental results and formulate coherent discussions and conclusions.
- Assess and conclude over experiment's results to answer a given research question and outline the conclusion in a scientific report

Description of the course

This skills training is designed to provide students with an overview of Good Laboratory Practice (GLP), a set of principles and guidelines that ensure the quality, integrity, and reliability of non-clinical laboratory studies. You will learn to adhere to standardized protocols and best practices to minimize bias, error, or fraud in laboratory research and testing by making proper and efficient handling of apparatuses, instruments, and materials in the laboratory.

By successfully completing this course, you will be well-equipped to work in a laboratory research setting. This skillset will ensure the credibility and reliability of scientific research results while promoting transparency and accountability.

Literature

Literature will be provided for each task individually. Besides, you will need to look for your own sources according to the research question.

Instructional format

Laboratory sessions.

Assessment

Prelab preparation, lab journal and practical reports

VSK2016 Advanced Logic

2000 Skills Training

2.5 ECTS, Fall Semester, Period 1

Course Coordinator

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

Students who take the course need to have written at least one academic paper.

Recommendations

It is highly recommended that students have taken VCO1005 Information Literacy OR VSK2001 Argumentation prior to this course.

Objectives

- Understand and apply symbolic notations for arguments and statements;
- Understand the logical operations for conjunction, negation, and disjunction;
- Learn how to construct and interpret truth tables

Description of the course

This course aims to develop students' understanding of logic and argumentation by building on elements of argumentation introduced in the core course 'Information Literacy'. The goal for the course is to familiarize students with a more formal approach to logic, and use this language of logic to both decode existing arguments as well as build new arguments.

Literature

E-reader with various articles and chapters on argument analysis and logic.

Instructional Format

Assignment-based discussion, supplemented by lectures.

Assessment

A midterm assignment where students will analyze one of their own previous papers;

A final assignment where students will construct an argument

VSK3004 Science Communication I

3000 Skills Training

2.5 ECTS, Spring Semester, Period 5

Course Coordinator

Karin Lenssen, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

After this course, student will be able to:

- prepare and structure a clear, concise, and persuasive academic message.
- convey complex information clearly through visual and oral presentation skills.
- explore different science communication types to engage the audience and make their message stick.
- translate academic knowledge to a format that is understandable for laymen.
- understand and create their own digital professional footprint and IT use, so it can be used in an intentional manner.
- design a consistent personal communication strategy for both professional and popular purposes.

Description of the course

Every scientist will have to deal with it more than once in their career: communicating science. As a scientist, you will need to go to a conference, write press releases about big projects and participate in societal science events. All these different communication types require different approaches. An understanding of the differences and practice in the different approaches is crucial in order for a scientist to have an impact.

In this course, you will practice different science communication techniques. You will build your own science communication portfolio so you can make your personal science communication strategy. We will address formal academic conference presentations, as well as writing popular sciences blogs. You will learn how to use your brain, your heart and your gut for communication science!

Literature

A literature list will be provided on Canvas. Additional material needs to be retrieved by students themselves.

Instructional format

Lectures and workshops

Assessment

Academic presentation (30%)

Blog (30%)

Strategy for science communication (40%)

VSK3005 Food Product Development

3000 (Life) Science Skills Training

2.5 ECTS, Spring Semester, Period 5

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

VSC3203 Food Innovation

VSC2208 Sensory Science

VSC2203 Food Technology and Processing

VSC3202 Consumer Behaviour

Objectives

At the end of this course students are able to:

- Identify key factors influencing the development, production, and commercialization of food products.
- Identify and analyze consumer preferences, as well as stay up-to-date with industry trends.
- Design food formulations using appropriate ingredient selection, processing techniques, and preservation methods.
- Optimize new product designs and/or improve existing offerings by implementing diverse product development techniques.

Description of the course

In this skills training course you will develop and exercise abilities to create new, innovative food products through a comprehensive understanding of ingredient selection, formulation design, processing technologies, and sensory evaluation. During this intensive course you learn to develop a food product from the raw ingredients to the final packaging.

You will develop a strong foundation in the skills and knowledge required to create innovative, consumer-driven food products that meet market demands and regulatory requirements.

Literature

Literature list will be published on Canvas.

Instructional format

Lectures, workshops and tutorial group meetings.

Assessment

Weekly assignments to culminate in a final food product presentation.

VSK3101 PEERS – Undergraduate Research I

3000 Skills Training

2.5 ECTS, Spring Semester, Period 4

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

GPA \geq 7.0

See VPR3103 PEERS

VSK3102 PEERS – Undergraduate Research II

3000 Skills Training

2.5 ECTS, Spring Semester, Period 5

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

VSK3101 PEERS - Undergraduate Research I

See VPR3103 PEERS

Projects

VPR1002 The Applied Researcher III

1000 Core Project

5 ECTS, Spring Semester, Period 6

Course Coordinator

Connie Drosinou, University College Venlo, FSE, Maastricht University

Contact: connie.drosinou@maastrichtuniversity.nl

Pre-requisites

- ✓ VSK1000 The Applied Researcher I; VSK1004 The Applied Researcher II

Recommendations

None

Objectives

At the end of this project...

- Students have developed a basic ability to analyze collected research data and synthesize the results with the acquired content knowledge in order to draw reliable conclusions.
- Students have become aware of what constitutes an academic research article
- Students have further developed abilities needed to successfully complete a research project (analyzing own data, writing and evaluating own research).
- Students have gained experience in critically analysing a research study
- Students have become acquainted with presenting their research in a conference and answering critical questions.

Description of the course

The Applied Researcher III is the third and last part of a three period lasting research project, in which students will work in small groups to conduct research. Students continue working on the project that they started in the Applied Researcher I.

In this period the focus will lie on analyzing and interpreting the collected data after acquiring additional analytical skills in R and communicating the findings of the research project in a written research article that is of sufficient quality to be submitted to a journal. Students will also prepare and defend their research project in a poster presentation conference.

Literature

No essential reading list is provided. Students are expected to search for and identify credible and relevant sources by themselves.

Instructional Format

Research mentor meetings with the assigned supervisor, lecture(s), workshop(s)

Assessment

R exam (individual assignment)

Written research article (group assignment)

Research poster presentation (group assignment; pass/fail).

VPR1005 Research Methods II: Qualitative Research

1000 Core Project

5 ECTS, Fall Semester, Period 3

Course Coordinator

Alie Boer, de, University College Venlo, FSE, Maastricht University

Contact: a.deboer@maastrichtuniversity.nl

Karin Lenssen, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

After following the course, students will be able to:

- Identify and describe key characteristics of qualitative research and explain when and why it is an appropriate methodology;
- Summarize the three primary data collection methods in qualitative research (observation, interviewing, and document analysis) and explain when each method is most suitable for gathering data;
- Acquire a basic understanding of data analysis in qualitative research, in particular reflexive thematic analysis, to identify recurring patterns, themes and interpretations within data;
- Evaluate the methodological strengths and limitations inherent to empirical qualitative studies, considering factors such as validity, reliability and bias;
- Reflect upon personal positionality and ethical considerations as a researcher, demonstrating an understanding of how one's background, beliefs, and biases may influence the research process and outcomes;
- Develop a research proposal for a qualitative study on a chosen topic related to sustainable and/or healthy living, including clear research aims and objectives, appropriate data collection methods, and a plan for data analysis, demonstrating a clear understanding of how to design a qualitative research project, the methodological considerations and potential research contributions.

Description of the course

Why is it so difficult to live healthier or more sustainable? How do citizens, businesses and policymakers view food waste and potential solutions to this phenomenon? How do people experience being part of a particular community?

People's experiences, the context in which events take place or themes about which little is known can best be investigated using qualitative research methods. Qualitative research allows you to study how specific situations or phenomena are experienced, why people look at a theme in a certain way and explore new areas and themes. Similar to quantitative research, this type of research requires a specific methodological approach. In this project, you will engage with qualitative research methods, design your own qualitative study, and learn to reflect on your role as researcher in the process.

Literature

Denzin, N. K., & Lincoln, Y. S. (2024). The SAGE handbook of qualitative research (6th ed.). SAGE Publications Ltd.;

Braun, V., & Clarke, V. (2021). Thematic analysis – A practical guide. SAGE Publications Ltd.;

Research articles (via Canvas)

Instructional Format

Lectures, workshops, tutorial meetings

Assessment

Exam, presentation, reflection journal

This module may be a prerequisite/recommended for:

PEERS

VPR2001 Writing a Research Proposal

2000 Project

5 ECTS, Fall Semester, Period 3

Course Coordinator

Adam Simpson, Language Centre, UB, Maastricht University

Contact: a.simpson@maastrichtuniversity.nl

Pre-requisites

- ✓ VSK2004 Academic writing

Recommendations

VSK2001 Argumentation

VSK2016 Advanced Logic

Objectives

At the end of this project:

1. Students will be aware of the importance of analysing a real-life problem sufficiently in order to formulate an adequate research question and hypotheses in the context of an academic grant proposal;
2. Students will have practiced presenting their research focus and answering critical questions, both in writing and verbally;
3. Students will have developed abilities needed to successfully complete a research proposal (planning, writing, evaluating, presenting);
4. Students will have improved relevant soft skills (planning, communication, as well as providing and processing peer feedback).

Description of the course

You will learn to write a professional research proposal.

In the project context of applying for a research grant, the focus will lie on the process steps of writing a research proposal, and communicating a clear research focus, both in writing, as well as via a short personal proposal presentation (pitch).

Each session will focus on the conventions and requirements for writing a specific section of the proposal, along with guidelines on the effective use of academic English in writing a research proposal.

The outcome will be a research proposal that could be submitted to an external Grants office, such as the UM Universiteitsfonds.

Literature

No essential reading list is provided. Depending on their topic of choice, students are expected to search for and identify credible and relevant sources by themselves, and arrive at a short list of required reading. Nevertheless, the following are recommended:

- Fowler, H. R., & Aaron, J. E. (2004). *The Little, Brown Handbook* (9th ed, or higher). New York: PearLongman.
- Kumar R. *Research Methodology – a step-by-step guide for beginners*. ISBN9781446269978

Instructional Format

In In this project 2 instructional formats are used.

1. A total of 9 mentor/group meetings, in which a group discusses their research progress, questions etc. with their research mentor
2. 1 Final proposal presentation Workshop

Assessment

Written research proposal (as individual assignment; 80 %) and
Final presentation (pitch, as individual assignment; 20 %) on the last day of the project

This module may be a prerequisite/recommended for:

Think Tank
Capstone project

VPR2002 Academic Debate

2000 Project

5 ECTS, Fall Semester, Period 3

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Contact: k.semen@maastrichtuniversity.nl

Pre-requisites

- ✓ None

Recommendations

None

Objectives

- To equip students with essential debating and communication skills.
- To introduce students to the practice of speaking in a public setting.
- To practice argumentation skills.
- To gain expertise on a topic of choice (the debate topic).

Description of the course

Debating skills are an important component of academic life. In this 2000 level-project, students will prepare, present and defend a position for an academic debate. The debate topics will be centered around the issues that emerge out of a wide range of UCV courses from different concentrations taught during the academic year. There will be a “yes” (pro) and a “no” (con) team, which will build their argumentation strategy and prepare to refute arguments of the opponents throughout the project in order to win a debate. The emphasis lies on delivery and content. It is not only important to think about what you deliver, but also about how you deliver it. In the end, it will be your job to persuade an audience as to the correctness of your position. In order to do this, you need a coherently structured, logically laid out set of arguments that you will present in a clear and self-assured way. Your task is to make the issue involved come alive.

Literature

Students will choose, read and use literature that is related to their debate topic. Some of the literature will be suggested by the tutor; however, most literature has to be found by the students themselves.

Instructional Format

Tutorial group meetings, a lecture/workshop on debate and debating skills, workshops on argumentation, open debate.

Assessment

A position paper (individual grade) and a debate (group grade).

This module may be a prerequisite/recommended for:

Think Tank

VPR2004 Strategic Marketing and Practice

2000 Project

5 ECTS, Spring Semester, Period 6

Course Coordinator

Dr. Marcel van Birgelen, Department of Marketing & Supply Chain Management, SBE, Maastricht University
Contact: m.vanbirgelen@maastrichtuniversity.nl

Pre-requisites

✓ None

Recommendations

None

Objectives

In this course we will take the viewpoint of the Chief Marketing Officer (CMO). A CMO is not simply an implementer but rather a maker of organization strategy. More specifically, a CMO is expected to be a leader in defining the mission of a business, in analyzing competitive market situations, in developing business objectives and goals, and in defining customer value propositions and marketing strategies that create value for a business unit as a whole.

Hence, we will use this perspective to address the issues of (1) defining and developing the strategic goals of the organization; (2) identifying organizational growth opportunities through customer and market analysis; (3) formulating product-market strategies; and (4) budgeting marketing, financial and production resources.

Description of the course

In an increasingly dynamic environment companies require a capacity to continuously learn about and swiftly respond to markets. Fundamental to this is the customer perspective, the recognition that company success comes from delivering superior customer value. Marketing traditionally has advocated the customer focus; yet, today, marketing needs to take on a more strategic, coordinative role within the firm to craft more interactive strategies when it comes to consumers and partners. Thus, it is imperative for both marketing and non-marketing specialists to grasp how marketing helps the firm design strategies starting from the customer.

The course Strategic Marketing and Practice focuses on designing strategies from the market back to create, deliver, and sustain customer value in competitive and dynamic markets. To do so, this course deals with a comprehensive investigation and analysis of all major components of marketing strategy and their integration. This course takes a business-oriented setup by focusing on real life examples/cases and by allowing students to participate in a market simulation game. The objective of the simulation is to put into practice the concepts related to marketing strategy and the marketing mix in a risk-free environment.

Literature

Palmatier, R. W., & Sridhar, S. (2017). Marketing strategy: Based on first principles and data analytics. Macmillan International Higher Education. + academic articles

Instructional Format

Tutorial group meetings, participation in market simulation game

Assessment

Group report, individual report

VPR2005 Interviewing II

2000 Project

5 ECTS, Fall Semester, Period 3

Course Coordinator

Karin Lenssen, University College Venlo, FSE, Maastricht University

Contact: karin.lenssen@maastrichtuniversity.nl

Pre-requisites

- ✓ VSK2015 Interviewing I

Recommendations

This course is for students with a background or sincere interest in interviewing for different purposes: both for medical and psychological studies, as well as for the purpose of conducting qualitative research.

Objectives

- Novice level application of basic and more advanced interview techniques in order to retrieve the required information.
- Organise and interpret the data gathered through interviews;
- Report and discuss the results of qualitative research in an academic way whilst critically evaluating its limitations;
- Apply an experience- and theory-based conversation strategy into real life;
- Reflect on the use of different conversations techniques in different settings.

Description of the course

Preparing and conducting interviews provide you with an incredible amount of valuable information. The next step is to use your gathered information for the next steps. This project builds upon the skills training VSK2015 Interviewing I, and you will continue to work on your started project. You will execute your strategy for motivational interviewing, and start analysing and reporting on the scientific interviews you already conducted in the skills training. You will put your learnings into practice by keeping a critical eye on the techniques, the gathered information and yourself as researcher. All to inspire you to make optimal use of interviews in future work.

Literature

Materials available on Canvas.

Instructional Format

Workshops

Assessment

Conducted motivational interviews (20%), reflection report (40%) and scientific report (40%).

VPR3002 Think Tank

3000 Project

5 ECTS, Spring Semester, Period 6

Course Coordinator

Mitchell Kiefer, University College Venlo, FSE, Maastricht University

Contact: mitchell.kiefer@maastrichtuniversity.nl

Pre-requisites

One of the following modules: VSK2001 Argumentation; VPR2002 Academic Debate; VSC1303 Introduction to Statistical Methods and Data Analysis (or VSC2305 Intermediate Statistical Methods and Data Analysis); VSC2204 Public Health Policy Making.

Recommendations

The project and the nature of the assignment require some experience in academia. Therefore students can only take the project in their fourth semester or later. This also allows students to do well and gain more from the project.

The coordinators would like to emphasize that Think Tank is a time-consuming project with a high workload, which requires highly motivated students. Students should have a broad interest in e.g. policy development and research and analysis. Due to the specific nature of the project and the fact that group work is an essential element, students should take into account that they need to be available during entire weekdays throughout the entire project.

Participating in Think Tank as part of the regular workload at UCV is doable but demanding. Therefore, having a higher workload due to e.g. additional or parallel projects is not allowed.

Objectives

- Let students work together and set up a problem analysis based on the assignment given by an external client, i.e. to develop skills concerning critical analysis, including the analysis of a problem, conceptualizing a problem as a case study (the ability to see the particular problem within a wider context), and to generate new knowledge relevant to the case at hand (Boyer's 'discovery' and 'integration')
- Let students work together and do research based on the assignment that was given to them, i.e. to develop skills concerning organization of work, and collaboration in a team (not specifically related to Boyer, yet instrumental towards all four aspects at the level of collaborative learning);
- Let students write a report based on an assignment that was given to them, i.e. skills related to formulating finding and recommendations in a comprehensive yet concise manner ('application' and 'teaching')
- Let students present their report to the representative and a group of experts ('teaching').

Description of the course

Students will be assigned to writing and presenting a (policy) recommendation that is partly based on the knowledge and expertise they have developed as a result of their educational programme at UCV. Students will form a 'think tank' and write and present an extensive and elaborate (policy) recommendation for a client, i.e. a company or organization. A creative and critical analysis of the problem at hand will lead to the application of knowledge and skills acquired at UCV through previous course work, and new insights developed during the project.

The first week of ThinkTank will focus on a problem analysis and an analysis of the knowledge and expertise of the members of the think tank. The second week will focus on doing research. The third week

will deal with discussing and formulating solutions. During the final week, students will present their report to an audience of experts and share their recommendations with the client.

Besides having meetings with their fellow students and a tutor, the group might meet with guest experts (either invited by the coordinators or by the students themselves) and undertake self-organized field trips and external visits to obtain the required information. Depending on their academic background and skills, students will divide the workload and take on specific roles within the ThinkTank.

Literature

Students search for their own literature depending on the demands of the assignment.

Instructional Format

Students will meet with their group on a daily basis by means of tutorial group meetings, external visits and workshops.

Assessment

Problem analysis (group assignment), individual research memo, final group report and a final presentation of the report (group assignment).

VPR3003 Science Communication II

3000 Project

5 ECTS, Spring Semester, Period 6

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

- ✓ VSK3004 Science Communication I

Recommendations

None

Objectives

After this course, students will be able to:

- Apply theoretical knowledge to the practical application of science communication.
- Differentiate between different science communication outlets and to select the most appropriate outlet for their intended audience and message.
- Create a science communication activity for a laymen's public.
- Use the necessary organizational and communication skills for reaching the experts and the public.
- Critically assess the success of their science communication activities and identify areas for improvement.

Description of the course

This course focuses on developing students' ability to effectively communicate scientific concepts and research findings to diverse audiences. By integrating theoretical knowledge with practical application, the course aims to equip students with the skills necessary to engage both experts and laypeople in scientific discussions.

Students will develop the skills and knowledge crucial for developing public understanding of science and promoting evidence-based decision-making in society.

Literature

A literature list will be provided on Canvas. Additional materials need to be retrieved by students themselves.

Instructional Format

Lectures and workshops

Assessment

Science communication activity (60%)

Science-based strategy for science communication activity including marketing, evaluation, and reflection (40%)

VPR3004 Project Management

3000 Project

5 ECTS, Fall Semester, Period 3

Course Coordinator

Gert Poppe, University College Venlo, FSE, Maastricht University

Contact: gert@poppe.nl

Pre-requisites

✓ None

Recommendations

None

Objectives

Description of the course

The importance of project management nowadays cannot be overstated. Introducing an innovative product in the market, organising a music festival or developing a new software tool... these are all complex, interdisciplinary and time-constrained activities that can easily go off tracks and struggle with out of control budgets. Good project management helps teams to deliver on time and within budget, improves internal communication as well as communication with the stakeholders outside of the team and leads to better business decisions. Due to decreased time-to-market and the tendency towards flatter and leaner organisations, good project management skills have become increasingly important. In this course you will learn the essentials of project management and apply them in your own project. You will experience how it is to operate in a real project, monitor quality, time and money goals and deliver results.

Literature

TBA

Instructional Format

TBA

Assessment

TBA

VPR3103 PEERS – Undergraduate Research III

3000 Project

5 ECTS, Spring Semester, Period 4 (VSK3101 PEERS - Undergraduate Research I), Period 5 (VSK3102 PEERS - Undergraduate Research II), Period 6 (VPR3103 PEERS – Undergraduate Research III)

Course Coordinator

Alvaro Garcia Fuentes, University College Venlo, FSE, Maastricht University

Contact: a.garciafuentes@maastrichtuniversity.nl

Pre-requisites

- ✓ GPA \geq 7.0
- ✓ VSK3101 PEERS - Undergraduate Research I
- ✓ VSK3102 PEERS - Undergraduate Research II

Recommendations

The PEERS project is preferably done during the second year (or the third year) of your study programme.

Objectives

- To further develop research skills starting from conceiving the good research question, identifying correct methodology to answer it, to actually conducting the study, analysing data and reporting the results to scientific community.
- To emphasize the ability to identify and formulate academic problems.
- To become aware how various research methodologies provide answers and may initiate new ideas.
- To enhance the learning experience of students by integrating research into their undergraduate curriculum.
- To reinforce the awareness of how academic work relates to the needs of society.

Description of the course

UCV PEERS is a semester research programme carrying 10 ECTS. In period 4 and 5, PEERS is delivered in a skills format while during period 6 it gets transformed to the full time research project. This set-up ensures that PEERS students increase their proficiency in all steps involved in conducting research, from writing a research proposal and making choices about the study methodology to communicating the results of their project. Small groups of students will conduct research under the guidance of a senior researcher. They will act as a group, but engage in individual work as well. PEERS offers a unique opportunity to develop one's own research topic. In this way, student researchers will make an actual contribution to ongoing research and will experience firsthand what is involved in doing research.

Literature

Project-specific literature will be used

Instructional Format

Research-Based Learning, group meetings and individual research

Assessment

The examination may vary and will depend on the nature of the conducted research, but will usually include:

- Presentation of the findings
- Research paper or report

VCA3000 Capstone

3000 Core Project

20 ECTS, Fall Semester

20 ECTS, Spring Semester

Course Coordinator

Khrystyna Semen, University College Venlo, FSE, Maastricht University

Emmy van den Heuvel, University College Venlo, FSE, Maastricht University

Contact: ucv-capstone@maastrichtuniversity.nl

Pre-requisites

Students should have at least 140 ECTS at the start of Capstone.

Recommendations

Participating in Capstone is doable, but demanding. Therefore, having a higher workload than usual (30 ECTS for one semester) due to e.g. additional courses, skills trainings and projects is not recommended.

Objectives

- To enable students to express their individual academic profile through a scholarly project during their last semester at the College.
- To further develop the ability to give an independent, systematic and clear treatment of a certain topic.
- To train the ability to independently identify and analyse relevant literature, theories and knowledge.
- To make systematic use of an appropriate selection of theories and methodologies in approaching questions and problems.
- To train the ability to independently acquire and handle academic knowledge through independent studies of relevant literature, and to cultivate the ability to critically evaluate and briefly account for the central elements in a large literature base.
- To assist senior students in the transition from undergraduate education to a master programme or the labour market.

Description of the course

The word capstone refers to a wedged stone connecting two sides of a curved stone bridge. Your capstone serves as a connection between the various important themes in your curriculum that you have followed at UCV. Capstone is the culmination of a student's academic work at UCV and is comparable in function to a bachelor thesis.

During this module students will work on writing a proposal in which they formulate their individual goals and determine a topic and format appropriate to their topic; students will independently search for a capstone/ research advisor; students will conduct the research primarily themselves; and their findings are going to be presented in a final piece of work (capstone). The capstone can take on a variety of forms and is not confined to a traditional research article/paper.

Literature

There is no preassigned literature for Capstone. Students will search for their own literature based on their capstone topic.

Instructional format

Individual work, tutorial group meetings/workshops, guidance from Capstone advisor and support hours.

Assessment

Students will be assessed pass/fail on an idea, topic substantiation and a presentation. Their final grade is based on two assessments, a proposal and the final Capstone. Oral defense of the final Capstone can be expected.

Courses at University College Maastricht & Maastricht Science Programme

It is possible for UCV students that already have obtained a positive Binding Study Advise to take courses at University College Maastricht and the Maastricht Science Programme, provided they meet the prerequisites of those courses.

The UCM and MSP courses listed in this appendix are considered internal courses for purposes of graduation, meaning that they do not count towards the 60 ECT maximum for external education and that they do not have to be at the 3000-level. Students must register for these courses through the request form 'Courses elsewhere > Internal courses at UCM/MSP' on the Campus Venlo intranet request form page. The request will automatically be forwarded to the UCM/MSP Office of Student Affairs, where the course will be booked and made visible in the Student Portal two weeks prior to the start of the education. However, UCV cannot guarantee that there is no clash of schedules between these courses and the courses offered at UCV. These courses are not available to exchange students.

UCM and MSP courses not listed in the appendix, are considered external education and have to be requested via the request form 'Courses elsewhere > External courses at UM' on the Campus Venlo intranet request form page and via the 'special course approval' booking module in the Student Portal.

Please indicate backup courses on the course registration form.

Important note

Courses that are marked as "Yes, as Humanities module", "Yes, as Sciences module" or "Yes as Social Sciences module" can be taken freely, following the procedure mentioned above.

UCM/MSP courses (may) also have prerequisites. MSP courses listed at least have VSC1101 Introduction to Biology as a pre-requisite and may have additional ones. To ensure that you meet all prerequisites, it is important you discuss the compatibility of your followed curriculum to the desired prerequisites with your academic adviser prior to registering for UCM/MSP courses. You may need to ask for a prerequisite waiver. Please note that this prerequisite waiver needs to be submitted to UCM/MSP before the course registration deadline, so start in time.

In all cases, the registration of these courses should occur only after a sound curriculum planning form has been created in agreement with the academic adviser. Your academic adviser will be able to help you figure out whether your course selection is feasible from a scheduling point of view.

More information

UCV Office of Academic Advising

Karin Lenssen, campusvenlo-advising@maastrichtuniversity.nl

UCM Office of Academic Advising

Lonneke Bevers, Wilfred van Dellen, ucm-academicadvising@maastrichtuniversity.nl

MSP Office of Academic Advising

Christopher Pawley, mSP-academicadvising@maastrichtuniversity.nl

Period 1

Courses

Course Code	Course Title	Owner	UCV allowed
BIO2004	General Zoology	MSP	Yes, as Sciences module
HUM1007	Introduction to Philosophy	UCM	Yes, as Humanities module
HUM1011	Introduction to Art; Representations, Performances and Interactions	UCM	Yes, as Humanities module
HUM1012	Pop Songs and Poetry: Theory and Analysis	UCM	Yes, as Humanities module
HUM2003	The Making of Crucial Differences: 'Race', Sexuality, Gender, and Class in Historical Perspective	UCM	Yes, as Humanities module
HUM2005	Enlightenment and Romanticism	UCM	Yes, as Humanities module
HUM2046	Living in a Technological Culture: Introduction to Science and Technology Studies Part 1	UCM	Yes, as Humanities module
HUM2058	History of Contemporary Spirituality	UCM	Yes, as Humanities module
HUM3036	Narrative Media	UCM	Yes, as Humanities module
HUM3043	Acts of Literature: The Role of Prose, Poetry and Plays in a Changing World	UCM	Yes, as Humanities module
HUM3045	Distributive Justice in Contemporary Political Philosophy	UCM	Yes, as Humanities module
HUM3052	Lifting The Iron Curtain	UCM	Yes, as Humanities module
SCI1010	Basic Mathematical Tools	UCM	Yes, as Sciences module
SCI2002	Discrete Mathematics	UCM	Yes, as Sciences module
SCI2011	Introduction to Programming	UCM	Yes, as Sciences module
SCI2022	Genetics and Evolution	UCM	Yes, as Sciences module
SCI2042	Infectious Diseases, Epidemiology and Global Public Health	UCM	Yes, as Sciences module
SCI3003	Optimization	UCM	Yes, as Sciences module
SCI3007	Endocrinology	UCM	Yes, as Sciences module
SSC1007	Introduction to Law and Legal Reasoning	UCM	Yes, as Social Sciences module
SSC1029	Sociological Perspectives	UCM	Yes, as Social Sciences module
SSC2002	International Relations: Themes and Theories	UCM	Yes, as Social Sciences module
SSC2020	The Economics of Information	UCM	Yes, as Social Sciences module
SSC2025	Memory	UCM	Yes, as Sciences OR Social Sciences module
SSC2063	The Psychology of Individual Differences: Personality and Intelligence	UCM	Yes, as Social Sciences module
SSC2072	Less is More? An Introduction to Degrowth	UCM	Yes, as Social Sciences module
SSC3030	Law of the European Institutions	UCM	Yes, as Social Sciences module
SSC3036	American Foreign Policy	UCM	Yes, as Social Sciences module
SSC3054	International Trade Law	UCM	Yes, as Social Sciences module

Skills Training

Course Code	Course Title	Owner
SKI2085	Ethnography and Qualitative Interviewing I	UCM

Period 2

Courses

Course Code	Course Title	Owner	UCV allowed
BIO3007	Tropical Biology	MSP	Yes, as Sciences module
HUM1010	Common Foundations of Law in Europe	UCM	Yes, as Humanities module
HUM1013	The Idea of Europe: the Intellectual History of Europe	UCM	Yes, as Humanities module
HUM2013	The Presence of Art: Reinterpreting Modern and Contemporary Art	UCM	Yes, as Humanities module
HUM2057	Religion, Myth, and Secularization	UCM	Yes, as Humanities module
HUM2059	Data Analysis and Visualization for the Humanities and Social Sciences	UCM	Yes, as Humanities OR Social Sciences module
HUM2060	Poetry, Poetry Theory and Poetry Practices	UCM	Yes, as Humanities module
HUM3014	Philosophers of the 20th Century	UCM	Yes, as Humanities module
HUM3034	World History	UCM	Yes, as Humanities module
HUM3040	Crucial Differences in the 21st Century	UCM	Yes, as Humanities module
HUM3049	Science, Power and the Construction of Facts: Introduction to Science and Technology Studies Part 2	UCM	Yes, as Humanities module
HUM3050	A Cultural Critique of our Aging Society	UCM	Yes, as Humanities module
HUM3053	The Idea of Africa	UCM	Yes, as Humanities module
INT3007	Systems Biology	MSP	Yes, as Sciences module
SCI1005	The Digital Enterprise	UCM	Yes, as Sciences module
SCI2018	Calculus	UCM	Yes, as Sciences module
SCI2036	Artificial Intelligence	UCM	Yes, as Sciences module
SCI3050	Advances in Biomedical Science	UCM	Yes, as Sciences module
SSC1025	Introduction to Political Science	UCM	Yes, as Social Sciences module
SSC1027	Principles of Economics	UCM	Yes, as Social Sciences module
SSC2011	European Integration: History and Theory	UCM	Yes, as Sciences OR Social Sciences module
SSC2028	Classical Social Theory	UCM	Yes, as Social Sciences module
SSC2048	Intermediate Microeconomics	UCM	Yes, as Social Sciences module
SSC3032	Atrocity Triangle: a Course on the Causes Gross Human Rights Violations and their Aftermath	UCM	Yes, as Social Sciences module
SSC3033	Economic Psychology	UCM	Yes, as Social Sciences module
SSC3041	Economics and Society in Contemporary Asia	UCM	Yes, as Social Sciences module
SSC3047	Urbanisation, Development and Poverty	UCM	Yes, as Social Sciences module
SSC3049	Human Rights: Principles and Polemics	UCM	Yes, as Social Sciences module

Skills Training

Course Code	Course Title	Owner
SKI3002	Argumentation II	UCM
SKI3052	Ethnography and Qualitative Interviewing II	UCM

Period 3

Projects

Course Code	Course Title	Owner
PRO2003	Writing Project: 'The journal'	UCM
PRO2011	Project Deep Reading	UCM
PRO3009	Ethnography and Qualitative Interviewing III	UCM

Period 4

Courses

Course Code	Course Title	Owner	UCV allowed
BIO2003	General Botany	MSP	Yes, as Sciences module
BIO2005	Evolutionary Biology	MSP	Yes, as Sciences module
HUM1003	Cultural Studies I: Doing Cultural Studies	UCM	Yes, as Humanities module
HUM1016	Telling Stories	UCM	Yes, as Humanities module
HUM2018	Cultural Diversity in a Globalizing World	UCM	Yes, as Humanities module
HUM2021	Exploring Historical Parallels: Learning from Medieval History	UCM	Yes, as Humanities module
HUM2047	The Future of Literature?	UCM	Yes, as Humanities module
HUM2051	Philosophical Ethics	UCM	Yes, as Humanities module
HUM3019	Totalitarian Temptation	UCM	Yes, as Humanities module
HUM3029	Literature, Art and Psychology	UCM	Yes, as Humanities module
HUM3044	Philosophy of Language	UCM	Yes, as Humanities module
HUM3051	Medical Humanities: Bodies & Minds, Histories of the Normal and the Pathological	UCM	Yes, as Humanities module
HUM3054	Dialogues in Philosophy: Thinking Difference - Feminism and Decolonialism	UCM	Yes, as Humanities module
SCI2010	Introduction to Game Theory	UCM	Yes, as Sciences module
SCI2031	Immunology	UCM	Yes, as Sciences module
SCI2033	Datamining	UCM	Yes, as Sciences module
SCI2037	Cell Biology	UCM	Yes, as Sciences module
SCI3006	Mathematical Modelling	UCM	Yes, as Sciences module
SSC1007	Introduction to Law and Legal Reasoning	UCM	Yes, as Social Sciences module
SSC2006	Developmental Psychology	UCM	Yes, as Social Sciences module
SSC2007	Intermediate Macroeconomics	UCM	Yes, as Social Sciences module
SSC2018	Brand Management and how to Communicate about Brands	UCM	Yes, as Social Sciences module
SSC2037	Peace and Conflict Studies	UCM	Yes, as Social Sciences module
SSC2039	History of Western Political Thought	UCM	Yes, as Social Sciences module
SSC2060	Comparative Constitutional Law	UCM	Yes, as Social Sciences module
SSC2064	Migration Studies: Flows and Concepts	UCM	Yes, as Social Sciences module
SSC3009	Public Economics	UCM	Yes, as Social Sciences module
SSC3012	War in World Politics	UCM	Yes, as Social Sciences module
SSC3013	Social Movements	UCM	Yes, as Social Sciences module
SSC3023	Philosophy of Mind	UCM	Yes, as Social Sciences module
SSC3038	Contemporary Social Theory	UCM	Yes, as Social Sciences module

Skills Training

Course Code	Course Title	Owner
SKI2005	Back to the Sources	UCM
SKI2077	Lab Skills: Cell Biology	UCM

Period 5

Courses

Course Code	Course Title	Owner	UCV allowed
BIO2002	Ecology	MSP	Yes, as Sciences module
BIO3004	Animal Behaviour	MSP	Yes, as Sciences module
HUM2007	States and Nations in Europe, from the Middle Ages to the First World War	UCM	Yes, as Humanities module
HUM2008	Ancient Philosophy	UCM	Yes, as Humanities module
HUM2030	Media and Technology; Philosophical Perspectives	UCM	Yes, as Humanities module
HUM2031	Cultural Studies II: Visual Cultures	UCM	Yes, as Humanities module
HUM2056	Cultural Memory and the Politics of Visualizing the Past	UCM	Yes, as Humanities module
HUM3042	Biopoetics: An Evolutionary Approach to Art, Literature, Music and Religion	UCM	Yes, as Humanities module
SCI2019	Linear Algebra	UCM	Yes, as Sciences module
SCI2044	Logic	UCM	Yes, as Sciences OR Social Sciences module
SCI3046	Cognitive Neuroscience	UCM	Yes, as Sciences OR Social Sciences module
SCI3049	Applied Immunology and Oncology	UCM	Yes, as Sciences module
SCI3051	Data Analytics	UCM	Yes, as Sciences OR Social Sciences module
SSC1027	Principles of Economics	UCM	Yes, as Social Sciences module
SSC2004	Clinical Psychology	UCM	Yes, as Social Sciences module
SSC2024	International Law	UCM	Yes, as Social Sciences module
SSC2027	Law and Society	UCM	Yes, as Social Sciences module
SSC2043	Development Economics	UCM	Yes, as Social Sciences module
SSC2050	Psychology and Law	UCM	Yes, as Social Sciences module
SSC2065	Theories of Social order	UCM	Yes, as Social Sciences module
SSC3002	European Foreign Policy	UCM	Yes, as Social Sciences module
SSC3003	The Law of the United Nations	UCV	Yes, as Social Sciences module
SSC3019	Human Reasoning and Complex Cognition	UCM	Yes, as Social Sciences module
SSC3040	Identities	UCM	Yes, as Social Sciences module
SSC3051	Contemporary Critical Security Studies	UCM	Yes, as Social Sciences module

Skills Training

Course Code	Course Title	Owner
SKI2079	Human Anatomy & Histology	UCM

Period 6

Projects

Course Code	Course Title	Owner
PRO2003	Writing Project: 'The journal'	UCM