IBCM Programme Handbook

Environmental Mangement and Technology,

Bachelor of Science

Program Overview	
Name of the institution	Public International Business College Mitrovica (IBCM)
Faculty/Department	Faculty of Environment, Technology and IT
Main Campus or Branch	Riverside Campus
Name of the study program	Environmental Management and Technology, BS
Person responsible	Prof. Dr. Jelena Djokic
NQF Qualification Level	Level 6
Academic degree conferred	Bachelor of Science in Environmental Management and Technology
ECTS	180
Erasmus Code	052
Type of study	Full-time
Minimum duration of study	3 years
Permanent staff	Prof. Dr. Jelena Djokic Prof. Dr. Ekrem Gjokaj Prof. Asst. Afete Musliu Prof. Asst. Aleksander Djikic Prof. Dr. Mihone Kerolli Mustafa Prof. Asst. Marko Smilic Prof. Asst. Hyrmet Mydyti Lect. Damir Gashi Lect. Jelisaveta Marjanovic Lect. Gresa Ferri

1. Module overviews for the programmes

Bachelor of Science in Environmental Management and Technology		
Semester 1		
M/E	***Subject***	***ECTS***
M	*Principal of Environmental Management and Technology*	*5*
M	*Science, Environment, and Society*	*5*
M	*Sustainable Development*	*5*
M	*Mathematics*	*5*
M	*Introduction to IT*	*5*
M	*Academic English 1*	*5*
Semester 2		
M/E	***Subject***	***ECTS***
M	*Innovation Management*	*4*
M	*Environmental Economics*	*5*
M	*Science, Technology, and Society*	*5*
M	*Statistics and Research Methods*	*6*
M	*Academic English 2*	*5*
E	• *Natural Disaster* • *Environmental Psychology* • *Digital Computer Architecture*	*5*
Semester 3		
M/E	***Subject***	***ECTS***
M	*Natural Resource Management*	*5*
M	*Environmental Chemistry*	*6*
M	*Techno-Entrepreneurship and Biotechnology*	*5*
M	*Sustainable Water Management Technology*	*5*
M	*Climate Change & Air Quality*	*5*
E	• *Digital Marketing* • *Industrial Training and Biotechnology* • *Introduction to Human Resource Management and Development* • *Introduction to Internet of Things*	*4*
Semester 4		
M/E	***Subject***	***ECTS***
M	*Clean Technology and Waste Management*	*5*
M	*Project Management*	*5*
M	*Environmental Law and Regulations*	*5*
M	*Agro-economy*	*5*
M	*Cross-disciplinary Project*	*5*

E	• *Vegetation, Restoration and Biodiversity* • *Standardization* • *Landscape Management and Spatial Planning* • *Geographic Information Systems (GIS) and remote sensing*	*5*
Semester 5		
M/E	***Subject***	***ECTS***
M	*Nature planning/Conservation/restoration/ Habitat management*	*5*
M	*Green Transition and Technology*	*5*
M	*Soil pollution and remediation*	*5*
M	*Fundamentals of Energy*	*5*
M	*Integrated Rural Development*	*5*
E	• *Supply Chain Management and Logistics* • *Environmental Laboratory* • *Environmental Data and Computer Analysis* • *Environmental Crime-Training*	*5*
Semester 6		
M/E	***Subject***	***ECTS***
M	*Business Planning*	*5*
E	• *Renewable Energy* • *Environment and Health*	*5*
M	*Internship*	*10*
M	*BA Thesis*	*10*

2. Profile and Learning outcomes

The Environmental Management and Technology program at IBCM is a comprehensive six-semester BSc program designed to prepare students for a range of roles and specialized skills ideal for employment in the environment sectors. The programme consists of modules in the field of Environmental Management and Technology. The curriculum emphasizes the theoretical foundations and practical skills necessary for bridging the disciplines of environment, management, rural development and applied technology. In addition, the program aims to train students in integrating technology, leadership and design in solving complex problems in the environmental sciences and technology.

2.1. Program Overview and Objectives

Environmental Management and Technology addresses the ever increasing pressures and demands of modern business and society on the natural, productivity and built environments. These complex

challenges require effective environmental management which is why we draw upon a range of different discipline areas including science, technology, the social sciences and management. This program provides hands-on training to enhance the student capacitors and placement in relevant organisations. Today, there is an increasing demand for graduates with these skills sets. This programme is offers practical experience, with a mixture of lectures, field work, laboratory practical's, internship and Information Technology.

The program objectives are determine in support of student learning, program goals, and the College's Mission. The program development objectives include the following:

- Apply advanced environmental technologies to address pressing challenges.
- Recognize the imperative for expanding expertise in environmental stewardship and practices.
- Enhance problem-solving abilities through deep analysis to tackle environmental issues.
- Anticipate and adapt to the transformative potential of the Internet of Things (IoT) paradigm.
- Acquire proficiency in integrating cutting-edge technologies like big data, robotics, digital technology, AI, and machine learning to optimise systems on environment and energy production sustainably.
- Effectively manage information and self-awareness to promote the effective utilisation of technology (including biotechnology) and natural resources, leveraging communication skills and business opportunities.

2.2. Knowledge and Competencies Developed

In general the program aims to provide students with essential knowledge and skills required to address the current environmental challenges using smart technology applications. Additionally, the specialisation will provide practical and workplace skills to build a career in solving problems of environmental sustainability. It will prepare the graduates to work in the environmental sector, making and inspiring sustainable change using integrated technology.

On successful completion of this programme, graduates should be able to:

- Contribute to the sustainable management of the environment.
- Support development and implementation of Environment Management Policies.
- Learn how biological, physical, social, economic, legal, and political aspects interact with the impact of the environment.
- Gain practical experience through laboratory classes, field trips, work experience and research based projects to investigate environmental issues and provide potential solutions.
- Enhance the use of modern technology including biotechnology.

2.3. Analytical Skills and Practical Applications

Following IBCM's motto, From Theory to Practice, students engage in practical exercises, lab work, case studies, and field visits to environmental institutes, agencies and business of environmental sector. This includes experiences with institutions such as the Hydro-meteorological Institute, Agriculture Institute in Peja, Agency for Environmental Protection, government departments, municipalities, research institutes, Science Academy, businesses and NGOs working in environmental Management fields. Through these practical and applied experiences, graduates develop problem-solving skills essential for effective engagement with both industry and civil society stakeholders.

With the above mentioned focus on leadership and management, the program explores solutions to real-world problems using digital technologies and practices that are centred on sustainability, including social, economic, and environmental impacts.

During six semester students will be required to complete a three to six month (10 ECTS) industry internship where they gain practical experience, while developing skills in leadership, project management and data informed decision making. This program will equip students with necessary skills, such as critical thinking, problem solving and collaborative investigation, to solve real-world business challenges. Through industry focused instruction, students will spend the 5 semesters on campus followed by another semester in internship placed in an organisation outside of the campus.

Students of the program will be required in addition to internship to complete Field Study, which provides a unique opportunity to apply both academic and experiential learning in the workplace with the support of identified industry mentorship.

2.4. Future Environmental Managers and Leaders

Graduates of the Environmental Management and Technology program are prepared to become key contributors across all levels of government and society. Equipped with the knowledge, skills, and ethical grounding needed to address pressing environmental and social issues, they are well-suited to lead efforts in environmental management and to support sustainable development initiatives. By fostering a balanced understanding of both environmental and economic engagement, the program positions graduates as valuable assets for collaborative, cross-sector initiatives.

2.5. Professional Qualifications and Career Readiness

Upon completing the Environmental Management and Technology Program, graduates are qualified to undertake complex, development-oriented roles within collaborative cross-sector environments. They are equipped to manage a wide range of functions, from governmental and private services to environmental community-led projects in NGOs, social enterprises, and other civil society organizations. Graduates have a comprehensive understanding of theory and practice in environmental management and are capable of handling complex challenges in ways that benefit socio-economic sectors. They are prepared to collaborate within interdisciplinary teams, engage with diverse communities, assume responsibility within ethical frameworks, and continuously build on their professional competencies.

Through this program, IBCM equips students with the expertise and adaptability needed to make meaningful contributions in an increasingly interconnected and diverse society, enabling them to lead positive change within environmental and society transition.

Upon completion of this degree programme, students have a wide choice of career paths that they can take, including:

- Climate Change Analyst
- Environmental Associate
- Environmental Management Consultant
- Environmental, Social and Governance (ESG) Executive
- Environmental Conservationist
- Pollution Control Manager
- Sustainability Quality Analyst
- Research Officer
- Manager
- Environmental Project Manager
- Environmental Logistics Specialist
- Government agencies
- Environmental Data analyst
- Environmental Technicians
- Environmental Technologist

2.6. Programme Learning Outcomes

Knowledge and understanding

On completion of this degree, students will have knowledge and understanding of the:

- scientific, technological, social and economic factors that influence complex environmental situations
- principles of managing complex environmental problems using technological and biotechnological interventions
- principles and methods for assessing and evaluating environmental situations and environmental impacts
- core concepts on analyzing complex situations involving people, technologies and organizations.

Skills

On completion of this degree, they will be able to:

- assess the technological, economic, social and other factors that influence environmental management
- evaluate the scientific and engineering techniques and predict the effects of resource management activities on the environment
- apply systems concepts and techniques to engage with complex environmental management problems
- compare, contrast and critically assess different approaches and techniques for solving environmental management problems.

Competences

On completion of this degree, the students will be able to:

- apply the advanced environmental technologies to address pressing challenges
- develop practical skills in the use of integrating cutting-edge technologies like big data, robotics, digital technology, AI, and machine learning to understand, analyze and recommend improvements to a range of situations and systems involving environmental impacts
- develop appropriate models for assessing and evaluating environmental situations and environmental impacts.

Key skills

On completion of this degree, they will be able to:

- use appropriate numerical and mathematical techniques
- learn and perform more effectively by reflecting on practice
- interpret and critically analyze complex situations involving people, technologies and organizations.

Based on the specific objectives the learning outcomes are based on concepts of Blooms Taxonomy and Webb's DoK (Depth of Knowledge), but are not limited to as may depend on students' individual learning preferences and methods:

Level	**The Student can…**	**Examples**
Knowledge (Lower Level)	remember material by showing terms used in his/her field, facts, rules and conventions, methods, principles or theories.	Define, describe, identify, label, list, match, name, outline, reproduce, select, state, recall, record, recognize, repeat, draw on, or recount
Application	use what they learned in new or concrete situations	Change, compute, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, use, schedule, employ, sketch, intervene, practice, or illustrate
Analysis	can break down material into its component part so that its underlying structure can be understood	Break down, make a diagram, differentiate, discriminate, distinguish, appraise, test, inspect, illustrate, infer, outline, relate, select, investigate, analyze, make an inventory, calculate, question, contrast, debate, compare, or criticize.
Synthesis	put parts together to form a new whole, perhaps to produce something, which is unique, creative, or showing a new pattern of events	Categorize, combine, compose, arrange, plan, assemble, prepare, construct, propose, start, elaborate, invent, develop, devise, design, plan, rearrange, summarize, tell, revise, rewrite, write, modify, organize, produce, or synthesize.
Evaluation (Higher Level)	judge the value of something for a given purpose, usually using criteria designed either by him/herself or by others. This is usually seen as the highest domain in terms of cognitive learning because it requires students to use all the others activities already covered above.	Appraise, compare, conclude, contrast, criticize, discriminate, judge, evaluate, choose, rate, revise, select, estimate, measure, justify, interpret, relate, value, or summarize

From a professional perspective, the skills and competencies can be categorized as follows:

Type	Transferable Skill or Competence
Academic	Primary Research
	Secondary Research
	Synthesis of Materials
	Appraise and Critic Existing Theories and Methods
	Interpret Data based on Solution Based Assessment
Professional	
• **Soft Skills**	Communication
	Team Work
	Adaptability
	Problem Solving
	Creativity
	Time Management
	Critical Thinking
• **Hard Skills**	
○ **Management**	Diligence
	Efficient Work Methods
	Tolerance and Restraint
	Flexible and Adaptive Learning
○ **Environment and Technology**	Project Management Methods and Software
	Data Analysis
	Technology and Biotechnology Applications
	Computer Skills
	Data Presentation
	Awareness of Global and Local Challenges of Environmental Management

These certainly do not represent all the skills obtainable through the programme as those may depend on student individuality and interests, however, present a baseline of transferable skills and competences that all student acquire in order to function successfully in employment at national and international environments.

3. Pedagogical concept

The pedagogical concept of the Environmental Management and Technology study programme was developed in a way to ensure the realization of the IBCM motto: "*From theory to practice*". With this concept students gain both explicit and tacit knowledge through a combination of theory and practice. Explicit knowledge is the knowledge that is transferred and gained by articulation, can be explained in words and can be learned by listening and/or reading. Tacit knowledge is the knowledge that can be gained only through applying and practical involvement.

Thus, the pedagogical concept puts the students into four different aspects of learning: Conceptualization, Experimentation, Experience and Reflection. This is not a linear process. The students can have a combination of the different aspects at any time.

The pedagogical concept can be visualized as follows:

	Explicit knowledge	**Tacit knowledge**
Theory	Conceptualization	Experimentation
Practice	Reflection	Experience

Conceptualization (in-class learning) – is an aspect of learning, where theoretical a basis is created by transferring theoretical knowledge to students, which acquire it by reading or listening. Theoretical knowledge could be definitions, concepts, theories, models, rules, descriptions, etc.

Conceptualization at IBCM happens through:

Lessons – Teacher lecturing:

- Students teaching – assigned students teaching other students (in groups);
- Exercises in every class or labs – In general every class should have around 40% to 50% of exercise activities related to theories;
- Real life examples provided by students in every subject - students are tasked to find real life examples during the class (using all available resources, ex: Internet), related to the theories presented in class, and analyze them;
- Guest speakers – Speakers presenting their real-life experiences and issues related to the theories;
- Field trips – Students are observing real life situations related to theories.

Experimentation (in-lab learning) – is working with real life problems in a controlled environment without communicating with the outside world.

Experimentation at IBCM happens through:

- Real-life cases in all teaching;
- Group work and individual oral presentations.

Experience (in-field learning) – is working with theoretical knowledge in the real world environment.

Experience at IBCM happens through:

- Guest speakers presenting real life problems to be solved by students;
- Field work and research;
- Semester projects;
- Trial exams.

Reflection (competence gaining) – Means linking recent knowledge and experiences to earlier ones to promote a more complex and interrelated mental schema. It takes into consideration all the learning achieved through conceptualization, experimentation and experience and interrelates them. Reflection is the learning aspect where the student independently can solve real world problems related to the profession. This means that the student can understand and discuss why specific tools are relevant to solve a specific problem.

Experience at IBCM happens through:

- In-class reflection exercises;
- Pre-exam tutorials;
- Final Bachelor thesis.

The Environmental Management and Technology bachelor's programme puts special emphasis on reflection, as the final goal of the learning process. The above-explained pedagogical concept is implemented using a combination of teaching/learning methods, such as problem-based learning, project-based learning, research-based learning, blended learning, reflective learning, and so on.

4. Degrees and double degrees

The bachelor's degree in Environmental Management and Technology has a workload of 180 ECTS. It is offers cooperation and partnership exchange between IBCM and the BOKU University from Austria and Turku University from Finland. IBCM with both institutions are in process of starting the double degree program in environmental field of study.

4.1. Fraud in examinations and plagiarism

Attempt to influence examination results by using non-permitted aids or by fraud will lead to a failing of the respective examination. Permitted aids are specified on the exam paper of every individual exam. Fraud is indicated with the assessment fail in pass/fail exams.

Cases of fraud in examinations and plagiarism are generally referred to the academic council and reviewed based on the current institutional policies and regulations at the IBCM.

4.2. Appeal to examination result

A student can appeal his/her examination result based on the Study Regulations, which are reviewed and published annually by the Academic Council and published on the IBCM website.

5. Curriculum description and syllabuses

5.1.1st Semester

General Course Information	
Course name:	Principal of Environmental Management and Technology
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	1st Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course highlight all aspects of the environmental control context, and provides a historical and new perspective on pollution problems and solutions, and offers an introduction to the specialized themes in environmental management and the use of technology. It also presents the information on how to respond to the complex problems encountered in environmental management and related areas. In addition, the course will offer guest lectures and field trip to various study sites that have a diversity of environmental or sustainability issues and see and discuss issues at the site with practitioners.
Prerequisites:	*N/A*
Course learning outcomes:	*Knowledge:* • Identify and define environmental science concepts; • Differentiate types of environmental pollution;

<table>
<tr><td></td><td>
Defend analytical theories of environmental management issues and apply case study solutions in using recent environmental technology
</td></tr>
<tr><td></td><td>
Skills:

Present theoretical understanding and technical knowledge of environmental technology;
Demonstrate technical ability and operational skills to perform effectively and ethically within the specific fields of environmental management and technology;
Develop independent practical skills, using the lab and other technological resources.

</td></tr>
<tr><td></td><td>
Competencies:

Convey ideas and information both through written and oral methods;
Present ideas and topics, and to structure an argument by putting forward different points of view.

</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">
Class Methodology - Students are encouraged to learn as autonomously and gain the knowledge and skills from each module of the course or additional material used in the classroom.
Theory-based classes: Case studies and problem-solving learning will be used to deal with these and other concepts related to environmental management context.
Practical classes: Students will work with a set of materials aimed to provide them with the necessary skills to demonstrate the knowledge.
Other activities
Case study, field trip and lab exercises will focus on all the work produced by the students, which includes case studies and problem-solving activities.
</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must</td></tr>
</table>

	be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Introduction to the issues • Air pollution management issues • Water pollution management issues • Solid and radioactive waste management issues • Hazardous waste management issues • Pollution prevention • Additional environmental concerns and management considerations • New technologies and approaches • Risk-related topics • Recent developments
Instructional and Technology Information	
List of required textbooks and learning materials:	• Burke, G., Singh, B. R., & Theodore, L. (2004). *Handbook of Environmental Management and Technology*. Wiley-Interscience. • Shukla, P., Singh, P., & Singh, R. M. (2023). *Environmental processes and management: Tools and Practices for Groundwater*. Springer Nature. • Theodore, M. K., & Theodore, L. (2021). *Introduction to environmental management*. CRC Press. • Spellman, F. R. (2017). *Environmental science and technology: Concepts and Applications*. Bernan Press. • Wright, R. T., & Boorse, D. F. (2017). *Environmental Science Pearson e Text Access Code: Toward a Sustainable Future*. Pearson.
Additional textbooks and learning materials:	
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	

Assignments and descriptions:	Homework assignments 15 % Lab assignments/exercises 15 % Active participation 15 % Case study 20 % Final exam 35 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introductions Course description and expectations. Principals of Environmental Management and Technology Overview
Week 2	Environmental Management Overview International Environmental Concerns
Week 3	Regulatory Framework Mobile and Stationary Sources of Pollution
Week 4	Case study
Week 5	Case Study demonstration
Week 6	Air Pollution Management issues
Week 7	Water management issues
Week 8	Field Trip

Week 9	Solid and Radioactive Waste Issues Hazardous Waste issues
Week 10	Pollution Preventions
Week 11	Guest Lecture
Week 12	Additional Environmental Concern and Management Consideration
Week 13	New Technologies and Approaches Environmental Risk Approaches
Week 14	Iso standards Environmental ethic and justice
Week 15	Environmental audits

General Course Information	
Course name:	Science, Environment, and Society (I)
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	1st Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course explores the Science, Environment and Society (SES) in an interdisciplinary way through combined methodologies, techniques and knowledge associated with both the sciences. humans and societies. This course uses the context of environmental issues to introduces students with the basic nature of matter, energy, and living systems and to the nature of science. Further, the course uses the research and investigations approach to stimulate the discussions of the application of environmental impact issues in social, cultural, economic, political and ethical contexts. Science part explores conceptual understandings related to: • developing scientific literacy • providing a framework in which students can more easily access the course content • supporting student learning.
Prerequisites:	*N/A*

<table>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Understand the concepts of science and technology and the number of important social and political issues linked with the nature and the environment protection.
Differentiate variety of theoretical standpoints that address the environmental and socio-scientific issues.
Describe the position of science and technology as a part of wider society, and its impact.</td></tr>
<tr><td colspan="4">Skills:
Demonstrate the knowledge of science and environmental science concepts.
Apply principles of chemistry, ecology, and nature conservation.
Identify human impact on environment</td></tr>
<tr><td colspan="4">Competencies:
Analyze and make critical interpretations of data presented at the level of scientific subjects.
Make connections between course core concepts and make connections to a wide variety of unfamiliar situations.
Relate ideas and topics, and to structure an argument by putting forward different points of view.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, lab exercises, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="11">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
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Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities.</td></tr>
</table>

	Students are expected to understand all materials covered in assigned reading material as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Scientific Method • Nature, science and human behavior • Fundamental Concepts of Chemistry • Greenhouse gasses in the atmosphere and global warming • Energy • Useful Substances • Water Chemistry • Pollutants and acid rain • Nutrition and Life • Food and the planet • Science and environmental issues • Biodiversity • Human Impact on Environment • Citizen Science Approach • Multilevel Perspective Approach • The geographies and geopolitics of science: case study of Europe
Instructional and Technology Information	
List of required textbooks and learning materials:	• Essential Chemistry, Hsu et al, 2018 Pasco education • Essential Chemistry Student Lab manual, 2020 Pasco • Bostrom, M., & Davidson, D. J. (2019). *Environment and society: Concepts and Challenges*. Palgrave MacMillan. • Dove, M. R., & Kammen, D. M. (2015). *Science, society and the environment: Applying Anthropology and Physics to Sustainability*. Routledge.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments (case studies) 15 % Numerical and Lab exercises 15 %

	Active participation 15 % Quiz 15 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction 1. Studying science and society 2. Situating life on Earth: nature, science and human behavior
Week 2	Fundamental Concepts 1. Introduction, measurements, significant figures, scientific notation, metric system 2. Elements, atoms, molecules, substances, mixtures 3. Names and formulas of compounds 4. Chemical reactions and balancing equations 5. Structure of the atom, Lewis structure
Week 3	Greenhouse gases in the atmosphere and global warming
Week 4	Energy 1. Nuclear energy 2. Energy from electron transfer 3. Energy from combustion
Week 5	Interactive exercises

Week 6	Useful Substances 1. Organic molecules 2. Functional groups 3. Polymers and plastics
Week 7	Water Chemistry 1. Characteristics of water and other liquids 2. Acids, bases, pH 3. Pollutants and acid rain
Week 8	Nutrition and Life 1. Fats and oils 2. Vitamins and minerals 3. Food and the planet
Week 9	Science and environmental 1. Science and environmental issues I 2. Science and environmental issues II 3. Science and environmental issues III
Week 10	Biodiversity
Week 11	Guest Lecture
Week 12	Human Impact on Environment
Week 13	Lab exercises
Week 14	Citizen Science Approach Multilevel Perspective Approach
Week 15	The geographies and geopolitics of science: 1. Case study of Europe. 2. The rise of public engagement and course wrap-up

General Course Information	
Course name:	Sustainable Development
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	1st Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	

<table>
<tr><td>Course overview:</td><td colspan="4">This course explores the concepts of sustainable development and defines the applications, indicators, measurement tools of sustainable development for analysis and decision making in support of environmentally sustainable development from a regional perspective. The course uses case studies and problem-solving exercises to stimulate learning and provide practical experience in addressing sustainable development issues.</td></tr>
<tr><td>Prerequisites:</td><td colspan="4">N/A</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Describe the concept of sustainable development - emergence, different dimensions and interpretations
Define various examples of challenges and possible solutions for sustainable development at local, national and global levels
Discuss and identify current sustainability issues.</td></tr>
<tr><td colspan="4">Skills:
Demonstrate the knowledge of sustainability aspects and the implications of the national environmental goals at the local area.
Carries out an independent in-depth work on any topic in the field of sustainable development.
Seek, evaluate, compile and present information in the area of sustainability.</td></tr>
<tr><td colspan="4">Competencies:
Convey ideas and information both through written and oral methods;
Display leadership, professionalism and decision-making ability through case study demonstration approach;
Develop ideas and topics, and to structure an argument by putting forward different points of view.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="8">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures & Practical Work</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
</table>

Communication/feedback channels:	Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Sustainability, sustainable development, and the sustainable development goals; • What are the SDGs? • Clean Water and Sanitation; • Clean Energy; • Quality Education and Economic Growth; • Industry, Innovation, and Infrastructure; • Sustainable Cities and Communities; • Responsible Consumption and Production; • Climate Action, Water and Land; • Peace, Justice, Strong Institutions; and Partnerships for Goals; • Implementing the SDGs; • Monitoring, Evaluation, Reporting; • Beyond Sustainability to Radical Transformation.
Instructional and Technology Information	
List of required textbooks and learning materials:	• Harlow, K. (2015). *Sustainable Development: Environmental management*. • Salomone, R., & Saija, G. (2014). *Pathways to environmental sustainability: Methodologies and Experiences*. Springer. • Zeng, Y., & Wang, S. (2024). *Environmental Science and Technology: Sustainable Development II*. Springer.
Additional textbooks and learning materials:	• Mensah, J. (2019). Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review. *Cogent Social Sciences*, *5*(1).
Citation format:	APA style
Technologies/software/ programs to be used:	N/A

Course Assignments and Assessments	
Assignments and descriptions:	Case studies 30 % Group presentations 15 % Active participation 15 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Laptop/Smartphone policy:	• Cell phone and laptop use are forbidden in the classroom except when any practical demonstration are done, or where cell phone cameras may be used to document a visual result. • Online discussion protocols must be followed.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	1. Introductions 2. Course description and expectation 3. Sustainability, sustainable development, and the sustainable development goals 4. What are the SDGs?
Week 2	1. Clean Water and Sanitation 2. Clean Energy
Week 3	1. Quality Education and Economic Growth
Week 4	1. Interactive exercises
Week 5	1. Online discussion forum

Week 6	1. Industry, Innovation, and Infrastructure 2. Sustainable Cities and Communities
Week 7	1. Responsible Consumption and Production
Week 8	1. Climate Action, Water and Land
Week 9	1. Peace, Justice, Strong Institutions; and Partnerships for Goals
Week 10	1. Guest Lecture 2. Implementing the SDGs
Week 11	1. Monitoring, Evaluation, Reporting
Week 12	1. Green Transition and Technology 2. Beyond Sustainability to Radical Transformation.
Week 13	1. Gender Equality
Week 14	1. Sustainable Development Case studies
Week 15	1. Sustainable Development Case studies

General Course Information	
Course name:	Mathematics
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	1st Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail:
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course introduces the basic concepts of mathematics and calculus. It covers topics in mathematical logic, polynomials, real and complex numbers, determinants, linear equations, matrices, vectors, strings and rows, functions, and integrals that provide building blocks for higher-level study in mathematics, business, computer science, and environmental science. Upon completion of this course, the students will deeply understand basic notions and be able to use them in theoretical and practical aspects.
Prerequisites:	*N/A*
Course learning outcomes:	*Knowledge:* • Define and describe fundamental concepts of listed mathematics and calculus topics.

<table>
<tr><td></td><td>

- Identify, label, and outline the key mathematics and calculus properties, components, and structures, recognizing their significance in mathematical problem-solving.
- State essential principles, drawing on key definitions and relationships to build a strong foundational understanding.

</td></tr>
<tr><td></td><td>

Skills:

- Compute, solve, and manipulate problems involving mathematical logic, polynomials, real and complex numbers, determinants, linear equations, matrices, vectors, strings and rows, functions, and integrals.
- Demonstrate the ability to modify, operate, and employ mathematical methods to predict outcomes and produce solutions effectively.
- Relate and employ mathematical techniques to discover relationships and prepare for advanced problem-solving.

</td></tr>
<tr><td></td><td>

Competencies:

- Integrate and apply knowledge of mathematical logic, polynomials, real and complex numbers, determinants, linear equations, matrices, vectors, strings and rows, functions, and integrals to solve complex problems.
- Demonstrate autonomy and responsibility in selecting and employing appropriate mathematical techniques in varied contexts.
- Develop critical thinking and adaptability in using mathematical concepts to interpret, analyze, and address real-world scenarios effectively.

</td></tr>
<tr><td>Learning outcomes verification:</td><td>

Class Methodology

- Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.

The typical class session will be structured as follows:

- Review session: a brief question/answer session focused on the previous homework,
- Exams (as scheduled),
- Presentation and discussion of new material,
- Discuss applied exercises,
- Summary of key items and review next week’s assignment.

</td></tr>
<tr><td>Workload Allocation:</td><td>

Activity	**Hours**	**Weeks**	**Total**
Lectures/Exercises	3	15	45
Practical Work/Labs	/	/	/

</td></tr>
</table>

	Consultations	1	10	10
	Homework	1	15	15
	Self-study	3	15	45
	Assignments/Exams	2	3	6
	Assessment	2	2	4
	Total			125
Communication/feedback channels:	The professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom or Moodle. The professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom or Moodle in case of any changes or announcements, as well as the ASC timetable.			
Main course themes and topics:	• Mathematical logics • Polynomials • Determinants • Linear Equations • Matrices • Vectors • Strings • Rows • Applications of Functions • Applications of Integration			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Lial, M. L., Greenwell, R. N., & Ritchey, N. P. (2021). *Calculus with Applications*. 12th edition. Pearson. • Ventre, A. G. S. (2023). *Calculus and Linear Algebra: Fundamentals and Applications*. 1st edition. Springer. • Fusco, N., Marcellini, P., & Sbordone, C. (2022). *Mathematical Analysis: Functions of Several Real Variables and Applications*. 1st edition. Springer.			
Additional textbooks and learning materials:	N/A			
Citation format:	APA style			

Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Final exam: 40% Active Participation: 10% Homework: 10% Colloquiums (each colloquium 20 % worth): 40%
Formatting instruction for assignments:	Written work should adhere to Standard IBCM English. Please proofread your papers and e-mail messages before submitting them. All written assignments are checked for plagiarism through the campus-wide plagiarism program.
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to the course. Mathematical logic and deduction.
Week 2	Polynomials.
Week 3	Reals and Complex Numbers.
Week 4	Determinants and systems of linear equations.
Week 5	Methods of solving systems of linear equations.
Week 6	Matrices and application in solving systems of linear equations.
Week 7	Vectors, scalars, and mixed products.
Week 8	Strings. Rows.
Week 9	1. Colloquium 1

	2. Introduction to Calculus
Week 10	Functions I: 1. Derivation of function. 2. Area of definition. 3. Parity. 4. Periodicity.
Week 11	Functions II: 1. Zero points. 2. Asymptotes. 3. Extremes. 4. Monotonic intervals.
Week 12	Graph of the function.
Week 13	Integrals I: 1. Indefinite and definite integral. 2. Application of the indefinite integral.
Week 14	Integrals II: 1. Application of the definite integral.
Week 15	1. Colloquium 2 2. Course overview and preparation for the final exam

General Course Information	
Course name:	Introduction to IT
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	1st Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	Introduction to IT provides a foundational understanding of the field of information technology, including key concepts, terminology, and basic tools. This course covers the essentials of computer hardware and software, networking, cybersecurity, data management, and the ethical implications of IT in society. Students will also gain practical experience with popular software applications, data processing, and basic troubleshooting techniques. By the end of this course, students

<table>
<tr><td></td><td colspan="4">will have a solid grasp of the IT fundamentals that support our digital world, preparing them for further studies in more specialized areas of information technology.</td></tr>
<tr><td>Prerequisites:</td><td colspan="4">N/A</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Understand the fundamental concepts of IT, including hardware, software, networks, and data.
Describe the role of IT in business, society, and modern communication.
Outline the functions of major software applications, operating systems, and basic network types.</td></tr>
<tr><td colspan="4">Skills:
Employ foundational troubleshooting techniques to diagnose and solve common hardware and software issues.
Use essential IT tools and software to produce, manage, and communicate information.
Manipulate basic data organization and processing tasks, including data entry, sorting, and analysis.</td></tr>
<tr><td colspan="4">Competencies:
Compare different operating systems, software, and tools.
Investigate different emerging technologies and trends.
Develop effective communication skills when working in IT-focused teams or discussing IT issues.
Demonstrate responsibility and ethical awareness in handling digital information, recognizing privacy, security, and professional standards within the IT field.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Class Methodology
Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
The typical class session will be structured as follows:
Review session: a brief question/answer session focused on the previous homework,
Exams (as scheduled),
Presentation and discussion of new material,
Discuss applied applications and software,
Summary of key items and review next week’s assignment.</td></tr>
<tr><td rowspan="4">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>13</td><td>26</td></tr>
<tr><td>Exercises</td><td>1</td><td>13</td><td>13</td></tr>
<tr><td>Practical Work</td><td>3</td><td>2</td><td>6</td></tr>
</table>

	Consultations	1	15	15
	Homework	1	15	15
	Self-study	3	15	45
	Assignments/Exams	2	3	6
	Assessment	2	2	4
	Total			125
Communication/feedback channels:	The professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom or Moodle. The professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom or Moodle in case of any changes or announcements, as well as the ASC timetable.			
Main course themes and topics:	• Basics of Computers and Computing, • Operating Systems, • Data Representation and Storage, • Introduction to Computer Networks, • Internet and World Wide Web, • Markups and Scripts Languages, • Common Programming Languages, • Database Management Systems, • E-Government Applications and Healthcare Information Systems, • Cybersecurity and Privacy, • Artificial Intelligence and Machine Learning, • Internet of Things and Blockchain Technology.			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Benson, E. G. (2023). *Introduction to Information Technology: Basic Insight into the Modern World of Technology,* Independently published. • Frick, E. (2020). *Information Technology Essentials*. Volume 1, Frick Industries LLC. • Bernstein, J. (2020). Computers Made Easy: From Dummy to Geek. Independently published.			

	• Langman, K. B. (2022). *COMPUTERS FOR BEGINNERS AND SENIORS: A User Guide on How to Become an Expert in Computer with Illustrations*. Independently published.
Additional textbooks and learning materials:	• https://netbeans.apache.org/front/main/index.html • https://www.jetbrains.com/pycharm/ • https://learn.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-ver16 • https://code.visualstudio.com/
Citation format:	APA style
Technologies/software/ programs to be used:	Python, Java, HTML, CSS, AI, Visual Studio Code, NetBeans, SSMS, Virtual Machines.
Course Assignments and Assessments	
Assignments and descriptions:	Final exam: 40% Active Participation: 10% Homework: 10% Practical Work: 40%
Formatting instruction for assignments:	Written work should adhere to Standard IBCM English. Please proofread your papers and e-mail messages before submitting them. All written assignments are checked for plagiarism through the campus-wide plagiarism program.
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	

Week 1	Introduction to Informatics and Information Technology. Basics of Computers and Computing: 1. Hardware and Software, 2. Peripheral Devices.
Week 2	Operating Systems: 1. Windows, 2. Linux, 3. iOS, 4. Android, 5. Chrome OS.
Week 3	Data Representation and Storage: 1. Binary and Decimal Systems, 2. Memory and Storage Devices, 3. File Systems.
Week 4	Introduction to Computer Networks: 1. Types of Networks, 2. Network Topologies and Protocols.
Week 5	Internet and World Wide Web: 1. How the Internet Works, 2. Web Browsers and Search Engines, 3. Internet Security and Privacy. Markups and Scripts Languages: 1. HTML, XML, 2. JavaScript, TypeScript.
Week 6	Introduction to Software Development Life Cycle, Programming Paradigms, and Languages: 1. Procedural, 2. Functional, 3. Object-Oriented Programming.
Week 7	Common Programming Languages: 1. Python, 2. Java, 3. C#, C, C++ 4. Software Development Tools and Environments.
Week 8	Practical Work.
Week 9	Database Management Systems: 1. Databases and Data Models, 2. Relational Databases Management Systems, 3. Database Design and Normalization, 4. Structured Query Languages.
Week 10	Information Systems and Applications:

	1. Enterprise resource Planning Systems, 2. Customer Relationship Management Systems, 3. E-Government Applications and Healthcare Information Systems.
Week 11	Cybersecurity and Privacy: 1. Threats and Attacks, 2. Security Measures and Best Practices, 3. Data Privacy Regulation and Compliance.
Week 12	Emerging Technologies and Trends I: 1. Cloud Computing, 2. Edge Computing,
Week 13	Emerging Technologies and Trends II: 3. Artificial Intelligence, 4. Machine Learning.
Week 14	Emerging Technologies and Trends III: 1. Internet of Things, 2. Blockchain Technology.
Week 15	Practical work.

General Course Information	
Course name:	Academic English 1
Course number:	
Study Programme:	Environmental Management Technology
Number of ECTS:	5 ECTS
Semester and Year:	1st Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	Email
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	Academic English is designed to develop students' proficiency in academic writing, reading comprehension, and critical analysis. This course equips students with essential skills to succeed in university-level studies, focusing on grammar, structure, argumentation, and scholarly conventions. Through guided exercises and assignments, students learn to analyze academic texts, formulate coherent arguments, and produce well-structured essays and reports. These skills are foundational for effective communication in public service and

<table>
<tr><td></td><td colspan="4">essential for the completion of written assignments throughout the program</td></tr>
<tr><td>Prerequisites:</td><td colspan="4">N/A</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge
Understand the principles of academic writing and structure
• Describe the conventions of academic writing, including thesis statements, topic sentences, paragraph structure, and referencing.
Recognize grammatical structures and vocabulary specific to academic English
• Identify and understand key grammatical and vocabulary structures relevant to formal, academic writing.</td></tr>
<tr><td colspan="4">Skills
Compose well-structured academic essays and reports:
• Write clear, coherent, and well-organized essays that demonstrate an understanding of structure, argumentation, and critical thinking.
Analyze and critique academic texts
• Read, interpret, and evaluate academic articles and reports, identifying main arguments, supporting evidence, and biases.</td></tr>
<tr><td colspan="4">Competences
Develop the ability to present ideas clearly and effectively in written form
• Exhibit the ability to articulate complex ideas in a clear, organized, and logical manner suited for an academic audience.
Demonstrate effective use of referencing and citation practices
• Properly integrate APA citations and references into written work, demonstrating academic integrity and respect for intellectual property.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Outcomes will be verified through written assignments, reading comprehension tests, in-class writing exercises, and a final essay.</td></tr>
<tr><td rowspan="7">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Consultations</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Homework</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>3</td><td>5</td><td>15</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
</table>

Communication/feedback channels:	Students can reach the instructor via email or attend office hours. Feedback will be provided on assignments, reading exercises, and in-class writing tasks.
Main course themes and topics:	• Fundamentals of academic writing and structure • Essay writing: thesis statements, introductions, and conclusions • Grammar and vocabulary specific to academic English • Reading comprehension and critical analysis of academic texts • Paraphrasing, summarizing, and integrating evidence • APA referencing and citation practices
Instructional and Technology Information	
List of required textbooks and learning materials:	• Bailey, S., & Group, T. &. F. (2021). *Academic writing for university students*. Routledge.
Additional textbooks and learning materials:	Supplementary readings, articles, and exercises provided by the instructor.
Citation format:	APA
Technologies/software/ programs to be used:	Word processing software (e.g., Microsoft Word, Google Docs) and access to online course materials.
Course Assignments and Assessments	
Assignments and descriptions:	**Essay Assignment**: Students will write a structured essay on a chosen topic, demonstrating their ability to apply academic writing conventions. 30% **Reading Comprehension Exercises**: Weekly exercises focusing on reading and understanding academic texts, followed by discussions and analysis. 30% **Final Essay**: A comprehensive, end-of-semester essay where students apply all learned skills, including proper referencing and citation. 40%
Course Policies and Procedures	
Attendance policy:	IBCM policy will be applied.
Late work or assignments policy:	Late submissions may be accepted with a grade penalty unless prior arrangements are made with the instructor.
Student Support Resources	
IT Support and Resources:	Students may contact campus IT support for assistance with accessing course materials and word processing tools.
Course Lesson Schedule	
Week 1	Course Introduction and Objectives, and Syllabus Basics of Sentence Structure
Week 2	Academic Reading Skills
Week 3	Understanding Academic Vocabulary
Week 4	Critical Reading and Note-taking

	Effective Note-taking Strategies
Week 5	Structure of an Academic Essay
Week 6	Writing Effective Thesis Statements Paragraph Development and Cohesion
Week 7	Transitions and Flow in Academic Writing
Week 8	Basics of Research and Academic Sources
Week 9	Summarizing and Paraphrasing Techniques
Week 10	Introduction to APA Formatting
Week 11	Avoiding Plagiarism
Week 12	Drafting an Academic Essay
Week 13	Revising and Editing Academic Writing
Week 14	Giving Oral Presentations
Week 15	Speaking Practice and Peer Feedback

5.2.2nd Semester

General Course Information	
Course name:	Innovation Management
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	4 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	The course will cover the basic concepts of innovation, basic theories and representative practical cases in innovation management. The purpose of this course is to help students break through the existing thinking patterns, improve their ability to think creatively, understand the main problems in the innovation process of products, services, organizations and industries, and apply the general principles and laws of promoting and managing innovation activities. This course is suitable for students who want to use innovative thinking to solve problems and to improve their capabilities and management skills related to innovation.

<table>
<tr><td>Prerequisites:</td><td colspan="4">Mandatory courses from courses of first semester</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Identify analytical methods and decision-making tools.
Differentiate social and behavioral aspects in innovation process
Identify the impact of globalization on business operations, opportunities, and challenges.</td></tr>
<tr><td colspan="4">Skills:
Summarize problems and collect data and analyze problems in a critical manner
Reproduce and apply the main models for innovation development</td></tr>
<tr><td colspan="4">Competencies:
Define the innovation landscape from a technological and corporate perspective and evaluate the context for innovation management
Display leadership, professionalism and decision-making ability through case study demonstration approach;
Classify ideas and topics, and structure an argument by putting forward different points of view.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Lecture, discussion, case study, group presentation, guest speaker, and experiment, etc.</td></tr>
<tr><td rowspan="8">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures
Exercises
Practical Work/ Develop innovation case</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Consultations</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Assessment</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Total</td><td></td><td></td><td>100</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.</td></tr>
</table>

	Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	Topics will include: • Creativity • Innovative thinking • Design thinking • Design and management of innovative teams and organizations, • Innovative management of technology and products • Identification of innovation opportunities • Design and innovation of business models • Planning and implementation management of innovation strategy • Organization and management of innovation process • Developing project innovation case
Instructional and Technology Information	
List of required textbooks and learning materials:	• Van Den Ende, J. (2021). *Innovation Management*. Red Globe Press. • Maital, S., & Seshadri, D. (2007). *Innovation management: Strategies, concepts and tools for growth and profit*. SAGE Publications.
Additional textbooks and learning materials:	• Cooper, R. G. (2006). *Winning at new products: pathways to profitable innovation*. In Proceedings Project Management Research Conference, Montreal, Canada. • Cooper, R. G. (2019). *The drivers of success in new product development*. Industrial Marketing Management, 76, 36-47 • Cooper, R. G., & Edgett, S. J. (2010). *Developing a product innovation and technology strategy for your business*. Research-Technology Management, 53(3), 33-40.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active Participation: 10% Project innovation case: 30% Group presentation: 20% Final examination: 40%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.

Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	Introduction to the course
Week 2	Creativity and innovation
Week 3	Creative thinking
Week 4	Design thinking
Week 5	Product innovation
Week 6	Product development
Week 7	From Idea to product – exercise
Week 8	From Idea to product – presentation
Week 9	Management of innovative team1
	Management of innovative team2
Week 10	Strategy in traditional term
	Innovation strategy
Week 11	Innovation process
Week 12	Developing innovation strategy – practice
Week 13	Social innovation
Week 14	Research in innovation management- Developing project innovation case
Week 15	Guest speaker

General Course Information

Course name:	Environmental Economics
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	Environmental Economics examines the economic principles and policy issues underlying environmental problems and solutions. Topics include environmental policy design, market failure, externalities, public goods, resource management, and sustainable development. The course emphasizes the economic tools and methods used to analyze environmental issues, including cost-benefit analysis, and explores the global implications of environmental policy and economic development.
Prerequisites:	*Mandatory courses from courses of first semester*
Course learning outcomes:	*Knowledge:* • Understand the core principles of environmental economics, including externalities, public goods, and market failure. • Comprehend global environmental issues and evaluate economic approaches to sustainable development. • Identify economic models to define environmental policies and outcomes.
	Skills: • Analyze how economic activities impact the environment and the role of economic policy in addressing these impacts. • Conduct cost-benefit analysis and economic impact assessments in environmental decision-making. • Use data analysis to relate environmental policies and present evidence-based conclusions.
	Competencies: • Develop critical thinking regarding economic and environmental trade-offs in policy-making. • Collaborate effectively on projects analyzing environmental and economic data. • Illustrate complex environmental economic issues clearly in both written and verbal formats.

<table>
<tr><td>Learning outcomes verification:</td><td colspan="4">Exams, case studies, and assignments will verify understanding and application of economic models, theories, and policies in environmental economics.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams (Case study and Final exam)</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Course announcements, readings, and feedback will be provided through Google Classroom.
Regular email check-ins are expected for updates or changes in the schedule.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Introduction to Environmental Economics
• Market Failures and Externalities
• Public Goods and the Environment
• Property Rights and Resource Allocation
• Cost-Benefit Analysis in Environmental Policy
• Environmental Valuation Methods
• Economics of Pollution Control
• Global Environmental Issues: Climate Change and Biodiversity Loss
• Policy Instruments: Taxes, Subsidies, and Permits
• Case Studies in Environmental Economics
• Environmental Policy in Developing Economies
• The Role of Economics in International Environmental Agreements</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Anderson, D.A. (2022). Environmental Economics and Natural Resource Management. Routledge.
• Tietenberg, T. & Lewis, L. (2021). Environmental and Natural Resource Economics. Pearson.
• Hanley, N., Shogren, J., & White, B. (2020). Principles of Environmental Economics. Oxford University Press.</td></tr>
</table>

Additional textbooks and learning materials:	• Berck, P. & Helfand, G. (2022). *Economics of the Environment* Pearson. • Kolstad, C.D. (2021). *Handbook of Environmental Economics*. Academic Press.
Citation format:	APA style
Technologies/software/ programs to be used:	Google Classroom for announcements and assignment submissions. Data analysis software (e.g., R or Excel) for economic data and statistical analysis.
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 15% Active Group Presentations 15 % Case study 30 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Assignments submitted after the deadline may incur a grade reduction unless prior arrangements are made with the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	Introduction to Environmental Economics
Week 2	Market Failures and Externalities
Week 3	Public Goods and the Environment
Week 4	Property Rights and Resource Allocation
Week 5	Cost-Benefit Analysis
Week 6	Environmental Valuation Techniques

	Case study on Environmental economics
Week 7	Economics of Pollution Control
Week 8	Natural Resource Economics Sustainable Development and Growth
Week9	Policy Instruments
Week 10	Global Issues: Climate Change Environmental Policy Design
Week 11	The Role of Government and NGOs in Environmental Policy Corporate Responsibility in Environmental Economics
Week 12	Environmental Policy in Developing Countries
Week 13	Economics of Biodiversity Conservation
Week 14	The Economics of Renewable vs. Non-renewable Resources
Week 15	International Environmental Agreements

General Course Information	
Course name:	Science, Technology and Society (II)
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	The course deals with interactions between science, technology and socio economic principles. This interdisciplinary course engages students to confront the realities brought about by science and technology in society. It explores the fundamental laws of nature and application of scientific method in environmental issues.
Prerequisites:	*Math and Science (SES) I*
Course learning outcomes:	*Knowledge:* • Understand the impact of science and technology on society. • Identify science and technology topics and the number of important social and political issues linked with the nature and the environment protection. • Discuss a variety of theoretical standpoints that address the environmental and socio-scientific issues.

<table>
<tr><td></td><td colspan="4">• Describe the position of science and technology as a part of wider society, and determine the impacted factors.</td></tr>
<tr><td></td><td colspan="4">Skills:
• Demonstrate the knowledge of science and environmental concepts.
• Apply principles of chemistry, ecology, and nature conservation.</td></tr>
<tr><td></td><td colspan="4">Competencies:
• Classify and make critical interpretations of data presented at the level of scientific subjects.
• Relate between different parts of the syllabus, and apply concepts to a wide variety of unfamiliar situations.
• Develop ideas and topics, and to structure an argument by putting forward different points of view.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, lab exercises, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Practical Work/Labs</td><td>3</td><td>5</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Homework</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Self-study</td><td>2</td><td>20</td><td>40</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned reading material as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
</table>

Main course themes and topics:	Main topics of the course are lined up in such a manner to gradually introduce and upgrade student's knowledge in general science subjects. Main course topics include: • Introduction to science and technology • Laws of nature • General chemistry • Introduction to physics • Importance of science and application • Technology and digitalization • Energy and green transition
Instructional and Technology Information	
List of required textbooks and learning materials:	• McGraw-Hill. (2003). *Glencoe Science, Level Green, Student Edition*. Glencoe/McGraw-Hill • Hewitt, P. G., Lyons, S., Suchocki, J., & Yeh, J. (2006). *Conceptual Integrated Science*. • Essential Chemistry , Hsu et al, 2018 Pasco education • Essential Chemistry Student Lab manual, 2020 Pasco • Bostrom, M., & Davidson, D. J. (2019). *Environment and society: Concepts and Challenges*. Palgrave MacMillan. • Dove, M. R., & Kammen, D. M. (2015). *Science, society and the environment: Applying Anthropology and Physics to Sustainability*. Routledge.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments (case study) 15 % Lab and numerical exercises 15 % Active participation 15 % Quiz 15 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment,

	library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction: 1. Science, technology and society 2. Scientific method, progress and revolution
Week 2	1. Classification of substances 2. Atomic structure, reactions and compounds
Week 3	1. Solids, liquids or gases 2. Elements (metals and non-metals), 3. Compounds and mixtures 4. Acidic, neutral or basic
Week 4	1. Air, oxygen, carbon dioxide and water
Week 5	1. Interactive exercises 2. Measurement in science 3. Density and flotation
Week 6	1. Force and moments
Week 7	1. Pressure, factors affecting pressure; 2. pressure in fluids air has mass and occupies space atmospheric pressure and its relationship to weather measuring pressure, 3. everyday applications of pressure 4. Work and power
Week 8	1. Energy, Energy conversion
Week 9	2. Lab exercises
Week 10	1. Heat, light and sound 2. Magnetism, electricity and electronics
Week 11	1. Lab exercises
Week 12	1. Static electricity, Current electricity, Voltage 2. Electronics
Week 13	1. Guest Lecture
Week 14	1. Digital Age 2. Science, technology, and political economy 3. Case study

Week 15	1. Green transition and technology 2. Science, technology and justice

General Course Information	
Course name:	Statistics and Research Methods
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	6 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides a basic review of descriptive and inferential statistics and how these techniques are used with research methods appropriate for social sciences, business, management, and technology. Students will become proficient in computer analysis of data sets, designing and evaluating research designs and techniques, and having the skills to understand primary research in counseling literature.
Prerequisites:	*Mathematics*
Course learning outcomes:	*Knowledge:* • Understand the basics of research, research process, and statistics. • Define and describe research work and research reports. • Name the key descriptive and inferential statistics techniques. • Recognize the differences between parametric and Non-parametric tests.
	Skills: • Use a small-scale research project to collect information and resolve problems for different cases. • Employ different statistical software to enter and analyze quantitative data. • Apply statistics tests, hypotheses, and techniques.
	Competencies: • Analyze research data using descriptive and inferential statistical techniques.

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Test and compare results of statistics hypotheses, techniques, and tests.
Compare software for data analysis.

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<tr><td>Learning outcomes verification:</td><td>
Class Methodology

Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.

The typical class session will be structured as follows:

Review session: a brief question/answer session focused on the previous homework,
Exams (as scheduled),
Presentation and discussion of new material,
Discuss applied applications/exercises,
Summary of key items and review next week’s assignment.

</td></tr>
<tr><td>Workload Allocation:</td><td>
<table>
<tr><th>Activity</th><th>Hours</th><th>Weeks</th><th>Total</th></tr>
<tr><td>Lectures</td><td>2</td><td>11</td><td>22</td></tr>
<tr><td>Exercises</td><td>2</td><td>11</td><td>22</td></tr>
<tr><td>Case Study</td><td>4</td><td>4</td><td>16</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Self-study</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>150</td></tr>
</table>
</td></tr>
<tr><td>Communication/feedback channels:</td><td>The professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom or Moodle. The professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom or Moodle in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td>

Research Methodology and Problem Definition
Research Design,
Sampling Design,
Data Collection,
Interpretation and report writing,

</td></tr>
</table>

	• Descriptive Statistics and Measures of Dispersion, • Correlation and Regression, • Probability distributions, • Sampling methods and sampling distributions, • Estimation, • Testing of Hypothesis, • Parametric tests, • Non-parametric tests, • Research Tools, • Software for statistics and data visualization.
Instructional and Technology Information	
List of required textbooks and learning materials:	• Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. 7th edition. Routledge. • Politano, P. M., Walton, R. O., Parrish, A. E. (2018). *Statistics and Research Methodology: A Gentle Conversation*. 3rd edition. Hang Time Publishing, Ltd. Co. • Hermans, K. (2023). *Mastering Probability and Statistics: A Comprehensive Guide to Learn Probability and Statistics*. 1st edition. Independently published. • Deckler, G., Powell, B. (2022). *Mastering Microsoft Power BI: Expert techniques to create interactive insights for effective data analytics and business intelligence*. 2nd edition. Packt Publishing.
Additional textbooks and learning materials:	• https://www.ibm.com/products/spss-statistics • https://www.microsoft.com/en-us/power-platform/products/power-bi • https://www.youtube.com/watch?app=desktop&v=ZpwZS3XnEZA • https://www.youtube.com/watch?v=77jIzgvCIYY
Citation format:	APA style
Technologies/software/ programs to be used:	AI tools for research methodology, Excel, SPSS, Power BI.
Course Assignments and Assessments	
Assignments and descriptions:	Active Participation: 10 % Report writing: 20% Case study: 40% Final exam: 30%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.

Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to the course Introduction to Research Methodology and Problem Definition: 1. Meaning, nature, and scope. 2. Types of research, and research process. 3. Research problem. 4. The necessity of defining the problem. 5. Techniques involved in defining a problem. 6. Literature review and identification of research gaps.
Week 2	Research Design: 1. Meaning of research design, and need for research design. 2. Features of a good design. 3. Important concepts relating to research design. 4. Different research designs. Sampling Design: 1. Census and sample survey. 2. Steps in sampling design. 3. Criteria for selecting a sampling. 4. Characteristics of a good sample design. 5. Different types of sample designs and random sampling designs.
Week 3	Data Collection: 1. Collection of primary data. 2. Observation method. 3. Interview method. 4. Collection of data through questionnaires. 5. Collection of data through schedules. 6. Latest advances in methods of data collection.

	7. Collection of secondary data. 8. The case study method. 9. Sources of error in measurement and important scaling techniques.
Week 4	Interpretation and report writing: 1. Different steps in writing a report.
Week 5	Descriptive Statistics and Measures of Dispersion: 1. Measures of central tendency-Arithmetic Mean, Median, Mode. 2. Range, Quartile deviation, Standard deviation.
Week 6	Correlation and Regression: 1. Scatter diagram, Karl Pearson's coefficient of correlation, spearman's rank correlation coefficient. 2. Finding regression equations, regression coefficients, and predictions based on regression equations.
Week 7	Probability distributions: 1. Binomial distributions, 2. Poisson distribution, 3. Normal distribution, 4. Distributions applications.
Week 8	Sampling methods and sampling distributions: 1. Population and sample, 2. Probability and non-probability sampling methods, 3. Determination of sample size, 4. Chi-square, 5. t and F distributions-definition, properties, and tables of distribution.
Week 9	Estimation: 1. Parameter and statistic, 2. Estimation of parameters - Point estimation and interval estimation. Testing of Hypothesis: 1. Simple and composite hypothesis, 2. Null and alternative hypothesis, 3. Rejection and Acceptance region, 4. Type I and type II errors, significance level, 5. power of a test, 6. p-value of a test.
Week 10	Parametric tests: 1. Testing mean, testing equality of means, paired t-test, 2. Testing variance, testing equality of variances. Non-parametric tests: 1. Chi-square test of independence and goodness of fit, sign test, 2. Wilcoxon's Signed rank test, median test, 3. Mann-Whitney U test, 4. Kruskal Wallis test.
Week 11	Research Tools: 1. AI tools for researchers. Software for statistics and data visualization: 1. Excel,

	2. SPSS, 3. Power BI.
Week 12	Case study: AI tools for researchers.
Week 13	Case study: Excel.
Week 14	Case study: SPSS.
Week 15	Case study: Power BI.

General Course Information	
Course name:	Academic English 2
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	Email
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	Academic English is designed to develop students' proficiency in academic writing, reading comprehension, and critical analysis. This course equips students with essential skills to succeed in university-level studies, focusing on grammar, structure, argumentation, and scholarly conventions. Through guided exercises and assignments, students learn to analyse academic texts, formulate coherent arguments, and produce well-structured essays and reports. These skills are foundational for effective communication in the environmental fields and essential for the completion of written assignments throughout the Environmental Management and Technology program.
Prerequisites:	Completion of Academic English 1
Course learning outcomes:	Knowledge • Understand advanced academic English concepts and field-specific terminology ○ Demonstrate familiarity with environmental and technical terms used in academic and professional contexts. • Identify the conventions of academic writing in environmental management

<table>
<tr><td></td><td>
Recognize writing structures and formats commonly used in scientific and environmental studies.
</td></tr>
<tr><td></td><td>
Skills

Analyze field-specific texts to extract and critique key information
Evaluate academic articles, environmental case studies, and reports for argumentation and evidence.
Apply advanced writing and presentation skills in environmental contexts
Create structured essays, reports, and presentations using environmental terminology and academic conventions.

</td></tr>
<tr><td></td><td>
Competences

Demonstrate critical thinking in addressing environmental issues
Assess environmental problems and propose well-structured, evidence-based solutions.
Develop a field-specific academic paper or project proposal
Draft a comprehensive report or proposal incorporating relevant research, data analysis, and technical language.

</td></tr>
<tr><td>Learning outcomes verification:</td><td>Learning outcomes will be verified through assignments, case study analyses, technical writing exercises, and a final project.</td></tr>
<tr><td>Workload Allocation:</td><td>
<table>
<tr><th>Activity</th><th>Hours</th><th>Weeks</th><th>Total</th></tr>
<tr><td>Lectures</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Consultations</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Homework</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>5</td><td>6</td><td>30</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
</table>
</td></tr>
<tr><td>Communication/feedback channels:</td><td>Students can reach the instructor via email or attend office hours. Feedback will be provided on assignments, case studies, and the final project.</td></tr>
<tr><td>Main course themes and topics:</td><td>
Advanced Academic Writing

Writing and formatting technical reports
Structuring research papers for environmental studies
Incorporating data, graphs, and visuals effectively

Field-Specific Vocabulary and Terminology

Technical language in environmental management and technology
Key terms related to sustainability, ecosystems, climate change, and pollution control

Critical Reading and Analysis

Evaluating scientific articles and technical reports
Identifying bias and gaps in environmental research

</td></tr>
</table>

	Effective Oral Communication • Presenting technical data to academic and non-academic audiences • Engaging in debates and discussions on environmental topics Research Skills and Ethics • Conducting literature reviews in environmental management • Ethical considerations in academic research and writing
Instructional and Technology Information	
List of required textbooks and learning materials:	• Bailey, S. (2018). *Academic Writing: A Handbook for International Students* (5th ed.). Routledge. • Glendinning, E. H., & Holmström, B. (2018). Study Skills for Science, Engineering, and Technology Students. Cambridge University Press. • Relevant articles from journals such as Environmental Science & Technology and Sustainability.
Additional textbooks and learning materials:	Supplemental field-specific readings and environmental case studies provided by the instructor.
Citation format:	APA
Technologies/software/programs to be used:	Word processing software (e.g., Microsoft Word), citation tools (e.g., Zotero), and presentation software (e.g., PowerPoint).
Course Assignments and Assessments	
Assignments and descriptions:	**Field-Specific Vocabulary Test**: A test on key terms in environmental management and technology. 10% **Case Study Analysis**: Analyze an environmental issue, focusing on the use of technical language and argumentation. 20% **Technical Writing Exercise**: Draft a report or research paper on an assigned topic within environmental management. 20% **Oral Presentation**: Deliver a presentation on a current environmental challenge, incorporating visuals and terminology. 20% **Final Project**: Develop a comprehensive academic paper or proposal for a research project in the field. 30%
Course Policies and Procedures	
Attendance policy:	A minimum of 70% attendance is required as per IBCM's institutional policy.
Late work or assignments policy:	Late submissions may be accepted with a grade penalty unless prior arrangements are made with the instructor.
Student Support Resources	
IT Support and Resources:	Students may contact campus IT support for assistance with accessing academic databases, citation tools, and word processing software.
Course Lesson Schedule	
Week 1	Course Overview and Objectives Advanced Essay Writing Structure

Week 2	Environmental Management Terminology Using Technical Terms in Writing
Week 3	Identifying Main Ideas and Arguments Analyzing Environmental Research Articles
Week 4	Writing Technical Reports Incorporating Data and Visuals in Writing
Week 5	Conducting Literature Reviews Ethical Research Practices and Plagiarism
Week 6	Complex Sentence Structures Writing with Clarity and Precision
Week 7	Structuring Research Papers in Environmental Studies Writing Abstracts and Summaries
Week 8	Preparing Effective Presentations Handling Q&A and Audience Engagement
Week 9	Writing Case Studies in Environmental Contexts Peer Review Workshop
Week 10	Advanced Data Presentation in Academic Writing Data in Environmental Studies
Week 11	Communicating Environmental Policy in Academic Writing Developing Arguments for Environmental Advocacy
Week 12	Synthesizing Multiple Sources Editing for Cohesion and Coherence
Week 13	Outlining and Drafting Final Projects Rehearsing Oral Presentations
Week 14	Finalizing Written Projects Delivering Final Presentations
Week 15	Course Review and Self-Reflection Feedback and Future Directions

General Course Information	
Course name:	Natural Disasters
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail

Office hours:	Weekly office hours: with email upon request			
Course Description				
Course overview:	The course objective is recognizing and managing the impact of natural disasters on people and communities, as well as understanding the natural processes which cause these phenomena. For this purpose, the concept of theory of risk and risk management will be studied. The student will get knowledge in the field of prevention, assessment, recording of the natural disasters, identification of the hot spots of the area, timely and adequate information about the status of environment: air, water, soil and eco-systems and society before, during and after the natural disasters. Enabling the holistic approach in actual informing, alarming and reporting to the public.			
Prerequisites:	*Passed exams from the previous semester*			
Course learning outcomes:	*Knowledge:* • Understand the natural phenomena causing natural disasters; • Define disaster, hazard, vulnerability and risk theory • Collect and process data as foundation for choosing the best methods or tools for solving tasks and problems in relation to natural disaster risk management			
	Skills: • Identify the nature, location, intensity and likelihood of major hazards prevailing in a community or society • Differentiate factors that may affect social reactions due to disasters • Analyze and assess theoretical and practical problems in relation to planning and strategy for natural disaster			
	Competencies: • Develop response plans for a variety of cases • Estimate the current situation, needs and gaps to assess what already exists, avoid duplication of efforts, and build on existing information and capacities;			
Learning outcomes verification:	*Class Methodology* - Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom. *Theory-based classes*: Theory behind the occurrence and impact of natural disasters will be verified in the Compulsory Assignment paper *Practical classes*: Students will work with data and models to simulate the disasters occurrence, impact and behaviour *Semester project* Projects will focus on all the work produced by the students, which includes Theoretical knowledge, data collected on the field and a solutions pro			
Workload Allocation:	**Activity**	**Hours**	**Weeks**	**Total**

	Lectures	2	15	30
	Exercises/ Labs/Case study	3	5	15
	Consultations	1	10	10
	Group Presentations	5	5	25
	Self-study	3	10	30
	Assignments/Exams	2	6	12
	Assessment	3	1	3
	Total			125
Communication/feedback channels:	Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.			
Main course themes and topics:	• Natural Disasters, definition, classification, occurrences • Risk Management theory • Energy Flows-Internal Energy and External Energy Fuels Weather and Climate • Natural Disasters and Human Population • Natural Disasters Consequences, Preparedness and Disasters Management			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Abbott, P. L. (2022). *Natural Disasters*. McGraw-Hill Education. • Natural Disasters Risk Management and Engineering (2020) https://link.springer.com/book/10.1007/978-3-030-39391-5 • Hyndman, D., & Hyndman, D. (2016). *Natural hazards and disasters*. Cengage Learning. • Crane, L., Gantz, G., Isaacs, S., Jose, D. & Sharp, R. (2013). *Introduction to Risk Management, Extension Risk Management Education and Risk Management Agency*. • STATE STRATEGY FOR REDUCING THE RISK FROM NATURAL DISASTERS AND OTHER DISASTERS 2023 – 2028 https://ame.rks-gov.net/vleresimiIRrezikshmerise/en-			

	us/STATE%20STRATEGY%20FOR%20REDUCING%20THE%20RISK%20FROM%20NATURAL%20DISASTERS%20AND%20OTHER%20DISASTERS%202023%20-%202028.pdf • Strategy for enhancement of the hydrometereological services in Kosovo 2022-2032 Action Plan for Strategy implementation 2022-2032 https://www.giz.de/de/downloads/giz-2023-en-strategy-of-HM-services-in-kosovo.pdf
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Cases studies 25% Active participation 10 % Midterm exam (group presentations) 30% Final exam 35%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	1. Introductions. 2. Energy Flows 3. Earth's Internal flow 4. External Energy of the Sun
Week 2	1. Processes of construction vs deconstructions

	2. The rock cycle 3. Understanding the rock cycle and the construction and deconstruction of land
Week 3	1. Natural Disasters and Human Population 2. Human Fatalities in Natural Disasters 3. Human population in the past, present and future 4. Correlation of the human population density and the number of natural-disasters deaths
Week 4	1. Economic losses 2. Natural Hazards 3. Analyze the structure of economic losses caused by Natural Disasters
Week 5	Case study: 1. Students analyze historical data from the Natural Disaster from the available data in the region
Week 6	Case Study: 1. Demonstration of the students' presentations 2. Discussion and reflection
Week 7	1. Internal energy and Plate Tectonic 2. Development of the plate tectonic process 3. Plate Tectonic and Earthquakes
Week 8	1. Volcanic Eruptions 2. Plate tectonic and Magmas 3. External Energy Fuels Weather and Climate Atmospheric Pressure and Winds
Week 9	Practice
Week 10	1. Severe Weather, Winter storms, Thunderstorms, Lightning and Heat 2. Climate Change and Natural Disasters
Week 11	Droughts
Week 12	1. Floods 2. How rivers and stream work 3. Urbanization and floods 4. Societal response to Flood risk
Week 13	Fire: 1. The Fire Triangle, 2. Wild fire 3. Fire Suppressions
Week 14	Natural Disasters Risk Management on the local and National level
Week 15	Field Trip to the Emergency Agency

General Course Information	
Course name:	Environmental Psychology
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS

Semester and Year:	2nd Semester, Year 1			
Class Status:	Elective			
Instructor Information				
Name and Last Name:				
Contact information:				
Preferred Method of Contact:	e-mail			
Office hours:	Weekly office hours: with email upon request			
Course Description				
Course overview:	Environmental Psychology explores the complex relationship between humans and their environment, focusing on how physical spaces, natural environments, and urban settings influence human behavior and well-being. This interdisciplinary course integrates theories from psychology, environmental science, and design to address topics such as environmental perception, place attachment, pro-environmental behavior, and sustainable living. Students will engage in case studies, practical exercises, and projects to understand how environmental psychology principles can inform environmental management and policy-making.			
Prerequisites:	All mandatory courses from 1st semester			
Course learning outcomes:	Knowledge: • Explain the psychological principles underlying human interaction with natural and built environments. • Recognize the role of sensory, cognitive, and social processes in shaping environmental attitudes and behaviors.			
	Skills: • Evaluate case studies to assess the psychological impacts of environmental design, policy, and management. • Design interventions or campaigns aimed at fostering sustainable practices and improving environmental quality.			
	Competencies: • Assess the effectiveness of environmental designs or policies in enhancing human well-being and sustainability. • Propose a solution to an environmental challenge that incorporates psychological insights and practical applications.			
Learning outcomes verification:	Outcomes will be verified through assignments, case studies, project work, and a final presentation.			
Workload Allocation:	**Activity**	**Hours**	**Weeks**	**Total**
	Lectures	3	15	45
	Consultations	1	5	5
	Homework	1	15	15
	Self-study	2	15	30

	Assignments/Exams	3	10	30
	Total			125
Communication/feedback channels:	Students can reach the instructor via email or during office hours. Feedback will be provided on assignments, projects, and class participation.			
Main course themes and topics:	• Introduction to Environmental Psychology • Environmental Perception and Cognition • Place Attachment and Environmental Identity • Pro-Environmental Behavior • Environmental Stress and Well-being • Designing Human-Centric Environments • Case Studies in Environmental Interventions • Policy and Environmental Psychology			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Steg, L. (2019). *Environmental Psychology: An Introduction*. John Wiley & Sons. • Gifford, R. (2014). *Environmental psychology: Principles and practice*. 5th edition. Optimal Books. • Clayton, S., & Myers, G. (2015). *Conservation psychology: Understanding and promoting human care for nature*. 2nd edition. Wiley-Blackwell. • Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge University Press.			
Additional textbooks and learning materials:	Supplemental readings, case studies, and design frameworks provided by the instructor.			
Citation format:	APA			
Technologies/software/ programs to be used:	MS Office Suite			
Course Assignments and Assessments				
Assignments and descriptions:	Active participation (10%) Midterm Paper – Research Proposal (30%) Assignment Paper – Behavioral Intervention (30%) Final exam- (30 %)			
Course Policies and Procedures				
Attendance policy:	College regulations apply to attendance.			
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.			
Student Support Resources				
IT Support and Resources:	Students may contact campus IT support for assistance with accessing online resources, GIS tools, and data analysis software.			
Course lesson schedule				

Week 1	Introduction to Environmental Psychology Human-Environment Interaction
Week 2	Environmental Perception Cognitive Maps and Navigation
Week 3	Place Attachment Environmental Identity
Week 4	Factors Influencing Pro-Environmental Behavior Designing Behavioral Interventions
Week 5	Environmental Stressors Restorative Environments
Week 6	Principles of Environmental Design Impact of Built Environments on Behavior
Week 7	Urban Sustainability and Human Behavior Conservation Psychology in Practice
Week 8	Role of Environmental Psychology in Policy-Making Public Engagement in Environmental Issues
Week 9	Climate Change Psychology Technology and Environmental Behavior
Week 10	Quantitative Methods in Environmental Psychology Qualitative Approaches to Environmental Research
Week 11	Developing Environmental Psychology Projects Ethical Considerations in Research
Week 12	Refining Project Proposals Preparing Presentations
Week 13	Presenting Environmental Psychology Projects
Week 14	Course Review and Synthesis Final Feedback and Future Directions
Week 15	Final Written Assessment Course Wrap-Up

General Course Information	
Course name:	Digital Computer Architecture
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	2nd Semester, Year 1
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	

Preferred Method of Contact:	e-mail			
Office hours:	Weekly office hours: with email upon request			
Course Description				
Course overview:	This course provides a comprehensive foundation in electronic circuits and computer systems. Students will explore key topics including Electric Circuit Laws, Electronic Devices, Combinational Circuit Design, Sequential Circuit Design, Programmable Logic Devices, Computer Architecture, Arithmetic and Logic Units, Pipelined Execution, and Microcontroller Programming. By the end of this course, students will have a grasp of electronic circuit design and computer architecture, preparing them for advanced studies and practical applications in different fields.			
Prerequisites:	*Introduction to IT*			
Course learning outcomes:	*Knowledge:* • Understand basic electric circuit laws, working principles of various electronic devices, and programmable logic devices. • Recognize different architectures of digital computers. • Define and name basic parts and elements of digital computers and microcontrollers.			
	Skills: • Solve problems of simple and complex circuit configurations. • Operate with electronics components and lab equipment. • Use Bool's principles to manipulate logical gates, data storage, and hazards.			
	Competencies: • Analyze complex problems in electronic circuit design and computer architecture. • Select effective solutions using programmable logic devices and microcontrollers for real-world applications. • Compare functional units, operational concepts, and performances of computer systems and microcontrollers.			
Learning outcomes verification:	*Class Methodology* • Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom. The typical class session will be structured as follows: • Review session: a brief question/answer session focused on the previous homework, • Exams (as scheduled), • Presentation and discussion of new material, • Discuss applied exercises, • Summary of key items and review next week's assignment.			
Workload Allocation:	**Activity**	**Hours**	**Weeks**	**Total**

	Lectures	2	11	22
	Exercises	1	11	11
	Practical Work/Labs	3	4	12
	Consultations	1	15	15
	Homework	1	10	10
	Self-study	3	15	45
	Assignments/Exams	2	3	6
	Assessment	2	2	4
	Total			125
Communication/feedback channels:	The professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom or Moodle. The professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom or Moodle in case of any changes or announcements, as well as the ASC timetable.			
Main course themes and topics:	• Electrical circuit analysis, • Electronic circuit analysis, • Boolean Algebra, • Logic Gates and Combinational Logic, • Memory and Programmable Logic, • Structure of Computer System, • Arithmetic for Computer, • Processor and Control Unit, • Microcontrollers.			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Patterson, D. A., Hennessy, J. L. (2013). *Computer Organization and Design MIPS Edition: The Hardware/Software Interface*. 5th edition. Morgan Kaufmann. • Hatake, R. (2024). *MASTERING EMBEDDED SYSTEM, C PROGRAMMING FOR ARDUINO AND MICROCONTROLLERS: Unleash the Power of C Programming for Microcontrollers, Arduino, Electronics & PCBs Hands-on Guide*. 1st edition. Independently published.			

	• Monk, S. (2022). *Programming Arduino: Getting Started with Sketches*. 3rd edition. McGraw Hill TAB.
Additional textbooks and learning materials:	• Pedroni, V. A. (2020). *Circuit Design with VHDL*. 3rd edition. The MIT Press. • https://www.arduino.cc/ • https://www.vhdl-online.de/start
Citation format:	*APA style*
Technologies/software/ programs to be used:	Labs Equipment, VHDL, micro C PRO, Arduino.
Course Assignments and Assessments	
Assignments and descriptions:	Final exam: 40% Active participation: 10% Homework: 10% Practical Work/Labs: 40%
Formatting instruction for assignments:	Written work should adhere to Standard IBCM English. Please proofread your papers and e-mail messages before submitting them. All written assignments are checked for plagiarism through the campus-wide plagiarism program.
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to the course Electrical circuit analysis: 1. Ohm Law, Kirchhoff's Law. Instantaneous power:

	1. Series and parallel circuit analysis with the resistive, capacitive, and inductive network.
Week 2	Nodal analysis, and mesh analysis. Network theorems: 1. Thevenin's theorem, 2. Norton's theorem, 3. Maximum power transfer theorem, and 4. Superposition theorem.
Week 3	Electronic circuits: 1. PN Junction, 2. VI Characteristics of Diode, 3. Zener diode, 4. Transistors configurations. Amplifiers. 1. Basic information about OA. 2. Ideal Operational Amplifier.
Week 4	Practical Work/Labs.
Week 5	Boolean algebra and logic gates: 1. Number Systems and Arithmetic Operations. 2. Binary Codes. 3. Boolean algebra and Logic Gates. 4. Theorems and Properties of Boolean algebra. 5. Boolean Functions. 6. Canonical and Standard Forms. 7. Karnaugh's Map. 8. Logical Gates and NAND and NOR implementation.
Week 6	Combinational logic: 1. Combinational Circuits, 2. Analysis and Design Procedures, 3. Binary Adder, 4. Subtractor, 5. Decimal Adder, 6. Binary Multiplier, 7. Magnitude Comparator, 8. Decoders and encoders, 9. Multiplexers.
Week 7	Synchronous sequential logic: 1. Sequential Circuits. Storage Elements: 1. Latches, Flip-Flops. 2. Analysis of Clocked Sequential Circuits. 3. State Reduction and Assignment. 4. Design Procedure. 5. Registers and Counters.
Week 8	Memory and programmable logic:

	1. RAM. Memory Decoding. 2. Error Detection and Correction. 3. ROM. 4. Programmable Logic Array. 5. Programmable Array Logic. 6. Sequential Programmable Devices.
Week 9	Practical Work/Labs.
Week 10	The basic structure of a computer system: 1. Functional Units. 2. Basic Operational Concepts. 3. Performance. Instructions: 1. Language of the Computer. 2. Instruction representation. 3. Decision-making. 4. MIPS Addressing.
Week 11	Processor and control unit: 1. A Basic MIPS implementation. 2. Building a datapath. 3. Control Implementation Scheme. 4. Pipelining. 5. Pipelined datapath and control. 6. Handling Data Hazards and Control Hazards. 7. Exceptions.
Week 12	Practical Work/Labs.
Week 13	Microcontroller: 1. Microcontroller Architecture. 2. Programming model. 3. Addressing modes. 4. Instruction set. 5. Assembly language programming. 6. Memory Organization.
Week 14	Microcontroller interface: 1. I/O Ports. Timer port architecture and programming: 1. Serial port architecture and programming. 2. Interrupts Handling. 3. LCD and Keyboard.
Week 15	Practical Work/Labs.

5.3.3rd Semester

General Course Information

Course name:	Natural Resources Management
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course covers key issues associated with managing natural resources in a sustainable way and balancing human demand with the need to maintain ecological integrity. The course will review basic ecological principles that underpin natural resource management 1. problems associated with the use/misuse of our natural resources and 2. current management practices associated with the conservation of natural resources. A study project approach will be employed to demonstrate theory in practice.
Prerequisites:	*Passed exams from the first year*
Course learning outcomes:	*Knowledge:* Students will acquire: • Understanding of the concepts of sustainability and resilience. • Identify, locate and obtain the required data.
	Skills: • Analyze the level of the sustainability and resilience of the environment at different sectors. • Employ information from the primary literature and other sources. • Argue findings and present them through written or oral modes.
	Competencies: • Initiate changes in professional environment • Develop new initiatives or establish enterprises, organizations, companies, associations, etc. • Recommend sustainable use of natural resources (energy, raw materials, water and land);

<table>
<tr><td>Learning outcomes verification:</td><td colspan="4">Class Methodology - Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
Theory-based classes: Theory behind the occurrence and impact of natural disasters will be verified in the Compulsory Assignment paper
Practical classes: Students will work with data and models to simulate the disasters occurrence, impact and behavior
Semester project
Projects will focus on all the work produced by the students, which includes Theoretical knowledge, data collected on the field and a solutions proposals</td></tr>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises/ Labs</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Group Project</td><td>5</td><td>5</td><td>25</td></tr>
<tr><td>Self-study</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>4</td><td>3</td><td>12</td></tr>
<tr><td>Assessment</td><td>3</td><td>1</td><td>3</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Concept of resources
• Major uses of natural resources
• Biodiversity and conservation of natural resources
• Resource allocation, development, management and resource conservation
• Modeling tools and ICT for NRM</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
</table>

List of required textbooks and learning materials:	• Filho, W. L., Azeiteiro, U. M., & Setti, A. F. F. (2021). *Sustainability in natural resources management and land planning*. In World sustainability series. • Kumar, R., Moharir, K. N., Pande, C. B., Varade, A. M., & Singh, V. P. (2024). *Sustainability of natural resources: Planning, Development, and Management*. • Alexander, Mike (2008). *Management Planning for Nature Conservation*. Springer. • Ausden, Malcolm (2007). *Habitat Management for Conservation*. Oxford University Press. • Yoe, C. (2012). *Introduction to natural resource planning*. CRC Press.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Group work project 30% Active participation 15% Midterm exam 25% Final exam 30%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	Introduction to Natural Resource Bases: Part 1 Concept of resources, Environmental resources, Potential values of environmental resources- real and external values.
Week 2	Classification of resources: exhaustible- renewable, partly renewable and non-renewable and inexhaustible- conditionally inexhaustible. Major uses of natural resources: Carrying capacities, ecological footprint and sustainability;
Week 3	Sustainable portfolios, Building sustainable business. Natural resources of different regions.
Week 4	Exercise: Carrying capacity K for particular species, population or community: field trip and formulation of population growth curves.
Week 5	Ecological footprint: Demand and Supply of Nature. Sustainable Resource Management Paradigms
Week 6	Approaches in Resource Management Natural resources concept: Preservation and Conservation
Week 7	Land resources, Water resources, Mineral resources, Power resources
Week 8	Biodiversity and conservation of natural resources.
Week 9	Exercise: Biodiversity evaluation in the local plot, Environmental Management laboratory
Week 10	Students' group presentations
Week 11	Participatory Rural Appraisal (PRA) and Rapid Rural Appraisal (RRA) paradigms of environmental management and development
Week 12	Resource allocation, Resource development, Resource management and resource conservation Technologies for NRM: renewable energy, circular economy, alternative waste treatment
Week 13	Field Trip for Case study on Resources management- trip to the selected industry – analysis on sustainable resource management in the sector
Week 14	Modeling tools and ICT for NRM. Using modeling tools to model and simulate of usage of resources
Week 15	Modeling in Environmental laboratory

General Course Information	
Course name:	Environmental Chemistry
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	6 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Mandatory
Instructor Information	

Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course serves as an introduction to the fundamentals of physical, inorganic, and organic chemistry, with applications to environmental problems. It surveys atomic and molecular structure, solutions, equilibrium, acids and bases, oxidation-reduction, reaction kinetics with emphasis on mechanisms of organic free radical reactions, and basic radioactivity. Purpose of the course is to develop a strong basis for the introduction to environmental chemistry and equip students with interdisciplinary knowledge, combining chemistry with environmental sciences, geology, mathematics and physics. Students should gain a molecular perspective of the world, focusing on pollution control, energy and climate change.
Prerequisites:	Science 1 and Science II
Course learning outcomes:	Knowledge: • Describe and evaluate the relative importance of various reactions, physical processes and transport mechanisms affecting different chemicals in the environment. • Perform quantitative problem-solving processes to questions in environmental chemistry. • Differentiate and confirm graphical data. • Identify and describe the composition and temperature profile as well as predominant types of reactions in different regions of the atmosphere. • Identify chemical reactions and processes responsible for creating the greenhouse gasses
	Skills: • Analyze the conditions and reactions that create photochemical and sulfurous smog. • Distinguish the sources and sinks of common indoor air pollutants. • Explain the scientific basis underlying global climate change.
	Competencies:

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Assess equilibrium concentrations of organic pollutants in environmental compartments based on partition coefficients.
Hypothesize key reactions in carbon, nitrogen and sulfur cycles.
Assess and argue expected aqueous concentrations of different chemical species based on equilibrium coefficients and environmental measurements of pH and Eh.
Theorize intersections between environmental chemistry and society including applications of green chemistry.

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<tr><td>Learning outcomes verification:</td><td>Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td>Workload Allocation:</td><td>
<table>
<tr><th>Activity</th><th>Hours</th><th>Weeks</th><th>Total</th></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>150</td></tr>
</table>
</td></tr>
<tr><td>Communication/feedback channels:</td><td>Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities.
Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
</table>

Main course themes and topics:	• Chemical composition and changes in the Atmosphere - air pollution • Composition and pollution of water • Soil pollution and harmful mater • Main pollutants and transposition of elements between air, water and soil • Concentration levels and significance of monitoring of pollutants
Instructional and Technology Information	
List of required textbooks and learning materials:	• Hanif, M., A., Nadeem, F., Bhatti, I., A. & Tauqeer, H., M. (2020). *Environmental Chemistry: A Comprehensive Approach*. • Gary W. van Loon G., W. & Duffy, S., J. (2017). *Environmental Chemistry A global perspective*. 4th edition.
Additional textbooks and learning materials:	• Baird, C. (2012). *ENVIRONMENTAL CHEMISTRY*. University of Western Ontario.
Citation format:	APA style
Technologies/software/programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active participation 10% Midterm assignment (Seminar) 40% Final exam 50%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet

	Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	Introduction to environmental chemistry
Week 2	Atmosphere Ground-level air pollution: gaseous pollutants Ground-level air pollution: aerosols
Week 3	Greenhouse gas emissions and global climate change
Week 4	Ozone layer – destruction – catalytic process Practices and tasks
Week 5	Particulate size
Week 6	The chemistry of ground level air pollution Practice and tasks Air Quality Standards
Week 7	Introduction to the hydrosphere and aquatic chemistry Acid-base chemistry
Week 8	The Chemistry of Natural Waters Aspects and Concentration Units of Water Chemistry
Week 9	The Solubility of Gases and VOCs in Water theory and practice
Week 10	Decomposition of Organic Matter in Water Oxygen demand – practice Nitrogen Compounds in Natural Waters Carbon Dioxide in Water Water in Equilibrium with Both CaCO3 and Atmospheric CO2
Week 11	Pollution and purification of water
	Ground water – supply, contamination and remediation
Week 12	Metal ion complexation, introduction to the lithosphere
Week 13	Speciation and the Toxicity of Heavy Metals
Week 14	Toxic organic compounds
	Chemistry of organic contaminants
Week 15	Environment and the solid state Practice

General Course Information	
Course name:	Techno-Entrepreneurship and Biotechnology
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS

Semester and Year:	3rd Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides students with an in-depth understanding of entrepreneurship in a modern technical and social environment. Topics include the basic knowledge on entrepreneurship in the recent and upcoming technical and biotechnological achievements. Students will gain skills and competences in establishing, developing and transformation of the entrepreneurship in the circumstances of new technological, technical and informational applications.
Prerequisites:	N/A
Course learning outcomes:	*Knowledge:* • Understand the fundamentals of entrepreneurship and management • Development of entrepreneurship from the business idea to sustainability. • Understand the influence new technical, informational and biotechnological achievements on entrepreneurship • Sustainable application of the new achievements • Illustrate contribution of the techno entrepreneurship to the economical, environmental and social aspects
	Skills: • Analyze the needs for innovation in entrepreneurship. • Identify the key stages of growth for new, innovative business moves. • Understand the requirements for successful technology and business development. • Understand the requirements for successful technology and business development.
	Competencies: • Select the best solutions in introducing the new bio technologies • Introduce the most efficient solution techno entrepreneurship • Argue the most efficient solutions in techno entrepreneurial schemes.
Learning outcomes verification:	Learning outcomes will be verified through assignments, case studies, class discussions, interactive exercises, and a final exam that assess both theoretical knowledge and practical application.

<table>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>3</td><td>5</td><td>15</td></tr>
<tr><td>Assessment</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Google Classroom: Primary platform for sharing materials, submitting assignments, and posting announcements.
Email: For individual queries, feedback, and consultation appointments.
Consultation Hours: Weekly sessions available for in-depth discussions or clarifications upon request.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Entrepreneurship, basic concepts
• Sources and validating of business ideas
• Who is entrepreneur
• Market research techniques
• Funding and path to the sustainability
• Being an entrepreneur and building the team culture
• Staff and internal customers development
• Technical support and experience
• Place and importance of R&D
• Designing and building out bio technology based products
• Industrial and biotechnological management
• Managing operations in a tech environment
• Business models</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Steve, B., Dorf, B. (2020). The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company.
• Rich, J., R. (2020). The Tech Entrepreneur's Survival Guide: How to Bootstrap Your Startup, Lead Your Team, and Keep Your Head in the Game.
• Reed, D., M. (2022). Remote Work and the Future of Tech Entrepreneurship.
• Sharmila, T. Ghosh, S., T. (2023). From Idea to Exit: The Entrepreneurial Journey.
• Kuratko, D., F. (2021). Entrepreneurship: Theory, Process, and Practice.</td></tr>
</table>

Additional textbooks and learning materials:	• Smith, R., G., T. (2021). *The Entrepreneur's Book of Actions: Essential Daily Exercises and Habits for Becoming Wealthier, Smarter, and More Successful*. • Wilkinson, A. (2021). *The Creator's Code: The Six Essential Skills of Innovative Entrepreneurs*.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Lab assignments/exercises 15 % Active participation/forum discussions 10 % Group work: Case study 35 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late submissions may incur penalties unless prior approval is granted due to extenuating circumstances.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Techno Entrepreneurship and Biotechnology
Week 2	The Entrepreneurial Mindset, Skills and Ideas
Week 3	Market Research and Opportunities
Week 4	Examples of Business Model in Techno Entrepreneurship
Week 5	Staff and internal customers development
Week 6	Funding and Marketing Strategy
Week 7	Technical support and experience
Week 8	Research and Development Case Study

Week 9	Intellectual Property in Business Structure
Week 10	Tech Achievements and Business Development
Week 11	Designing and building out biotechnology based products
Week 12	Industrial management
Week 13	Managing Operations in a Tech environment
Week 14	Creating the Start-up Idea
Week 15	Strategies for Growth

General Course Information	
Course name:	Sustainable Water Management Technology
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course explores the principles and practices of sustainable water management, focusing on innovative technologies and strategies to enhance water quality, conserve resources, and ensure equitable access. Students will engage with case studies, policy analysis, and hands-on projects to develop practical solutions for real-world water challenges.
Prerequisites:	Courses from previous semester and science classes
Course learning outcomes:	*Knowledge:* • Understand the key concepts of sustainable water management. • Argue methods for reduction of water usage, such as rainwater harvesting, greywater recycling, and xeriscaping • Distinguish methods for water processing, including reverse osmosis and distillation.
	Skills: • Ability to evaluate the sustainability of water practices and recommend improvements. Analyze the impact of technology on water resource management. • Evaluate policies and practices for effective water conservation.

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- Recommend treatment processes, including biological, chemical, and physical methods to ensure safe drinking water and wastewater treatment depending on case and conditions

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Competencies:

- Design sustainable water management solutions for various contexts
- Perform the process of monitoring water quality, including usage of sensors and remote sensing in the process.
- Predict water flow and quality in different environments, helping to manage water resources effectively.

</td></tr>
<tr><td>Learning outcomes verification:</td><td>Class Methodology - Students are expected to engage autonomously and acquire knowledge from the course materials provided.
Theory-based classes: Problem-solving learning will be used to deal with these and other concepts related to the water/environmental sensing context.
Practical classes: Case studies and real-world examples of successful water management, protection, and restoration projects will be analysed.
Other activities: Students will work in teams to develop solutions for water-related environmental challenges, promoting collaborative learning.</td></tr>
<tr><td>Workload Allocation:</td><td>
<table>
<tr><th>Activity</th><th>Hours</th><th>Weeks</th><th>Total</th></tr>
<tr><td>Lectures</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>2</td><td>5</td><td>15</td></tr>
<tr><td>Consultations</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Homework</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Self-study</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>3</td><td>2</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
</table>
</td></tr>
<tr><td>Communication/feedback channels:</td><td>Students are expected to regularly check Google Classroom and their emails for updates. The professor will be available during office hours for consultations, and feedback on assignments will be provided within one week. The readings and learning materials will be posted in Google Classroom. Professor will be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities.</td></tr>
</table>

	Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Overview of global water issues • Principles of sustainability in water management • Importance of water as a resource • Conventional vs. advanced treatment processes • Membrane technologies (RO, UF) • Biological treatment methods • Rainwater harvesting • Greywater recycling • Efficient irrigation systems (drip, sprinkler) • Principles of IWRM • Stakeholder engagement and participatory approaches • Case studies of IWRM implementation • Rainwater harvesting, Greywater recycling, Efficient irrigation systems etc.
Instructional and Technology Information	
List of required textbooks and learning materials:	• Chen, D., H. (2016). *Sustainable Water Management and Technologies*. CRC Press. • Shukla, S. K., Chandrasekaran, S., Das, B. B., & Kolathayar, S. (2021). *Smart technologies for sustainable development: Select Proceedings of SMTS 2019*. Springer.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	• Water quality monitoring tools • Microsoft Office for assignments and reports • Google Classroom for course materials
Course Assignments and Assessments	
Assignments and descriptions:	Lab exercises 20% Active participation 10% Case studies 30% Final exam 40%
Course Policies and Procedures	

Attendance policy:	College regulations apply to attendance. A minimum of 75% attendance is expected for the successful completion of the course.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Google Workspace environment with access to Google Drive, Sheets, Forms, Slides, Chat, etc. • Access to Microsoft Office (available on all campus computers), • Google Docs or another word processor that permits students to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Library and e-library resources:	Access to IBCM library and IBCM e-library access (J store, etc)
Course lesson schedule	
Lesson 1	Introduction to Sustainable Water Management Technology
Lesson 2	Water Quality and Pollution Water Treatment Technologies
Lesson 3	Integrated Water Resource Management (IWRM)
Lesson 4	Field trip
Lesson 5	Water Conservation Technologies Sustainable Urban Water Management Technology
Lesson 6	Technological Innovations in Water Management - Emerging Technologies in Water Management
Lesson 7	Water management technologies in agriculture
Lesson 8	Emerging Technologies and Future Trends Smart Water Management Systems
Lesson 9	Case studies of smart water systems technologies
Lesson 10	Water Storage and Distribution Systems Water Recycling and Reuse
Lesson 11	Field trip

Lesson 12	Flood Control and Storm water Management
Lesson 13	Water Governance and Policy Technologies Hydrological Cycle and Water Balance
Lesson 14	Guest lecture
Lesson 15	Final Exam

General Course Information	
Course name:	Climate Change & Air Quality
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	The climate change and air quality course aims to train students in the physical and biological processes associated with global climate change and air quality, and to provide them with the necessary policy background to be able to understand the implications of global warming and climate change. Courses cover foundations of climatology and atmospheric science, air quality, hydrology, interaction between vegetation and the atmosphere.
Prerequisites:	Courses from previous semester and science classes
Course learning outcomes:	*Knowledge:* • Identify and gain an understanding of the key causes of air pollution and climate change. • Recognize interactions between trace gases in the atmosphere. • Understand the techniques used by scientists to monitor the composition of the air around us.
	Skills: • Identify, locate and obtain the required data. • Analyze the sustainability and resilience concepts of the environment at different levels. • Conduct analyzes, experiments, assessments and evaluations, as well as the ability to synthesize and interpret results, formulate conclusions, and present the research in written and oral form.

<table>
<tr><td></td><td colspan="4">Competencies:
Propose solutions to air pollution and climate change
Argue and discuss the benefits of different models and technologies for mitigating potential problems</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Class Methodology - Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
Theory-based classes: Theory behind the occurrence and impact of natural disasters will be verified in the Compulsory Assignment paper
Practical classes: Students will work with data and models to simulate the disasters occurrence, impact and behaviour
Semester project: Projects will focus on all the work produced by the students, which includes Theoretical knowledge, data collected on the field and a solutions proposals</td></tr>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises/ Labs</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practice</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Group Project</td><td>5</td><td>10</td><td>50</td></tr>
<tr><td>Self-study</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">Chemical and physical processes impacting climate change
Sources and sinks of gasses and particles contributing to climate change
Importance of meteorological factors and atmospheric gasses</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
</table>

List of required textbooks and learning materials:	• Pearson, J. K., & Derwent, R. (2022). Air pollution and climate change: The Basics. Routledge. • Akhtar, R., & Palagiano, C. (2017). Climate change and air pollution. In Springer climate. https://doi.org/10.1007/978-3-319-61346-8
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (google classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 20% Active participation 10% Midterm exam (group projects) 40% Final exam 30%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Origin of the Earth's Atmosphere: Atmosphere layers
Week 2	Sun-Earth Relationships
Week 3	Atmospheric Transport Geostrophic flow; The General Circulation; Vertical Transport; and Turbulence
Week 4	Field trip: Measuring wind speed and directions
Week 5	Wind rose presentations
Week 6	Radiation and impact on atmosphere

	Atmospheric Chemistry: Sources, and Sinks of Trace Gases,
Week 7	Air Quality Modeling and usage of computer programs in monitoring of air quality and prediction of pollution
Week 8	Monitoring of Greenhouse gasses and usage of mathematical models for impact assessment
Week 9	Presentation of group project
Week 10	Chemical reactions leading to formation, distribution and disintegration of Ozone layer
Week 11	Stratospheric Ozone and the Ozone Hole - impact on climate change
Week 12	Climate change on long and shorter time-scales
Week 13	Global temperature and rainfall distributions;
Week 14	Field Trip: Monitoring the temperature distribution and humidity vs PM10 and PM2.5
Week 15	Interactions of air quality on climate (direct and indirect effects)

General Course Information	
Course name:	Digital Marketing
Course number:	/
Study Programme:	Environmental Management and Technology
Number of ECTS:	4 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	The digital marketing plays a key role in shaping the modern economy, fueling modern business, and enabling new forms of social communication. This course reflects an essential helpful tool and crucial background to the students involved with international sales and management interests and further studying in this regard. The course provides an applied and hands-on approach to understanding digital marketing technologies and how to use them to promote products and services, increase awareness, gain competitive advantages in promotion, attract customers, and grow businesses. The main goal of the course is to arm participants to become proficient in digital marketing jargon and in developing digital marketing strategies, analyzing them, and guiding them. An

<table>
<tr><td></td><td colspan="4">ancillary goal is to gain practical experience in fielding digital marketing campaigns.</td></tr>
<tr><td>Prerequisites:</td><td colspan="4">Completion of previous semesters courses</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Understanding the economics of digital environments;
Understanding the premium models and building two-sided markets;
Understanding the relevant marketing theories and models and how they are implemented in the company’s internal and external environment, as well as the marketing mix concept and its components.</td></tr>
<tr><td colspan="4">Skills:
Applying the company’s strategic platform, including mission, aim, and strategies in digital space;
Analyzing the company’s strategy, product/market portfolios, competencies, and resources based on digital content;
Understanding the company’s strengths and weaknesses, opportunities and threats, and possibilities to its positioning in digital space, as well as identifying the partners, buyers, and users' digital performance.</td></tr>
<tr><td colspan="4">Competencies:
Evaluating the strategic marketing circumstances of a specific company on given occasions;
Understanding the resources of the company to start digital activities;
Understanding the advantages and disadvantages of digital space in marketing.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Course Assignment(s), Final Exam (based on given case).</td></tr>
<tr><td rowspan="9">Workload Allocation</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Practice</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Homework</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Assessment</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Total</td><td></td><td></td><td>100</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Assignments, homework, e-classroom, e-mail, in-class/lab activities: informal discussions, workshops, study case analysis.</td></tr>
</table>

Main course themes and topics:	• E-Commerce • Introduction to New Age Media Marketing • Creating an Initial Digital Marketing Plan and Digital Branding Content • Marketing via Web Sites • Search Engine Optimization • Customer Relationship Management in the Digital World • Social Media Marketing • Digital Marketing Budgeting
Instructional and Technology Information	
List of required textbooks and learning materials:	• Diamond, S. (2023). *Digital Marketing All-In-One For Dummies*. 2nd Edition. For Dummies. • Kingsnorth, S. (2022). *Digital Marketing Strategy: An Integrated Approach to Online Marketing*. 3rd Edition. Kogan Page. • Jobber, D. & Ellis-Chadwick, F. (2020). *Principles and Practice of Marketing*. 9th Edition. Mc Graw Hill.
Additional textbooks and learning materials:	• Hollensen, S. (2020). *Global Marketing*. 8th Edition. Pearson Education.
Citation format:	APA style
Technologies/software/programs to be used:	MS Office
Course Assignments and Assessments	
Assignments and descriptions:	Students are graded through a mix of examinations and classwork. The assessment is divided into two parts: 1) Midterm examination (40% of the final grade) is the assessment that is done during the semester. It comprises the course assignment (CA) in the form of a class test - closed book; 2) The final examination (60% of the final grade) is a comprehensive written exam in the duration of 1.5h that intends to measure the examiner's knowledge, skills, and competencies on the concepts studied through the semester. The exam results are measured against the course learning outcomes.
Course Policies and Procedures	
Attendance policy:	IBCM policy is applied.
Late work or assignments policy:	Late assignments are not accepted.
Instructional methods:	Lectures by instructors, review sessions
Expectations of the Instructor:	Lecturers provide all students with an overview of the course including topics and reading materials for each scheduled class.

	Assigned readings and learning materials will be posted in Google Classroom for the course. Lecturers must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Student Support Resources	
IT Support and Resources:	Students can get IT Support in the IBCM IT Office
Library and e-library resources:	Required textbooks and learning materials for the course are available in the IBCM library or accessible via Google Classroom
Course lesson schedule	
Week 1	Introduction to Digital Marketing and E-Commerce • Defining Digital Marketing and E-Commerce • The Scope of Digital Marketing and E-Commerce
Week 2	Search Engine Optimization and Search Engine Marketing • SEO purpose and benefits • Search Engine Outputs in Terms of Customer Relationship and Retaining
Week 3	E-mail Marketing and Digital Display Marketing
Week 4	Class exercises: Analyzing potential target groups
Week 5	Case: Alibaba Web Site vs. Temu
Week 6	What is Digital Marketing in the New Digital Environment
Week 7	Digital vs. Real Marketing • Digital Content and Goals of Marketing: The Role of Web Sites and Social Media • Real Marketing Content and Goals
Week 8	Digital Marketing Channels and Types • Internet Marketing • Social Media Marketing • Mobile Marketing
Week 9	Creating a Digital Marketing Plan
Week 10	Class exercises: Planning, organization, and goals setting in Digital Marketing
Week 11	Course assignment
Week 12	Marketing via Web Sites
Week 13	Workshop: Understanding buyers' behavior in a digital environment
Week 14	Practical Approaches in Social Media Marketing: Facebook, Instagram, Linkedin, Youtube Case of study: Facebook and Instagram vs. Linkedin - Advantages and Disadvantages in Terms of Different Target Groups
Week 15	Digital Marketing Budgeting • Resource planning • Cost estimating, budgeting, and monitoring

General Course Information	
Course name:	Industrial Training and Biotechnology
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	4 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course will expose students in an industrial working environment and to ensuring students undertake industrial training at engineering and/or technical-based companies/firms/farms/institutions by having a list of preferred companies/firms/institutions having a proven track record of sound industrial training program, and vetting students' applications for placements at new companies/firms/farms/institutions
Prerequisites:	Courses from previous semester
Course learning outcomes:	*Knowledge:* • Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change. • Identify concepts and theories learned in the class and apply in an organizational setting/real world.
	Skills: • Applying theory to practical work situations. • Communicate effectively on complex engineering activities with the engineering community and with society at large. • Comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. • Apply ethical principles and commit to professional Ethics and responsibilities and norms of the engineering practice.
	Competencies: • Display leadership, professionalism and decision-making ability through case study demonstration approach. • Develop ideas and topics, and to structure an argument by putting forward different points of view.

<table>
<tr><td></td><td colspan="4">• Structure approach to resolve or recommend potential solution to the real situation problems in working environment.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, practical approach and simulations in real working environment</td></tr>
<tr><td rowspan="11">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Exercises</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>5</td><td>5</td><td>25</td></tr>
<tr><td>Consultations</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>100</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Expose student to work, responsibility and the ethics in working environment.
• Communicate effectively within the working environment
• Expose students to general and specific procedure of engineering field which related to industry
• Expose student to engineering practice which is specific to his/her specialization
• Prepare technical report for the industrial training
• Use the theoretical knowledge for solving the industry problem</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">Guideline on Industrial Training</td></tr>
</table>

Additional textbooks and learning materials:	All reading materials for the course will be available on the course (google classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Evaluation based on discussion with industry supervisor 25% Oral presentation 20% Log book 15% Report 40%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits students to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1-3	1. Confirming Industrial Training Placement to the Faculty 2. Industrial Training Program Orientation 3. Collecting Industrial Training related documents 4. Documents: Industrial Training Appointment Guidelines on Industrial Training Program Training Commencement Confirmation Daily Record Book /Daily Diary 5. Informing Training Commencement Confirmation 6. Preparation of Cover Page of Daily Records / Diary & get certified from the external supervisor
Week 4	Guest lecture

Week 5-10	Practice in the relevant industry
Week 11	1. Fortnightly Interim Report 2. Reflection
Week 12	Guest lecture
Week 13	Monthly Progress Report to the external supervisor, and send filled reports to the Faculty
Week 14	Monthly Progress Sessions/ Seminar
Week 15	1. Submitting Comprehensive Industrial Training Report 2. Industrial Training evaluations

General Course Information	
Course name:	Introduction to Human Resource Management and Development
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	4 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course introduces the fundamental principles and practices of Human Resource Management and Development (HRMD), emphasizing its crucial role in organizational success. HRMD focuses on attracting, developing, and retaining a talented workforce to help achieve strategic goals. Students will explore key HR functions, including recruitment, employee training and development, performance management, compensation, and employee relations. The course also addresses contemporary HR issues such as diversity and inclusion, employee engagement, and the role of HR in shaping organizational culture. By the end of the course, students will understand how HR practices impact employee performance, satisfaction, and retention, and how HR contributes to overall organizational effectiveness. This course is ideal for those pursuing a career in HR or those seeking to understand the strategic role of HR in modern organizations.

<table>
<tr><td>Prerequisites:</td><td colspan="4">Courses from previous semester</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Students will acquire:
Explain core HR functions including recruitment, selection, training, compensation, and performance management;
Analyze the legal and ethical considerations in HR practices;
Identify trends and challenges in the contemporary HR landscape.</td></tr>
<tr><td colspan="4">Skills:
Apply HR principles to solve workplace problems and develop effective HR strategies;
Critically evaluate HR practices and their impact on employee motivation and engagement;
Communicate effectively with stakeholders regarding HR policies and procedures.</td></tr>
<tr><td colspan="4">Competencies:
Demonstrate an understanding of professional ethics in HR decision-making;
Work collaboratively with other departments to achieve organizational goals through HR initiatives;
Adapt to evolving HR practices and trends in the workplace.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Final Exam
Case studies
Group project
Class interactivity and participation</td></tr>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures
Exercises
Case Study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Consultations</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Group Project</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>3</td><td>1</td><td>3</td></tr>
<tr><td>Assessment</td><td>2</td><td>1</td><td>2</td></tr>
<tr><td>Total</td><td></td><td></td><td>100</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Assignments
In-class activities
E-mail
Individual meetings</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">HR Planning and Strategy
Job Analysis and Design
Recruitment and Selection
Training and Development
Performance Management and Evaluation</td></tr>
</table>

	• Compensation and Benefits • Employee Relations and Labor Law • Workplace Safety and Health • HR Development and Talent Management • The Future of Work and HR Trends
Instructional and Technology Information	
List of required textbooks and learning materials:	• Verhulst, S. L., & DeCenzo, D. A. (2021). *Fundamentals of human resource management.* John Wiley & Sons.
Additional textbooks and learning materials:	• Armstrong, M., & Taylor, S. (2020). *Armstrong's handbook of human resource management practice.* Kogan Page Publishers.
Citation format:	APA style
Technologies/software/ programs to be used:	MS Office
Course Assignments and Assessments	
Assignments and descriptions:	• Final Exam 40% • Case studies 20% • Group project 30% • Active participation 10%
Course Policies and Procedures	
Attendance policy:	Minimum threshold for class attendance is 70%.
Late work or assignments policy:	Late assignments are not accepted
Student Support Resources	
IT Support and Resources:	Students can get IT Support in IBCM IT Office
Course lesson schedule	
Week 1	Overview of the course
Week 2	HR Planning and Strategy
Week 3	Job Analysis and Design
Week 4	Job Analysis and Design Case Study
Week 5	Recruitment and Selection
Week 6	Training and Development
Week 7	Performance Management and Evaluation
Week 8	Compensation and Benefits
Week 9	Mid-term review and assignment (Group project)
Week 10	Employee Relations and Labor Law
Week 11	Employee Relations and Labor Law
Week 12	Workplace Safety and Health

Week 13	HR Development and Talent Management
Week 14	The Future of Work and HR Trends
Week 15	Review and preparation for the final exam

General Course Information	
Course name:	Introduction to Internet of Things
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	4 ECTS
Semester and Year:	3rd Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course introduces the concept of IoT, starting from basic concepts and technologies to applications and challenges. It will teach students IoT system architecture, communication protocols, data management, and security considerations. In this course, students will get practical experience in building and programming IoT devices with hands-on laboratory work supported by case studies. The course will prepare students for advanced studies or careers in this fast-evolving area.
Prerequisites:	Digital Computer Architecture
Course learning outcomes:	Knowledge: • Understand the fundamentals of IoT, IoT system architecture, and IoT communications protocols. • Reproduce and repeat knowledge gained through theory, case studies, and hands-on laboratory work. • Recognize and select the best platform to solve real-time scenarios.
	Skills: • Demonstrate an understanding of key IoT concepts and technologies, including sensors, actuators, and communication protocols. • Use basic IoT tools and platforms to connect devices and gather real-time data. • Operate IoT systems and devices to monitor and control environmental or industrial processes. • Manipulate data collected from IoT sensors to extract useful insights and apply them to practical scenarios.

<table>
<tr><td></td><td colspan="4">Competencies:
Analyze real-world problems and propose IoT-based solutions.
Investigate the feasibility and effectiveness of various IoT implementations.
Discriminate between IoT devices and sensors based on their capabilities, functionalities, and suitable use cases.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Class Methodology
Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
The typical class session will be structured as follows:
Review session: a brief question/answer session focused on the previous homework,
Exams (as scheduled),
Presentation and discussion of new material,
Discuss applied applications/exercises,
Summary of key items and review next week’s assignment.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>3</td><td>9</td><td>27</td></tr>
<tr><td>Case Study</td><td>3</td><td>2</td><td>6</td></tr>
<tr><td>Practical Work/Labs</td><td>3</td><td>4</td><td>12</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>100</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">The professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom or Moodle. The professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom or Moodle in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">Introduction to IoT.
Application of IoT.</td></tr>
</table>

	• M2M and system management. • Developing IoT. • Python and IoT. • Embedded programming, RF, and interfacing. • Introduction to Arduino platform. • Introduction to Raspberry PI platform.
Instructional and Technology Information	
List of required textbooks and learning materials:	• Misra, S., Mukherjee, A., Roy, A. (2021). *Introduction to IoT*. 1st edition. Cambridge University Press. • Madisetti, V., Bahga, A. (2022). *INTERNET OF THINGS - A HANDS-ON APPROACH*. 1st edition. Efinito. • Halfacee, G. (2023). *The Official Raspberry Pi Beginner's Guide: How to use your new computer*. 5th edition. Raspberry Pi Press.
Additional textbooks and learning materials:	• https://www.raspberrypi.com/ • https://www.arduino.cc/
Citation format:	APA style
Technologies/software/ programs to be used:	Labs Equipment, Raspberry Pi, Arduino.
Course Assignments and Assessments	
Assignments and descriptions:	Final exam: 30% Active Participation: 10% Case study: 20% Practical Work/Labs: 40%
Formatting instruction for assignments:	Written work should adhere to Standard IBCM English. Please proofread your papers and e-mail messages before submitting them. All written assignments are checked for plagiarism through the campus-wide plagiarism program.
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader

	• Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to the course. Introduction to IoT: 1. Definition, characteristics, functional requirements, and motivation. Physical design: 1. Things in IoT, IoT protocols, and logical design functional blocks. 2. Communication models, communication APIs, and applications.
Week 2	Applications: 1. Home Automation. 2. Cities. 3. Environment. 4. Energy. 5. Agriculture. 6. Health. 7. Industry.
Week 3	M2M and system management: 1. Introduction to M2M. 2. Difference between M2M and IoT. 3. SDN and NFV for IoT. 4. System Management. 5. SNMP, NETCONF, YANG.
Week 4	Developing IoT: 1. IoT methodology. 2. Purpose and requirements specification, process specification, domain model specification, information model specification, service specification, IoT level specifications.
Week 5	Usage of Python: 1. IoT systems logical design using Python. 2. Python data types and data structures, control flow. 3. Python functions or modules, and remote access enablement using the cloud.
Week 6	Python packages of interest for IoT: 1. JSON, XML, HTTP, URLLib, SMTPLib.
Week 7	Case Study on IoT System I: 1. A case study for weather monitoring system modules and a package of Python.
Week 8	Case Study on IoT System II: 1. A case study for water monitoring system modules and a package of Python.
Week 09	Embedded programming, RF, and interfacing.
Week 10	Introduction to Arduino platform.
Week 11	Introduction to Raspberry PI platform.
Week 12	Practical Work/Labs:

	1. Toggling LEDs 2. Transmitting a string through UART 3. Controlling LEDs blinking pattern through UART 4. Digital IO configuration. 5. Timer-based LED Toggle. 6. On-chip Temperature measurement through ADC.
Week 13	Practical Work/Labs: 1. Point-to-point communication of two Ubimotes over the radio frequency. 2. Multi-point to single-point communication of Ubimotes over the radio frequency. 3. I2C protocol study. 4. Reading temperature and relative humidity values from the sensor. 5. Reading light intensity values from a light sensor. 6. Reading atmospheric pressure values from a pressure sensor.
Week 14	Practical Work/Labs: 1. Arduino platform.
Week 15	Practical Work/Labs: 1. Raspberry Pi platform.

5.4.4th Semester

General Course Information	
Course name:	Clean Technology and Waste Management
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	

Course overview:	This course provides a deeper knowledge of the problems and possibilities of waste management from a national and global perspective. It also provides information on waste characterization, classification of waste, waste flows in society, amounts and composition of waste, as well as problem-solving with a system analysis approach on waste management. This course aims to give students different insight into technologies needed to address different waste types, optimal and new technical solutions for processes and innovation. Course is designed to cover aspects of upstream and downstream waste production and product development, emphasizing the importance of sustainable technologies in reduction and utilization of waste. The course will apply an interdisciplinary view on solutions as well as technical aspects.
Prerequisites:	Students are obliged to pass the previous semester
Course learning outcomes:	*Knowledge:* • Demonstrate in depth knowledge of the waste management processes for different waste types. • Distinguish most suitable practices, technologies and operational models for proper waste management. • Identify complex systems, integrated waste management and current trends in waste management – following waste management hierarchy.
	Skills: • Illustrate and describe suitable technical solutions for waste treatment, and discuss the drawbacks and prerequisites for a chosen solution. • Explain the solid waste problem, suggest, motivate and criticize a way to tackle the problem from a system analysis approach. • Argue the potential of solid waste as a secondary raw material, and present the possibilities for recycling and economic development.
	Competencies: • Demonstrate innovative ways to implement environmental technology. • Propose new ways to communicate and to improve awareness in local populations. • Analyze local environmental action plan, that contains an analysis of environmental problems, waste management, technical solutions, the involvement of local population and/or NGO, financing and costs, political and/or legal concerns.
Learning outcomes verification:	Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.

<table>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Assessment</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities.
Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Waste management and integrated waste management
• Waste utilization
• Traditional and new technologies in waste processing and utilization</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Diwan, H., & Mona, S. (2023). Integrated Waste Management: The Circular Economy.
• Stefanakis, A., & Nikolaou, I. (2021). Circular economy and sustainability: Volume 1: Management and Policy. Elsevier.
• Zero waste. (2019). In CRC Press eBooks. https://doi.org/10.1201/9780429059247
• Zero waste: management practices for environmental sustainability / edited by Ashok K. Rathoure. Boca Raton, FL : CRC Press; 2020 https://doi.org/10.1201/9780429059247</td></tr>
<tr><td>Additional textbooks and learning materials:</td><td colspan="4">• National Integrated Waste Management Strategy and Action Plan</td></tr>
</table>

	• Local Waste Management Plans • EU Waste Directive • EU Landfill Directive • EU Roadmap to Circular Economy
Citation format:	APA style
Technologies/software/programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active Participation - 10% Compulsory assignment – bringing 30% of the total grade. Topic of the CA shell be selected during the course based on the lessons. List shell be provided by the Lecturer, Students can select the topic from the list of the topic and have for a task to research and present the knowledge obtained through the written analysis and recommendation. Final Exam– 60%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Waste Management – Introduction
Week 2	Legal framework - European Directives Local legal requirements – identification of stakeholders and their responsibilities
Week 3	Waste categorization and classification Waste Hierarchy
Week 4	Waste quantification and characterization Establishing the differentiation between specific fields in waste management

Week 5	State of the environment - waste factsheet
Week 6	Field visit
Week 7	Municipal waste - management practices and best technologies
Week 8	Industrial waste - management practices and best technologies
Week 9	Bio and Agricultural waste management practices and best technologies
Week 10	Animal waste management practices and best technologies
Week 11	Medical waste management practices and best technologies
Week 12	EEE waste management practices and best technologies
Lesson 13	Operational models and Integrated waste management Operational models and Integrated waste management – Strategy and overview on the harmonization with EU policies
Week 14	Waste and potential 5 Rs –redesign- reduction – repair - reuse – recycle Practice: Students demonstrating knowledge and problem solving using multidisciplinary approach
Week 15	Available technologies and processes Practice problem solving and critical thinking skills through interdisciplinary project

General Course Information	
Course name:	Project Management
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides introduction to project management, with focus on methodologies, processes, and tools for managing projects effectively. Students will learn about project life cycles, team management, and resource allocation, along with the challenges of balancing scope, budget, and time constraints. The course incorporates practical applications to help students understand the complexities of project management and develop skills in planning, execution, and evaluation.
Prerequisites:	N/A

<table>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Define key project management terms and processes, including scope, cost, and time management
Explain different project management methodologies and their applications in various types of projects</td></tr>
<tr><td colspan="4">Skills:
Develop project plans using established project management software
Analyze risks and propose strategies for mitigating project issues</td></tr>
<tr><td colspan="4">Competencies:
Create comprehensive project reports for stakeholders, synthesizing data and insights
Evaluate project outcomes against objectives and suggest improvements for future projects</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="8">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises/ Interactive work</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Project</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Assessment</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
</table>

Main course themes and topics:	• Introduction to Project Management • Project Life Cycle and Methodologies • Project Scope Management • Time and Cost Management • Risk Management and Quality Assurance • Resource Planning and Allocation • Project Monitoring and Control • Communication and Stakeholder Management • Project Closure and Post-Implementation Review
Instructional and Technology Information	
List of required textbooks and learning materials:	• Larson, E. W., & Gray, C. F. (2022). *Project Management: The Managerial Process*. 8th edition. McGraw-Hill Education. • Verzuh, E. (2021). *The Fast Forward MBA in Project Management*. 6th edition. Wiley. • Heldman, K. (2023). *Project Management JumpStart*. 4th edition. Wiley.
Additional textbooks and learning materials:	• Gido, J., Clements, J., & Baker, R. (2023). *Successful Project Management*. 8th edition. Cengage Learning.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active participation/forum discussions 10 % Project written part 50 % Project oral presentation 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework

	• A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Project Management Concepts
Week 2	Project Life Cycle Phases
Week 3	Project Methodologies Defining Project Goals
Week 4	SWOT Analysis Stakeholders Analysis
Week 5	Objective Analysis
Week 6	Logframe Matrix
Week 7	Project Finances, Budgets and Costs Risk Identification and Mitigation Strategies
Week 8	Quality Control and Assurance in Projects
Week 9	Communication Strategies in Project Management
Week 10	Team Leadership Stakeholders
Week 11	Monitoring of Project Progress
Week 12	Changes and Project Adaptability
Week 13	Project Evaluation
Week 14	Final Deliverables and Documentation
Week 15	Post-Implementation Reviews and Lessons Learned

General Course Information	
Course name:	Environmental Law and Regulation
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	Environmental law course focuses on the legal framework for environmental management activities. The course covers the key issues that concern environmental policies, such as: global warming, wastage of water, climate change, etc. It includes the local as well as the EU international legal frameworks for the protection of the environment, the protection of climate change, and conservation of natural resources. Course will give an insight to national and EU policies, strategies and action plans contributing to environmental protection and pollution reduction. It will explore implementation mechanisms and possibilities for improvement of legal framework on local level, in particular EU Acquis process.
Course learning outcomes:	*Knowledge:* • Identify an understanding of major environmental challenges facing Kosovo and the international community • Classify and defend basic principles underlying international environmental law, EU environmental legislation and Directives and assess the harmonization with the Kosovo national legislation; • Analyze and reflect on the environmental laws implementations dealing with climate change, environment protection, agriculture, energy, biodiversity conservation etc.
	Skills: • Relate key concepts in the field of environmental legislation for problem-solving across a range of contexts; • Illustrate concepts of environmental laws;
	Competencies: • Differentiate environmental legislation and compare with the EU Directives;

<table>
<tr><td></td><td colspan="4">• Develop the capacity to identify factual and legal issues</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Class Methodology - Students are encouraged to learn autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
Theory-based classes: Case studies and problem-solving learning will be used to deal with these and other concepts related to Environmental Law and application of Environmental policies on local and regional level.
Practical classes: Students will work with a set of materials aimed to provide them with the necessary skills to demonstrate the knowledge on substance, namely policies and relevant laws.
Other activities: Projects and tutorials will focus on all the work produced by the students, which includes case studies and problem-solving activities.</td></tr>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Practice</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Homework</td><td>3</td><td>5</td><td>15</td></tr>
<tr><td>Self-study</td><td>4</td><td>15</td><td>60</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>1</td><td>2</td></tr>
<tr><td>Assessment</td><td>2</td><td>1</td><td>2</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities.
Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Environmental law and policies in Europe
• National environmental and protection laws
• International movements, agendas and policies</td></tr>
</table>

	• Level of implementation of and governmental mechanisms for implementing environmental law and policies
Instructional and Technology Information	
List of required textbooks and learning materials:	• Sands, P., Peel, J., Fabra, A., & MacKenzie, R. (2018). *Principles of International Environmental Law*. Cambridge University Press. • Nanda. (2023). *International Environmental Law & Policy*. Martinus Nijhoff Publishers. • Weiss, E. B., Magraw, D. B., & Szasz, P. C. (2023). *International Environmental Law: Basic instruments and references: Volume 1*. BRILL.
Additional textbooks and learning materials:	• https://europa.eu/european-union/law_en • http://www.assembly-kosova.org/common/docs/ligjet/2009_03-L-025_en.pdf • Gazeta Zyrtare e republikes se Kosoves https://gzk.rks-gov.net/default.aspx?index=1
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active Participation - 10% Compulsory assignment – bringing 30% of the total grade. Topic of the CA shell be selected during the course based on the lessons. List shell be provided by the Lecturer, Students can select the topic from the list of the topic and have for a task to research and present the knowledge obtained through the written analysis and recommendation. Final Exam through semester Interdisciplinary project – 60%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers),

	• Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	National Legal Framework and Processes Emerging Issues in Environmental Law
Week 2	Protection of Environment under the Kosovo Legislation
Week 3	Protection of Forest, WildLife and Biodiversity
Week 4	Protection of Water, Air and Environment in Kosovo
Week 5	Agricultural and forest land protection Nature and landscape protection
Week 6	EU: Nature and Scope of Environmental Law
Week 7	Compulsory assignment demonstration
Week 8	Climate Change Mitigation, the International Dimension
Week 9	History and Development of Environmental Law in EU EU Environment Protection Mechanisms
Week 10	Special section - Protection against sources of pollution
Week 11	Law on waste and packaging management Multi-dimensional managerial aspects of processes and application of law Industry and mining – trade regulations and environmental protection
Week 12	Chemicals management, prevention of serious accidents. Public health protection. Protection against ionizing and non-ionizing radiation, regulation of GMOs
Week 13	Harmonization of Law on Nature protection EU Acquis process
Week 14	Inspectorate and process of law implementation and protection
Week 15	Discussion on incorporation of EU regulative in national laws

General Course Information	
Course name:	Agro-economy
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4st Semester, Year 2
Class Status:	Mandatory
Instructor Information	

Name and Last Name:				
Contact information:				
Preferred Method of Contact:	e-mail			
Office hours:	Weekly office hours: with email upon request			
Course Description				
Course overview:	This course provides students with an in-depth understanding of agricultural economics, covering the economic principles that drive agricultural production, resource management, market trends, and the policies influencing agricultural sustainability. Topics include the economic factors affecting farm productivity, agri-supply chains, rural development, and international agricultural markets. Students will gain skills in analyzing economic data relevant to agriculture, understand the impact of policy on agribusiness, and explore the economic role of agriculture in environmental and rural management.			
Prerequisites:	Courses from previous semesters			
Course learning outcomes:	*Knowledge:* • Understand the fundamentals of agricultural economics and its importance in environmental and rural development. • Recognize and analyze the economic factors impacting agricultural productivity, sustainability, and market demand. • Identify policy mechanisms and their effects on agribusiness, food security, and rural livelihoods.			
	Skills: • Analyze economic data related to agricultural production and pricing. • Apply economic principles to assess agricultural policies and resource management. • Communicate findings from economic analyses effectively in both written and verbal formats.			
	Competencies: • Make informed decisions regarding resource allocation in agriculture. • Integrate economic theories with sustainable practices to promote environmentally friendly practices. • Advocate for effective agricultural policies that enhance agricultural and rural development sustainability.			
Learning outcomes verification:	Learning outcomes will be verified through assignments, case studies, class discussions, interactive exercises, and a final exam that assesses both theoretical knowledge and practical application.			
Workload Allocation:	**Activity**	**Hours**	**Weeks**	**Total**
	Lectures	2	15	30

	Exercises	1	10	10
	Practical Work/Labs/Forum	1	5	5
	Consultations	1	15	15
	Homework	1	10	10
	Self-study	3	15	45
	Assignments/Exams	2	3	6
	Assessment	2	2	4
	Total			125
Communication/feedback channels:	Google Classroom: Primary platform for sharing materials, submitting assignments, and posting announcements. Email: For individual queries, feedback, and consultation appointments. Consultation Hours: Weekly sessions available for in-depth discussions or clarifications upon request.			
Main course themes and topics:	• Agricultural Economics Foundations • Importance of agriculture in economic development • Concepts of agricultural productivity and efficiency • Agricultural Production and Resource Management • Economics of farm inputs (labor, capital, land) • Sustainable resource management in agriculture • Market Structures and Price Mechanisms • Supply and demand in agricultural markets • Price formation and elasticity in agriculture • Agricultural Policy and Trade • Agricultural policies, subsidies, and their impact • International trade and its effects on local agribusiness • Rural Development and Economic Sustainability • The role of rural development in economic growth • Income diversification in rural areas			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Aftab, T., and Hakeem, K.R. (2022). *Sustainable Agriculture and Food Security in an Era of Climate Change*. Springer. • Bocchi, S., and Egziabher, T.B. (2022). *Climate Change and Resilient Food Systems*. CRC Press. • OECD & FAO. (2023). *OECD-FAO Agricultural Outlook 2023-2032*. OECD Publishing. • Massy, C. (2023). *Regenerative Agriculture: Principles and Practices*. Chelsea Green Publishing.			
Additional textbooks and learning materials:	• Cramer, G.L., Jensen, C.W., & Southgate, D.D. (2020). *Agricultural Economics and Agribusiness*. John Wiley & Sons			

	• Pretty, J., and Uphoff, N. (2021). *Sustainable Agricultural Systems: Economic, Environmental, and Social Perspectives*. Routledge
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active participation/forum discussions 10 % Case studies 30 % Final exam 60 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late submissions may incur penalties unless prior approval is granted due to extenuating circumstances.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Agricultural Economics
Week 2	Role of Agriculture in Economic Development
Week 3	Farm Management and Economic Principles
Week 4	Economic Theories of Productivity Farm Inputs: Labor, Capital, and Land
Week 5	Sustainable Agriculture and Resource Management
Week 6	Market Dynamics: Supply and Demand Price Elasticity in Agricultural Markets
Week 7	Agricultural Policies and Subsidies
Week 8	International Trade and Agriculture Food Security and Global Market Trends
Week 9	Rural Development: Economic Impact and Strategies

Week10	Income Diversification in Rural Areas
Week 11	Case Study: Local Agricultural Markets
Week 12	Data Analysis in Agricultural Economics
Week 13	Agricultural Research and Development
Week 14	Environmental Impact of Agriculture
Week 15	Current Trends in Agronomy

General Course Information	
Course name:	Cross-disciplinary Project
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Mandatory
Course Description	
Course overview:	The Cross disciplinary Semester Project is an interdisciplinary project designed to enable students from the Environmental management and Technology to collaborate with peers from the Faculty of International Business Management, Faculty of Social Science and IT program. Through this collaboration, students will address a complex real-world issue, integrating knowledge from environmental studies, public administration, business, and technology. Working in cross-functional teams, students will engage in research, solution development, and project management, culminating in a comprehensive report and presentation. This course develops skills in teamwork, interdisciplinary problem-solving, and professional communication across sectors.
Prerequisites:	None
Course learning outcomes:	*Knowledge:* 1. Understand interdisciplinary approaches to public and private sector challenges o Describe how different disciplines— environmental studies, public administration, business, and IT— contribute unique perspectives and solutions to shared issues. 2. Identify collaborative project strategies across disciplines o Recognize strategies for effective interdisciplinary collaboration, including coordination of tasks, integration of diverse expertise, and conflict resolution.
	Skills: 1. Analyze complex environmental issues through interdisciplinary collaboration

<table>
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Apply methods from multiple disciplines to assess and address real-world cases, demonstrating an understanding of varied perspectives and approaches.

2. Present project findings collaboratively and professionally

Develop and deliver a cohesive project presentation that incorporates contributions from all disciplines, reflecting professional and clear communication.

</td></tr>
<tr><td></td><td>Competences:
1. Demonstrate teamwork and project management skills in interdisciplinary settings

Effectively manage team roles, responsibilities, and timelines, fostering a collaborative environment that leverages each member’s strengths.

2. Create innovative, practical solutions to complex issues by integrating insights from environmental studies, public administration, business and IT.

Formulate comprehensive solutions that address the selected issue from multiple angles, promoting sustainable, ethical, and efficient approaches.

</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Outcomes will be verified through project proposal evaluations, interdisciplinary teamwork assessments, the final report, and the presentation.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Project Planning and Team building</td><td>2</td><td>4</td><td>8</td></tr>
<tr><td>Research and Data Collection</td><td>2</td><td>8</td><td>16</td></tr>
<tr><td>Interdisciplinary Team Meetings</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Report Writing and Documentation</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Self-Study and Reflection</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Presentation Preparation</td><td>4</td><td>4</td><td>16</td></tr>
<tr><td>Final Presentation</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Students are expected to maintain communication with their project supervisor and team members via email, group meetings, and consultations. Regular feedback will be provided on project milestones, team dynamics, and progress updates.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">

Interdisciplinary approaches to environmental sector challenges
Project planning and team building across disciplines
Integration of knowledge from environment, business, social and IT studies
Research and data analysis in an interdisciplinary context
Effective communication and presentation of collaborative projects

</td></tr>
</table>

	• Case studies of interdisciplinary problem-solving in the public sector
Instructional and Technology Information	
List of required textbooks and learning materials:	No specific textbook required. Relevant readings, case studies, and interdisciplinary project guides will be provided by the instructor.
Additional textbooks and learning materials:	Supplemental readings and best practices on interdisciplinary collaboration, as provided by the supervisor.
Citation format:	APA
Technologies/software/ programs to be used:	Project management software (e.g., Trello, Asana), word processing and presentation software (e.g., Microsoft Word, PowerPoint), and data analysis tools as required.
Course Assignments and Assessments	
Assignments and descriptions:	**Project Proposal**: A collaborative document outlining the project's objectives, interdisciplinary approach, and roles of each team member. This proposal must be approved by the project supervisor. 15% **Interdisciplinary Progress Meetings**: Regular team meetings to ensure alignment of efforts across disciplines, with updates on research and development. 10% **Final Written Report**: A comprehensive report that synthesizes insights from public administration, business, and environmental perspectives. The report should include sections on methodology, findings, and a proposed solution. 45% **Final Presentation**: A team presentation that demonstrates the interdisciplinary approach and outlines the project's objectives, methods, findings, and recommendations to a panel of faculty and peers. 30%
Course Policies and Procedures	
Attendance policy:	A minimum of 70% attendance is required for team meetings, consultations, and the final presentation, as per IBCM's institutional policy.
Late work or assignments policy:	Late submission are not accepted.
Student Support Resources	
IT Support and Resources:	Students may contact campus IT support for any technical assistance with presentation software or access to course materials.

General Course Information	
Course name:	Vegetation, Restoration and Biodiversity
Course number:	
Study Programme:	Environmental Management and Technology

Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	E mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course examines the vital role of vegetation in ecosystems and the strategies used to restore habitats and preserve biodiversity. Students will explore the structure and function of plant communities in natural and disturbed environments, understanding the complexities of ecosystem dynamics. In addition, the course will emphasise the integration of ecological principles with restoration goals to enhance species diversity, ecosystem services, and resilience. Through lectures, case studies, and practical applications, students will gain knowledge of ecological restoration techniques, including reforestation, wetland restoration, and grassland management. Students will explore the connections between plant diversity and broader ecological functions, such as carbon sequestration, soil stabilisation, and water regulation.
Prerequisites:	Courses from previous year.
Course learning outcomes:	*Knowledge:* • Understand the ecological principles of vegetation dynamics and the role of plant communities in ecosystems • Differentiate and classify different effects of human activity on biodiversity and vegetation. • Identify native and invasive plant species and their roles in ecosystem function. • Evaluate the challenges and opportunities in ecological restoration, with an emphasis on biodiversity conservation.
	Skills: • Manage restoration techniques to a variety of ecosystems, considering local environmental, economic, and social factors. • Develop strategies for enhancing and maintaining biodiversity through sustainable land management and restoration practices • Analyse and interpret the ecological factors affecting vegetation and biodiversity in various ecosystems. • Design and produce restoration plans, including plant selection, site preparation, and habitat design. • Utilise appropriate methods and tools to measure vegetation cover, species richness, and ecosystem health.

<table>
<tr><td></td><td>Competencies:
Conduct field surveys and biodiversity assessments to monitor the success of restoration projects.
Apply ecological restoration principles to real-world case studies, considering local environmental and socio-economic contexts.
Communicate restoration goals, methods, and outcomes effectively to diverse audiences, including local communities, policy makers, and stakeholders.</td></tr>
<tr><td>Learning outcomes verification:</td><td>Class Methodology - Students are encouraged to learn autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
Theory-based classes: Case studies and problem-solving learning will be used to deal with these and other concepts related to the environmental context.
Practical classes: Students will work in class, on research projects and field trips.
Other activities: Projects and tutorials will focus on all the work produced by the students, which includes case studies and problem-solving activities.</td></tr>
<tr><td>Workload Allocation:</td><td><table>
<tr><th>Activity</th><th>Hours</th><th>Weeks</th><th>Total</th></tr>
<tr><td>Lectures</td><td>2</td><td>9</td><td>18</td></tr>
<tr><td>Exercises</td><td>1</td><td>9</td><td>9</td></tr>
<tr><td>Practical Work/Labs</td><td>3</td><td>6</td><td>18</td></tr>
<tr><td>Consultations</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Homework</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Assessment</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
</table></td></tr>
<tr><td>Communication/feedback channels:</td><td>Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.</td></tr>
</table>

	Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Vegetation, Restauration and Biodiversity • Importance of healthy biodiversity • Biodiversity and its decline, • Protecting biodiversity • Habitat protection and restoration • Restoration methods and techniques
Instructional and Technology Information	
List of required textbooks and learning materials:	• Manuel, C. & Molles, Jr. (2021). *Ecology: Concepts and Applications*. • Ninad, R. (2021). Ecological Restoration: A key towards nature positive • Melchias, G. (2020). *Biodiversity and conservation*. • Deguine, J. P., Gloanec, C., Laurent, P., Ratnadass, A. & Aubertot, J. N. (2017). *Agroecological Crop, Protection*. Springer • Wright, R. T. (2016). *Environmental Science, Toward a Sustainable Future*. • Grime, P. (2006). *Plant Strategies, Vegetation Processes and Ecosystem Properties*.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10% Lab exercises 20% Active participation 10% Midterm exam (case study) 25% Final exam 35%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email)

	• Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits students to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	• Introductions. • Course description and expectations. • Vegetation, Restoration, Biodiversity and its importance • Plant Ecology and Vegetation Dynamics
Week 2	• What is ecology? • Principles of Ecological Restoration
Week 3	Life on Land Case study
Week 4	Life in Water Case study
Week 5	Individuals and population in ecology
Week 6	• Biodiversity and its decline • Ecosystem Services and Biodiversity
Week 7	Field trip
Week 8	• Protecting biodiversity internationally • Global biodiversity and its importance • Restoration Methods and Techniques • Forest Restoration • Wetland Restoration
Week 9	Laboratory
Week 10	• Wild plant knowledge Ecology– field trip • Restoration in Agricultural Landscapes
Week 11	• Vegetation Processes and Ecosystem • Climate Change and Vegetation Restoration
Week 12	• Types of habitats • Habitat restaurations
Week 13	• Guest lecture • Biodiversity assessment and field work
Week 14	• Nature vs. cultivation Semi nature • Conversion and degradation of semi-natural habitats
Week 15	• The future of biodiversity conservation • Emerging trends and technologies in restoration ecology

General Course Information	
Course name:	Standardization

Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4st Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides an overview of environmental standardization, its importance in promoting sustainable practices, and the role of various organizations in setting and enforcing environmental standards.
Course learning outcomes:	*Knowledge:* • Understand the principles and practices of environmental standardization. • Identify the role of international and national standardization bodies. • Determine the impact of standards on environmental protection and sustainability.
	Skills: • Develop skills for implementing and auditing environmental standards in various industries.
	Competencies: • Convey ideas and information both through written and oral methods; • Display leadership, professionalism and decision-making ability through case study demonstration approach; • Develop ideas and topics, and to structure an argument by putting forward different points of view.
Learning outcomes verification:	*Class Methodology* - Students are encouraged to learn autonomously and gain the knowledge and skills from each module of the course or additional material used in the classroom. *Theory-based classes:* Case studies and problem-solving learning will be used to deal with these and other concepts related to environmental management context. *Practical classes:* Students will work with a set of materials aimed to provide them with the necessary skills to demonstrate the knowledge. *Other activities:* Case study, field trip and lab exercises will focus on all the work produced by the students, which includes case studies and problem-solving activities.

<table>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Homework</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Assessment</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Standardization and types of standards
• Organizations for standardisations
• Management standards
• Product standards
• Environmental standards
• Policies and regulations for obtaining standardization
• Auditing and certification
• International aspect of standardization
• Current legal framework and trends in standardization process</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Silk, D., M. & Lu, C., X., L. (2024). Environmental, social & Governance Law.
• Hunter, D., Salzman, J. & Zaelke, D. (2022). International Environmental Law and Policy.</td></tr>
<tr><td>Additional textbooks and learning materials:</td><td colspan="4">All reading materials for the course will be available on the course (Google Classroom)</td></tr>
<tr><td>Citation format:</td><td colspan="4">APA style</td></tr>
</table>

Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 15 % In class assignments/exercises 15 % Active participation 10 % Case study 20 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Environmental Standardization
Week 2	Overview of Standards Organizations ISO (International Organization for Standardization) ASTM (American Society for Testing and Materials) National and regional bodies (e.g., ANSI, CEN)
Week 3	Types of Environmental Standards Management standards (e.g., ISO 14001) Product standards (e.g., eco-labeling) Measurement standards
Week 4	The Standardization Process Development and revision of standards Stakeholder involvement

	Consensus and transparency in standardization
Week 5	Environmental Policies and Regulations
Week 6	Implementing Environmental Standards
Week 7	Auditing and Certification
Week 8	Case Studies in Environmental Standardization
Week 9	Future Trends in Environmental Standardization
Week 10	Field Trip
Week 11	Environment policy: general principles and basic framework
Week 12	European Environmental Directives and Regulations
Week 13	National requirements and standardization process
Week 14	Role of advisory and consultants in obtaining standards in production or services
Week 15	Guest Lecture

General Course Information	
Course name:	Landscape Management and Spatial Planning
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides students with an understanding of landscape management and spatial planning principles. It emphasizes the interconnectivity of ecological, social, and economic factors in landscape design and management. Course aims to equip students with the skills and knowledge to manage landscapes sustainably and plan spatial areas for optimal use, incorporating ecological, social, and economic factors.
Course learning outcomes:	Knowledge: • Demonstrate the fundamental principles of landscape management and spatial planning. • Identify the relationship between landscapes and socio-economic factors.
	Skills: • Model projects with a balance of ecological, social, and

<table>
<tr><td></td><td colspan="4">economic factors;
• Applying experience through projects, internships, and fieldwork.</td></tr>
<tr><td></td><td colspan="4">*Competencies:*
• Critically assess the impacts of policy decisions on landscapes and communities.
• Evaluate the role of landscapes in providing ecosystem services (e.g., water regulation, carbon sequestration, cultural value).
• Develop strategies for managing landscapes sustainably, considering both ecological health and human needs.</td></tr>
<tr><td>*Learning outcomes verification:*</td><td colspan="4">*Class Methodology* - Students are encouraged to learn autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
Theory-based classes: Case studies and problem-solving learning will be used to deal with these and other concepts related to the environmental context.
Practical classes: Students will work in class, on research projects and field trips.
Other activities: Projects and tutorials will focus on all the work produced by the students, which includes case studies and problem-solving activities.</td></tr>
<tr><td rowspan="10">*Workload Allocation:*</td><td>**Activity**</td><td>**Hours**</td><td>**Weeks**</td><td>**Total**</td></tr>
<tr><td>**Lectures**</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>**Exercises**</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>**Practical Group Work**</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>**Consultations**</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>**Homework**</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>**Self-study**</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>**Assignments/Exams**</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>**Assessment**</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>**Total**</td><td></td><td></td><td>125</td></tr>
<tr><td>*Communication/feedback channels:*</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.</td></tr>
</table>

	Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Landscape and environmental protection, • Integrated Landscape, • Landscape management approaches and tools • Law on spatial planning, • Urban landscape planning • Climate-driven trends in landscape planning and efficient management
Instructional and Technology Information	
List of required textbooks and learning materials:	• Li, C., Liang, Q., Lin, B. & Zhai, J. (2023). *Landscape management and planning as a spatial organization method connecting CES supply-demand assessment and sustainable tourism development*. • Pettit, C., Cartwright, W., Bishop, I., Lowell, K., Pullar, D., & Duncan, D. (2008). *Landscape analysis and visualization: Spatial Models for Natural Resource Management and Planning*. Springer Science & Business Media. • Amer, M. (2020). *Sustainable Landscape Planning and Natural Resources Management*.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10% Lab assignments 20% Active participation 10% Midterm exam (group presentations) 20% Final exam 35%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Academic integrity statement:	Plagiarism is not tolerated at IBCM. Plagiarism is defined as taking, using, and passing off the ideas or words of another person as your own. Please refer to the Academic English guidelines; Study Skills Handbook for more information about what plagiarism is and how to avoid it. Cases of fraud and plagiarism will result in failing grades on the relevant examination or assignment, which will need to be repeated. A

	warning is issued on the first instance of fraud or plagiarism, and continued cases will result in more serious consequences, and ultimately expulsion from the college. For more information, refer to the IBCM Study Regulations.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits students to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Landscape Management
Week 2	Spatial Planning Theories Sustainable Landscape Management
Week 3	Law on Spatial Planning Environmental Impact Assessment (EIA)
Week 4	Guest Lecture
Week 5	Urban vs. Rural Landscape Management
Week 6	Environmental and Urban Design Solutions
Week 7	Regional Development Policies
Week 8	Cultural Landscape Management
Week 9	Climate and Ecology in Landscape Planning
Week 10	Environmental Assessment and Planning Tools
Week 11	Landscape Restoration and Rehabilitation
Week 12	Research Methods in Landscape and Spatial Planning Students group work
Week 13	Sustainable Development in Landscape Planning
Week 14	Study visit
Week 15	Future Directions in Landscape Management

General Course Information	
Course name:	Geographic Information Systems (GIS) and Remote Sensing

Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	4th Semester, Year 2
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course introduces students to the fundamental principles and applications of Geographic Information Systems (GIS) and Remote Sensing, with a focus on environmental and spatial data analysis. Through theoretical and practical components, students will learn about data acquisition, geospatial analysis, and the use of remote sensing for environmental management and planning. Emphasis is placed on applying GIS and remote sensing techniques to address real-world issues such as land use, urban planning, natural resource management, and environmental monitoring.
Prerequisites:	Mandatory courses from previous semesters
Course learning outcomes:	*Knowledge:* • Identify the basic concepts of GIS, remote sensing, and their applications in environmental management • Explain the principles of geospatial data collection, processing, and analysis, including GIS mapping and remote sensing interpretation
	Skills: • Utilize GIS and remote sensing software to perform spatial data analysis, including map creation and geospatial data visualization • Examine spatial datasets to identify patterns and relationships, applying these insights to case studies focused on Kosovo.
	Competencies: • Assess the suitability of different GIS and remote sensing methods for environmental monitoring and resource management in Kosovo's context • Develop a basic GIS project using real spatial data that addresses a specific environmental issue in Kosovo
Learning outcomes verification:	Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.

<table>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Exercises</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Assessment</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Introduction to GIS and Remote Sensing
• Types and sources of geospatial data
• Data collection techniques and mapping
• Data management and database concepts in GIS
• Basics of cartography and map design
• Remote sensing fundamentals and satellite imagery
• GIS analysis techniques (e.g., spatial and statistical analysis)
• Environmental and urban planning applications
• GIS applications in land use and agriculture
• Kosovo-specific case studies in GIS and remote sensing
• Practical applications and software tools (e.g., QGIS, ArcGIS)
• Ethical considerations and data privacy in GIS</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Campbell, J. B., & Wynne, R. H. (2020). Introduction to Remote Sensing (5th Edition). The Guilford Press.
• Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2020). Geographic Information Systems and Science (4th Edition). Wiley.</td></tr>
</table>

	• Jiang, B., & Yao, X. (2019). *Geospatial Analysis and Modelling of Urban Structure and Dynamics*. Springer.
Additional textbooks and learning materials:	• Zhang, J., & Roy, D. (2018). *Remote Sensing of Land Use and Land Cover: Principles and Applications*. CRC Press.
Citation format:	APA style
Technologies/software/ programs to be used:	• Microsoft Excel or Google Sheets – For data analysis and calculations related to energy production, efficiency metrics, and economic feasibility of renewable energy projects. • ArcGIS - A commercial GIS software that offers advanced spatial analysis tools and is industry-standard, with educational licence • Google Maps Platform - Creating custom maps and visualizations, and embedding GIS data into web applications, with a simpler interface for basic mapping needs. • DroneDeploy - A platform for drone-based remote sensing, allowing students to capture, process, and analyze aerial imagery if drone data collection is included in fieldwork.
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments (data analysis) 20 % In class assignments/interactive exercises (Case study) 30 % Final Exam 50%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to GIS and Remote Sensing
Week 2	Types and Sources of Geospatial Data

	Data Collection Techniques
Week 3	Data Management in GIS
Week 4	Basics of Cartography and Map Design Spatial Analysis
Week 5	QGIS Basics
Week 6	Satellite Imagery and Data Acquisition in Remote Sensing
Week 7	Practical Work: Electronics Laboratory Session – Data Collection Tools
Week 8	Kosovo Case Study: Urban Planning and Land Use
Week 9	Case study Land Use and Agricultural Applications of GIS Remote Sensing for Environmental Monitoring
Week 10	GIS Applications in Water Resources and Natural Disasters
Week 11	Analyzing Spatial Patterns
Week 12	Advanced Remote Sensing
Week 13	Environmental Case Study: Mapping Pollution and Water Quality in Kosovo
Week 14	Ethical Considerations in GIS Data Collection and Privacy Kosovo's Environmental Data: Challenges and Opportunities
Week 15	GIS Project Development and Management Report

5.5.5th Semester

General Course Information	
Course name:	Nature Planning, Conservation / Restoration and Habitat Management
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides a comprehensive understanding of the principles and practices involved in the planning, conservation, restoration, and management of natural habitats and ecosystems. It focuses on the processes and strategies used to protect biodiversity, rehabilitate

	degraded environments, and sustainably manage natural resources. Students will explore key concepts in ecosystem services, land-use planning, conservation biology, restoration ecology, and habitat management. The course integrates theoretical knowledge with practical applications, preparing students to contribute to effective environmental stewardship in both terrestrial and aquatic settings.
Prerequisites:	Courses from previous semesters
Course learning outcomes:	*Knowledge:* The student shall have knowledge of: • Describe ecosystem dynamics and biodiversity conservation principles, Management, Policy and Advocacy, • Understand the relationship between conservation, ecosystem services, and sustainable development, • Identify stakeholder engagement and community involvement • Recognize technical proficiency
	Skills: The student shall gain skills in: • Analyzing habitat conditions and identifying threats to biodiversity. • Utilize ecological tools and techniques for assessing and monitoring ecosystems. • Applying adaptive management practices to monitor and adjust conservation strategies. • Developing sustainable land and water management practices that align with ecological goals. • Implementing habitat restoration techniques and managing protected areas. • Addressing the challenges of habitat fragmentation and climate change in conservation management.
	Competencies: The students shall acquire competencies to: • Design and implement effective conservation and restoration plans. • Develop strategies for restoring degraded ecosystems and enhancing ecological functions. • Recommend habitat restoration techniques and manage protected areas. • Manage the challenges of habitat fragmentation and climate change in conservation management. • Contribute effectively to conservation and habitat restoration efforts.
Learning outcomes verification:	*Class Methodology* - Students are encouraged to learn as autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.

<table>
<tr><td></td><td colspan="4">Theory-based classes: Case studies and problem-solving learning will be used to deal with these and other concepts related to the environmental context.
Practical classes: Students will work in class, on research projects and field trips.
Other activities: Projects and tutorials will focus on all the work produced by the students, which includes case studies and problem-solving activities.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>2</td><td>10</td><td>20</td></tr>
<tr><td>Self-study</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Assignments/Exams</td><td>3</td><td>3</td><td>9</td></tr>
<tr><td>Assessment</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provides all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Restoration Ecology: Theory and Practice
• The role of conservation in addressing global challenges
• Threats to Biodiversity
• Conservation Strategies</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Nelson, C., Hallett, J., G. & Montoya, A., R. (2024). Standards of practice to guide ecosystem restoration. DC and Gland.
• Strecker, A., Koolen-Bourke, D., Peart, R., Wilde, B. & Turner, T. (2023). Conservation Management Planning System.</td></tr>
</table>

	• Armenteras, D. & Delgado, T., M., G. (2020). *Restoration at the landscape scale as a means of mitigation and adaptation to climate change*. • Alexander, M. (2020). *A Guide to Management Planning*. • Mansourian, S. (2024). *Human Dimensions of Forest Landscape Restoration*. • Bonnot, T., W., Jones-Farrand, D., T., Muenks, N., D. & Thompson, F., R. (2023). *Demonstrating a decision support process for landscape conservation design*. • Pradhan, A., Adhikari, D. & Chettri, A. (2020). *Predicting the distribution of suitable habitats for Pandanus*. • Hook, U. & Dwarf, F. (2023). *Endemic species from Sikkim Himalayas, through Ecological Niche Modeling*.
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10% In class assignments/ lab exercises 20% Active participation 15% Midterm exam (case study) 20% Final exam 35%
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits students to save files in Word format • Adobe Acrobat Reader • Zoom and Google Meet Additional Recommended Course Materials • USB drive for saving homework

	• A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Nature planning, Conservation Restoration and Habitat Management • Overview of biodiversity and ecosystem services • History of conservation biology and land management The role of conservation in addressing global challenges (climate change, land use, extinction crises)
Week 2	Landscape and Ecosystem Planning Integrated biodiversity goals
Week 3	Ecological Principles and Conservation Planning Ecological processes and ecosystem dynamics Principles of conservation biology (fragmentation, connectivity, meta populations)
Week 4	Threats to Biodiversity • Habitat destruction and fragmentation • Climate change and its effects on ecosystems and species
Week 5	Conservation Strategies • In-situ conservation (protected areas, wildlife corridors) • Ex-situ conservation (zoos, seed banks, breeding programs)
Week 6	The role of policy and international agreements (e.g., CITES, Convention on Biological Diversity)
Week 7	Field trip - Case studies of successful restoration projects
Week 8	Habitat Restoration Techniques
Week 9	Community Involvement and Stakeholder Engagement
Week 10	Adaptive Management and Monitoring
Week 11	Role of proper urban landscape management in nature conservation
Week 12	Climate Change and Conservation
Week 13	Economic and Policy Dimensions of Conservation
Week 14	Case Studies in Habitat Management Field trip - Real-world examples of habitat management, conservation, and restoration projects
Week 15	Guest lecturer Emerging Issues in Conservation and Restoration

General Course Information	
Course name:	Green Transition and Technology
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Mandatory
Instructor Information	

Name and Last Name:				
Contact information:				
Preferred Method of Contact:	e-mail			
Office hours:	Weekly office hours: with email upon request			
Course Description				
Course overview:	This course provides an overall understanding of the transition to green, sustainable technologies within environmental management. It focuses on interdisciplinarity to address global environmental challenges, covering the principles of sustainable development and the application of green technologies. The course explores essential sustainability topics, technological advancements in renewable energy, sustainable resource management, and the policy frameworks driving the green transition at local, regional, and EU levels. It uses theoretical knowledge and practical exercises to equip students with the skills to evaluate, understand and implement sustainable solutions.			
Prerequisites:	Courses from previous semesters and environmental chemistry			
Course learning outcomes:	*Knowledge:* • Understand the fundamental concepts of green technology and its impact on sustainable development • Explain various renewable energy systems and their applications • Describe the role of technology in reducing carbon footprints and promoting eco-friendly practices			
	Skills: • Evaluate environmental problems and the feasibility of green technologies to address these issues • Apply concepts of green engineering to design sustainable solutions for real-world challenges • Assess the environmental and economic impacts of green technologies in different sectors			
	Competencies: • Demonstrate innovative strategies for implementing green technology within an organization • Collaborate effectively within interdisciplinary teams to solve environmental problems using green technologies • Recommend sustainability initiatives by communicating the importance and benefits of green transition technologies to stakeholders			
Learning outcomes verification:	Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.			
Workload Allocation:	**Activity**	**Hours**	**Weeks**	**Total**

	Lectures	2	15	30
	Exercises	1	10	10
	Practical Work/Labs/Forum	1	5	5
	Consultations	1	15	15
	Homework	1	10	10
	Self-study	3	15	45
	Assignments/Exams	2	3	6
	Assessment	2	2	4
	Total			125
Communication/feedback channels:	Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.			
Main course themes and topics:	• Green Engineering Principles • Renewable Energy Systems. • Energy Efficiency • Waste Management • Circular Economy • Green Building • Smart Grids • Water Conservation • Environmental Policies • Emerging Trends			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Lackner, M. (2021). *Energy efficiency: comparison of different systems and technologies*. Springer. • Dincer, I., & Zamfirescu C. (2020). *Sustainable Energy Systems and Applications*. Springer. • Worrell, E., & Reuter, M. (2023). *Handbook of Recycling: State-of-the-art for Practitioners, Analysts, and Scientists*. Elsevier.			

Additional textbooks and learning materials:	• Block, B., & Guerne, M. G. (2024). *A Theory-Based concept for fostering sustainability competencies in engineering programs*.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10 % In class Lab assignments/interactive exercises 15 % Active participation/forum discussions 10 % Case studies 25 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Green Transition and Sustainability
Week 2	Climate Change and Environmental Impact Principles of Green Engineering
Week 3	Solar Energy Systems
Week 4	Wind and Biomass Systems
Week 5	Hydropower Systems
Week 6	Energy Efficiency and Sustainable Design Case study
Week 7	Waste Management Recycling Technologies Pollution Control

Week 8	Circular Economy and Resource Efficiency
Week 9	Sustainable Transportation Technologies
Week 10	Green Building and Eco-friendly Construction
Week 11	Smart Grids and Energy Management Case study
Week 12	Water Treatment technologies
Week 13	Environmental Policies and Regulations
Week 14	Corporate Social Responsibility Measuring and Reporting Sustainability Performance
Week 15	Trends in Green Technology

General Course Information	
Course name:	Soil pollution and remediation
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides students with an in-depth understanding of soil utilization, soil pollution, contamination, damaging, as well as the measures and procedures in prevention, and remediation of contaminated, damaged and destroyed land. Topics include the basic knowledge on soil physics and chemistry and the technical information on remediation of soil in various industries. Students will gain skills in pedagogical data relevant to agri-environmental schemes, understand the impact of procedures in remediation, and explore the environmental approach in mining, industry and urbanization.
Prerequisites:	Science classes

<table>
<tr><td rowspan="3">Course learning outcomes:</td><td>Knowledge:
Understand the fundamentals of soil science and its importance in environmental management.
Recognize and analyze the harmful effects of various human activities in soil management and finding the proper solutions.
Understand policy mechanisms technical solutions in soil remediation.</td></tr>
<tr><td>Skills:
Analyze various environmental threats, including soil and various forms of soil degradation.
Apply basic principles in soil protection and remediation management.
Recommend most recent scientific and technical solutions of soil protection in solving the particular problems.</td></tr>
<tr><td>Competencies:
Select the best solutions in soil utilization as the proper planning for soil management.
Introduce the most efficient solution in soil protection and remediation.
Reaching the most efficient solutions in agri-environmental schemes.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning outcomes will be verified through assignments, case studies, class discussions, interactive exercises, and a final exam that assess both theoretical knowledge and practical application.</td></tr>
<tr><td rowspan="11">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Google Classroom: Primary platform for sharing materials, submitting assignments, and posting announcements.
Email: For individual queries, feedback, and consultation appointments.
Consultation Hours: Weekly sessions available for in-depth discussions or clarifications upon request.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">Introduction to soil science
Pedogenetic factors and processes
Soil chemistry</td></tr>
</table>

	• Sorptive capacity and buffer capability of soil • pH and soil reaction • Industrialization and soil • Mining and soil • Urbanization and soil • Industrial waste and soil • Soil protection • Soil hygiene • Recultivation and remediation • The technical proceedures in soil remediation • Agrotechnical proceedures in soil remediation
Instructional and Technology Information	
List of required textbooks and learning materials:	• Ashman, M. (2021). *Soil Science and Geology*. • Ashman, P. (2022). *Essential of Soil Science*. • Kramer, B. (2021). *Water Relations of Plants and Soils*. Academic Press. • Humberto, B. (2008). *Principles of Soil Management and Conservation*. Springer. • Hudson, N. (2021). *Soil Conservation: Fully Revised and Updated*.
Additional textbooks and learning materials:	• Strecker, A. (2018). *Landscape Protection in International Law*. • Wise, D. (2018). *Remediation of Hazardous Waste Contaminated Soils*. • Meuser, H. (2013). *Soil Remediation and Rehabilitation Treatment of Contaminated and Disturbed Land*.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10 % In class lab assignments/interactive exercises 15 % Active participation/forum discussions 10 % Case studies 25 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late submissions may incur penalties unless prior approval is granted due to extenuating circumstances.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment,

	library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	Introduction to Soil science
Week 2	Factors and processes in soil formation
Week 3	Basic physical and mechanical properties of soil
Week 4	Chemical soil properties
Week 5	Chemical soil properties
Week 6	Colloid soil particle
Week 7	Sorptive capacity and buffer capability of soil
Week 8	pH and soil reaction
Week 9	Mining and soil
Week 10	Industrialization and Urbanization Case study
	Industrial waste and soil
Week 11	Chemical pollutants in soil
Week 12	Soil protection
	Soil hygiene
Week 13	Recultivation and remediation Case study
Week 14	The technical procedures in soil remediation
	Agrotechnical procedures in soil remediation
Week 15	Field trip

General Course Information	
Course name:	Fundamentals of Energy
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Mandatory

Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	The course gives introduction to energy fundamental principles and on improving energy efficiency in organizations, industrial and commercial settings. This course provides students with understanding of fundamentals of energy resources as well as information on monitoring techniques of energy usages, analyzing data, identifying improvement options and implementing strategies to reduce energy consumption, and tracking progress over time.
Prerequisites:	Students are obliged to pass the previous semester
Course learning outcomes:	*Knowledge:* • Understanding of fundamentals of energy and energy planning; • Classify green energy types • General financial considerations in terms of implementing green energy • Interpret and use data related to energy production, and efficiency in decision-making processes • Argue the theoretical, policy and practical aspects of managing the energy
	Skills: • Recommend the optimisation of the sources in the energy mix for different applications and contexts • Compare Renewable Energy Sources for Proposing a new and applicable combination of energy sources in a local community or larger industry • Demonstrate awareness of the economic, organizational and managerial aspects (such as project management, risk and change management) of business contexts in energy management and energy sources use
	Competencies: • Applying the principles of sustainability and the role of energy management in promoting sustainable development • The ability to develop and implement projects that meet defined and specified requirements, applying appropriate design methodologies. • Proposing a new and applicable combination of energy management solutions in a local community or larger industry.

<table>
<tr><td>Learning outcomes verification:</td><td colspan="4">Class Methodology - Students are encouraged to learn autonomously and gain the knowledge and skills from each unit of the course book or additional material used in the classroom.
Theory-based classes: Case studies and problem-solving learning will be used to deal with these and other concepts related to waste management.
Practical classes: Students will work with a set of materials aimed to provide them with the necessary skills to demonstrate the knowledge.
Other activities: Projects and tutorials will focus on all the work produced by the students, which includes case studies and problem-solving activities.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Homework</td><td>3</td><td>10</td><td>30</td></tr>
<tr><td>Self-study</td><td>5</td><td>7</td><td>35</td></tr>
<tr><td>Assignments/Exams</td><td>3</td><td>2</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Existing energy sources
• Utilization of energy
• Potential of renewable energy sources
• Practical application modern technologies in harvesting and utilization of energy
• Energy saving models and subsystems</td></tr>
</table>

	• Application of digitalization in monitoring and optimization and use of renewable energy
Instructional and Technology Information	
List of required textbooks and learning materials:	• Levite, B., & Rakow, A. (2023). Powering through: Energy Resilience Planning for the Grid, Governments, and End Users • Capehart, B. L., Turner, W. C., & Kennedy, W. J. (2016). Guide to Energy Management. River Publishers. • Beering, S. C. (2011). Building a sustainable energy future: U. S. Actions for an Effective Energy Economy Transformation. DIANE Publishing.
Additional textbooks and learning materials:	• Bioenergy Environmental Impact Analysis (BIAS): Analytical Framework, Food and Agriculture Organization of the United Nations, Rome 2010
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Active Participation - 10% Compulsory assignment – bringing 40% of the total grade. Topic of the CA shell be selected during the course based on the lessons. List shell be provided by the Lecturer, Students can select the topic from the list of the topic and have for a task to research and present the knowledge obtained through the written analysis and recommendation. Final Exam – 50%
Formatting instruction for assignments:	Written work should adhere to Standard IBCM English. Please proofread your papers and e-mail messages before submitting them. The work will be graded based on content, completeness, organization, spelling, grammar, and punctuation, as well as demonstration of knowledge gained in the course and ability to apply it. All written assignments are checked for plagiarism through the campus-wide plagiarism program.
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, library, and other campus locations if you don't have a device at home) • Email account (college email)

	• Access to Microsoft Office (available on all campus computers),
	• Google Drive, or another word processor that permits student to save files in Word format
	• Adobe Acrobat Reader
	• Zoom and google meet
	  ○ Laboratory for Environmental Management and Energy Management
	  ○ 1 Thermal imaging camera.
	  ○ 1 Bench multimeter
	  ○ 1 Bench power supply
	  ○ 1 Thermal Imaging Moisture Meter
	  ○ 1 Drone for analysing buildings envelope from an energy efficiency point of view.
	  ○ 1 SimaPro software (Phd license).
	  ○ 1 SimaPro software (multiple license).
	  ○ 1 G-ISBEM software interface license.
	• Air Dispersion Modelling
	• Transportation and Logistics Modelling Software
	Additional Recommended Course Materials
	• USB drive for saving homework
	• A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	• Fundamentals of energy • Energy sources • Importance of energy efficiency • Importance of data collections
Week 2	• Energy transition and sustainability • Energy policy and conversion
Week 3	• Field visit • Study case on energy management challenges for the electricity, industry and transport sectors
Week 4	• Environmental analysis • Technical economic analysis
Week 5	• Energy investments and their analyses • Analysis of energy investments (financial aspects of energy efficiency projects)
Week 6	Alternative energy sources • Geothermal energy • Tide energy • Fusion energy • Practice problem solving and critical thinking skills
Week 7	Energy efficiency in: • Energy production • Energy consumption • Students demonstrating knowledge of using multidisciplinary approach

Week 8	• Applicable energy efficient technologies • Practice problem solving and critical thinking skill
Week 9	Solar Radiation and Shadows: Impact on Building Energy Efficiency. • Understanding solar radiation • The effect of shadows on energy efficiency • Practice problem solving and critical thinking skills • Energy technologies for buildings that improve energy efficiency (advanced HVAC systems, energy-efficient lighting, building automation systems, and renewable energy installations)
Week 10	Energy Saving Methods • Traditional and modern energy-saving methods. Analysis of material efficiency and new technologies. • Practice problem solving and critical thinking skills
Week 11	Energy Storage Solutions. • Overview of energy storage technologies (batteries, thermal storage, etc.) • Practice problem solving and critical thinking skills
Week 12	Digitalization in Control and Regulation Subsystems for Energy Efficiency • Digitalization in energy management • New technologies in control systems • Practice problem solving and critical thinking skills
Week 13	• Monitoring and Optimization of Energy Efficiency • Application of digital tools in energy management • Practice problem solving and critical thinking skills
Week 14	Photovoltaic systems • Components of photovoltaic systems • Sizing and optimization of PV installations • New materials in PV systems • Practice problem solving and critical thinking skills
Week 15	• Heat pump and Geothermal installations as a source of renewable energy • Case studies on the application of heat pumps and geothermal systems • Practice problem solving and critical thinking skills • Installations of small wind turbines. Calculation – usage of small wind turbines • Practice problem solving and critical thinking skills

General Course Information	
Course name:	Integrated Rural Development
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5st Semester, Year 3
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	

Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	Integrated Rural Development addresses key objectives such as economic growth, poverty alleviation, elevating the living standards of rural communities, and ensuring essential minimum basic needs. The harnessing of modern technology holds significant potential for achieving these goals. To attain the aims of integrated rural development, there is a crucial need to modernize agriculture and the rural economy. This course is designed to provide students with a foundational understanding of integrated rural development and the performance of rural businesses. Encompassing a comprehensive approach, the curriculum will delve into various policies and analyses the contributing factors that enhance the economic and social well-being of rural populations. Specific focus areas include stakeholder analysis, effective management, strategic planning, and policymaking within the context of rural development. Through these studies, students will be equipped to contribute to the sustainable progress of rural areas.
Prerequisites:	Courses from previous semesters and Agro-economy course
Course learning outcomes:	• *Knowledge:* • Demonstrate an understanding of core theories, concepts, and approaches to integrated rural development, including sustainable agriculture, rural tourism, and rural-urban linkages. • Gain knowledge of relevant policy frameworks and institutional structures that impact rural development at the local, national, and EU levels. • Explain the interactions between socio-economic factors and environmental sustainability in rural areas, focusing on impacts on community well-being and resource conservation.
	Skills: • Develop skills to conduct comprehensive needs assessments in rural areas, using participatory tools and techniques to gather data and engage with local stakeholders. • Use quantitative and qualitative analytical tools, such as cost-benefit analysis, SWOT, and environmental impact assessments, to evaluate rural development projects and initiatives. • Create project proposals for rural development that integrate various sectors (e.g., agriculture, tourism, social services) with a focus on achieving sustainable outcomes.
	Competencies:

<table>
<tr><td></td><td colspan="4">

- Demonstrate competence in engaging and coordinating with diverse stakeholders (e.g., community members, NGOs, government entities) to collaboratively address rural development challenges.
- Show the ability to adapt development approaches to specific rural contexts, recognizing and responding to local cultural, economic, and environmental conditions.
- Exhibit the capacity to advocate for and implement sustainable practices within rural development initiatives, ensuring long-term viability and resilience of rural communities.

</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Workshop</td><td>5</td><td>2</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">The professor will provide all students with a comprehensive course overview, including topics and reading materials for each class session. All readings and learning resources will be accessible on Google Classroom. The professor will be available to students during scheduled class times and consultation hours and will respond to emails within 48 hours.
Students are expected to complete assigned readings before each class and actively participate in in-class activities. They are responsible for mastering all materials presented in assigned chapters, readings, and lectures.
Students are encouraged to reach out to the professor if any concepts or topics are unclear. Additionally, students should check their emails and Google Classroom daily for updates, announcements, and the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">

- Foundations of Rural Development
- Rural Economy and Livelihoods
- Gender equity in rural areas
- Rural unemployment, rural poverty and migration
- Sustainable Agriculture and Resource Management
- Rural Infrastructure and Access to Services

</td></tr>
</table>

	• Social and Cultural Dimensions of Rural Development • Environmental Sustainability and Biodiversity Conservation • Policy and Governance in Rural Development • Programmes for rural development • Rural Tourism and Diversification • Project Management for Rural Development Initiatives • Case Studies and Practical Applications in Rural Development
Instructional and Technology Information	
List of required textbooks and learning materials:	• Ratner, S., E. (2020). *Wealth Creation A New Framework for Rural Economic and Community Development*. Routledge. • Albrecht, D., E. (2020). *Building a Resilient Twenty-First-Century Economy for Rural America*. Utah State University Press. • Dannenberg, P. & Kulke, E. (2016). *Economic Development in Rural Areas: Functional and Multifunctional Approaches (The Dynamics of Economic Space).* • Brouwer, F., & van der Heide, C., M. (2013). *Multifunctional Rural Land Management Economics and Policies*. Routledge.
Additional textbooks and learning materials:	• Ellis, F. & Biggs, S. (2001). *Evolving themes in rural development 1950s–2000s*. Development Policy Review 19(4) 437–448.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Work shop 25 % Active participation/forum discussions 10 % Case studies 25 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers),

	• Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	• Introductions • Course description and expectation; • Foundations of Rural Development
Week 2	• Introduction to integrated rural development • Theoretical frameworks (e.g., sustainable development, socio-economic equity) • Rural demographics and migration patterns
Week 3	Rural Economy and Livelihoods (Agricultural productivity and diversification, Rural entrepreneurship and SMEs, Non-agricultural rural employment and income generation)
Week 4	Sustainable Agriculture and Resource Management (Sustainable farming practices, conservation, and resource efficiency,
Week 5	Agroecology and organic farming
Week 6	Climate change adaptation for rural areas
Week 7	Rural Infrastructure and Access to Services
Week 8	Social and Cultural Dimensions of Rural Development Environmental Sustainability and Biodiversity Conservation
Week 9	Responsible Consumption and Production
Week 10	Policy and Governance in Rural Development Rural Tourism and Diversification
Week 11	Project Management for Rural Development Initiatives
Week 12	Area development programmes (territorial approaches) Rural development and welfare schemes
Week 13	The evaluation of the EU LEADER Programmes
Week 14	International best practices in integrated rural development Case Studies and Practical Applications in Rural Development
Week 15	Discussion on current challenges and future trends Presentation of course projects.

General Course Information	
Course name:	Supply Chain Management and Logistics
Course number:	/
Study Programme:	Environmental Management and Technology

Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	E-mail, consultations in person
Office hours:	Tuesday, 14:00-16:00
Course Description	
Course overview:	This course helps students to understand the supply chain management process through which organizations analyze, plan, organize, implement, and control supply chain operations to develop and maintain the most effective international supply systems. The course covers effective integral supply chain operations and logistics. This course supports and upgrades students' competencies and knowledge since the real competition today is not between companies but between supply chains. In terms of competition relationships, the win-win outcome approach to supply chains is an integrated perspective that takes account of networks of relationships, sustainability, and product design, as well as the logistics of procurement, distribution, and fulfillment. As a critical concern for every business, effective logistics and supply chain management is key to successfully managing inventories, cooperating tidily with other entities, and finally, achieving competitive advantage(s), covered by the content of this course.
Prerequisites:	Courses from previous semesters
Course learning outcomes:	The student shall know: • Understanding the structure of supply chains; • Remembering the logistics strategy and its focus on supply operations; • Define the role of procurement and inventory management outcomes.
	The student shall have skills in: • Applying fundamental activities in supply operations • Assess the supply chain mission and logistics's roles • Evaluating the capacity of a supply chain.
	The student shall acquire competencies to: • Create effective decision-making in supply chain management issues; • Model the elementary and the most efficient use of data and data analytics for supply chain management;

<table>
<tr><td></td><td colspan="4">• Develop and organize systematically planned basic supply chain activities.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Course Assignment(s), Final Exam (based on given case), Interdisciplinary Semester Project (optionally).</td></tr>
<tr><td rowspan="9">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Practice</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Homework</td><td>3</td><td>5</td><td>15</td></tr>
<tr><td>Self-study</td><td>5</td><td>10</td><td>50</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>1</td><td>2</td></tr>
<tr><td>Assessment</td><td>3</td><td>1</td><td>3</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feed back channels:</td><td colspan="4">Assignments, homework, e-classroom, e-mail, in-class activities: informal discussions, workshop, study case analysis.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Introduction to supply chain management (SCM) and logistics
• Basic concepts, structure, and drivers of SCM
• Planning and sourcing
• Procurement strategies
• Inventory management
• Lean supply chain - New management approach</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
<tr><td>List of required textbooks and learning materials:</td><td colspan="4">• Stanton, D. (2023). Supply Chain Management For Dummies. Publisher For Dummies.
• Suman, S. S. (2023). The Supply Chain Revolution: Innovative Sourcing and Logistics for a Fiercely Competitive World. AMACOM.
• Handfield, R. and Linton, T. (2022). Flow: How the Best Supply Chains Thrive. Rotman-UTP Publishing.</td></tr>
<tr><td>Additional textbooks and learning materials:</td><td colspan="4">• Christofer, M. (2011). Logistics & Supply Chain Management. Pearson.
• Harisson, A. and Van Hoek, R. (2011). Logistics Management and Strategy: Competing Through the Supply Chain. FT Press.</td></tr>
<tr><td>Citation format:</td><td colspan="4">APA style</td></tr>
<tr><td>Technologies/software/programs to be used:</td><td colspan="4">MS Office</td></tr>
<tr><td colspan="5">Course Assignments and Assessments</td></tr>
<tr><td>Assignments and descriptions:</td><td colspan="4">Students are graded through a mix of examinations and classwork.
The assessment is divided into two parts:</td></tr>
</table>

	1) Midterm examination (40% of the final grade) is the assessment that is done during the semester. It comprises the course assignment (CA) in the form of a class test - closed book; 2) The final examination (60% of the final grade) is a comprehensive written exam in the duration of 1.5h that intends to measure the examiner's knowledge, skills, and competencies on the concepts studied through the semester. The exam results are measured against the course learning outcomes.
Course Policies and Procedures	
Attendance policy:	IBCM policy is applied.
Late work or assignments policy:	Late assignments are not accepted.
Instructional methods:	Lectures by instructors, review sessions
Student Support Resources	
IT Support and Resources:	Students can get IT Support in the IBCM IT Office
Course lesson schedule	
Lesson 1	Introduction to supply chain management (SCM) and logistics 1. Defining supply chain & supply chain management 2. Defining logistics 3. What is SCM and what is logistics (f(x))
Lesson 2	Basic concepts, structure, and drivers of supply chain management 1. Basic supply chain – Physical movements 2. The structure of a supply chain 3. Discussion
Lesson 3	Basic concepts, structure, and drivers of supply chain management 1. BAR Code concept 2. QR Code concept 3. RFID concept 4. Benefits of Supply Chain drivers 5. Discussion
Lesson 4	Study case: Driver challenging in H&M supply operations
Lesson 5	Basic concepts, structure, and drivers of supply chain management 1. RFID concept 2. Benefits of supply chain drivers 3. Discussion
Lesson 6	Planning and sourcing 1. Demand forecasting and planning 2. Forecasting methods
Lesson 7	Procurement strategies 1. Importance of procurement 2. Aims of procurement 3. Types of buying/procurements
Lesson 8	Procurement strategies

	1. Organization of procurement 2. Logistics and supply chain operations in ZARA
Lesson 9	Case study: Supply strategy of ZARA - RFID application
Lesson 10	Course assignment
Lesson 11	Inventory management 1. Buffering supply and demand 2. Types of stocks 3. Costs of carrying stock
Lesson 12	Inventory management 1. Buffering supply and demand 2. Types of stocks
Lesson 13	Inventory management 1. Costs of carrying stock 2. JIT concept
Lesson 14	Transport, database management, and services 1. Internal transport of goods (workshop introduction: instruction delegation to students) 2. External transport of goods 3. Combine transport 4. Information flow and cooperation among supply chain participants 5. Services
Lesson 15	Workshop: Creating a scheme of internal transport in huge warehouses

General Course Information	
Course name:	Environmental Laboratory
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course focuses on practical skills and methodologies used in environmental analysis, monitoring, and assessment. The course' goals is to show students hands-on laboratory techniques to measure environmental pollutants, analyze air and water quality, and assess soil

<table>
<tr><td></td><td colspan="4">health. Students will learn to operate standard laboratory equipment and interpret data essential for environmental research and management. Students gain practical experience in using lab-based methods to address real-world environmental challenges.</td></tr>
<tr><td>Prerequisites:</td><td colspan="4">Science 1 and Science 2 courses</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
• Identify and recall key laboratory procedures and environmental testing protocols.
• Explain the fundamental principles behind various environmental analysis techniques.</td></tr>
<tr><td colspan="4">Skills:
• Perform accurate environmental sampling and laboratory tests using essential equipment and techniques.
• Interpret laboratory data</td></tr>
<tr><td colspan="4">Competencies:
• Critically assess the reliability of lab results and determine implications for environmental policy
• Design an all-encompassing environmental analysis report based on laboratory findings.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Exercises</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.</td></tr>
</table>

	Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Introduction to Environmental Laboratory and Safety • Sampling Techniques for Air, Water, and Soil • Methods for Measuring Air Quality (e.g., particulate matter, gases) • Water Quality Analysis (e.g., pH, conductivity, salinlity, Oxygen Redox Potential) • Soil Testing and Nutrient Analysis • Instrumental Analysis Techniques • Data Analysis and Interpretation • Quality Control and Assurance in Environmental Testing • Laboratory Reporting Standards and Ethics
Instructional and Technology Information	
List of required textbooks and learning materials:	• Manahan, S. E. (2020). *Environmental Chemistry*. CRC Press. • Hillel, D. (2021). *Environmental Soil Physics*. Academic Press. • Radojevic, M., & Bashkin, V. N. (2019). *Practical Environmental Analysis*. Royal Society of Chemistry.
Additional textbooks and learning materials:	• Gupta, P. K., & Paliwal, A. (2022). *Laboratory Manual of Environmental Chemistry*. Springer.
Citation format:	APA style
Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10 % In class assignments/lab work 30 % Active participation/demonstrations 20 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers),

	• Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Environmental Laboratories
Week 2	Safety Procedures and Lab Conduct
Week 3	Air Quality Sampling Techniques Analyzing Particulate Matter in Air
Week 4	Water Sampling Methods Water Quality Parameters – pH, Conductivity, Dissolved Oxygen, ORP
Week 5	Determining Biochemical Oxygen Demand in Water
Week 6	Analytical Chemistry Analysis
Week 7	Soil Sampling Techniques Soil Nutrient Analysis
Week 8	Spectrophotometry Chromatography in Environmental Analysis
Week 9	Interpreting Environmental Data
Week 10	Quality Assurance and Control in Lab Testing
Week 11	Project Work on Air Quality Analysis
Week 12	Project Work on Water Quality Analysis
Week 13	Project Work on Soil Analysis
Week 14	Reporting Standards in Environmental Science
Week 15	Lab Ethics and Environmental Impacts

General Course Information	
Course name:	Environmental Data and Computer Analysis
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail

<table>
<tr><td>Office hours:</td><td colspan="4">Weekly office hours: with email upon request</td></tr>
<tr><td colspan="5">Course Description</td></tr>
<tr><td>Course overview:</td><td colspan="4">This course introduces students to the fundamentals of environmental data analysis and computational techniques, equipping them with skills to interpret and apply data for environmental decision-making. It covers data collection methodologies, statistical analysis, machine learning and data visualization tools tailored to environmental studies. By focusing on computer-based analysis, students will learn to leverage software and models to address contemporary environmental issues and enhance their understanding of data-driven environmental management.</td></tr>
<tr><td>Prerequisites:</td><td colspan="4">Previous semester and IT courses</td></tr>
<tr><td rowspan="3">Course learning outcomes:</td><td colspan="4">Knowledge:
Identify key environmental data sources and the basics of statistical and computational tools for data analysis.
Explain the principles of data collection and processing techniques and the application of statistical methods in environmental science.</td></tr>
<tr><td colspan="4">Skills:
Use computational tools for analyzing and visualizing environmental data
Distinguish patterns and trends in environmental datasets and interpret their implications for policy and management.</td></tr>
<tr><td colspan="4">Competencies:
Assess the quality and reliability of environmental data, recognizing limitations and potential biases in data analysis.
Develop structured reports and presentations that effectively communicate analysis results and actionable insights.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="11">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Homework</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and</td></tr>
</table>

	learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.
Main course themes and topics:	• Environmental Data Science Basics • Data Collection Methods • Statistical Analysis for Environmental Data • Data Cleaning and Preprocessing • GIS in Environmental Analysis • Time Series Analysis • Data Visualization Techniques • Machine Learning in Environmental Data • Air and Water Quality Data Analysis • Climate Change and Remote Sensing Data • Environmental Risk Assessment • Ethical Data Management
Instructional and Technology Information	
List of required textbooks and learning materials:	• Menke, W. (2022). *Environmental Data Analysis with MatLab*. • Davis, J. (2021). *Introduction to Environmental Data Science*. • Manly, B., F., J. (2021). *Statistics for Environmental Science and Management*.
Additional textbooks and learning materials:	• Ott, W. (2019). *Environmental Statistics and Data Analysis*.
Citation format:	APA style
Technologies/software/ programs to be used:	• Statsoft by Statistica • MATLAB • Python • InfluxDB • Grafana
Course Assignments and Assessments	
Assignments and descriptions:	Homework assignments 10 % Active participation/forum discussions/exercises 20 % Case studies 30 % Final exam 40 %
Course Policies and Procedures	

Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Environmental Data Overview Data Collection Techniques
Week 2	Basics of Statistical Analysis Data Cleaning and Preparation
Week3	Sampling Techniques for Environmental Studies Data Visualization Techniques
Week 4	Time Series Data
Week 5	Air Quality Data Analysis
Week 6	Water Quality Data Analysis
Week 7	Soil and Land Cover Data Analysis
Week 8	Climate and Change Analysis
Week 9	Remote Sensing Applications
Week 10	Machine Learning in Environmental Data
Week 11	Big Data in Environmental Studies
Week 12	Data Interpretation and Policy
Week 13	Communicating Environmental Insights
Week 14	Ethical Data Management Practices
Week 15	Review and Case Studies

General Course Information	
Course name:	Environmental Crime Training
Course number:	
Study Programme:	Environmental Management and Technology

Number of ECTS:	5 ECTS
Semester and Year:	5th Semester, Year 3
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides a comprehensive overview of environmental crime, focusing specifically on Kosovo and the Western Balkans region due to the transboundary nature of environmental issues. It examines the legal frameworks, implementation challenges, and environmental and socio-economic impacts of crimes such as illegal logging, wildlife trafficking, waste management violations, and pollution. The course explores the role of law enforcement, policy interventions, and international cooperation in addressing environmental crime, with a focus on building practical skills for identifying, investigating, and prosecuting these crimes.
Course learning outcomes:	*Knowledge:* • Understand the principles and frameworks governing environmental crime and protection laws, specifically in Kosovo and the Western Balkans. • Identify key environmental crimes and describe the socio-economic and ecological impacts of these activities on local and regional ecosystems.
	Skills: • Analyze case studies of environmental crime, applying critical thinking to understand enforcement challenges and propose strategic interventions • Develop environmental data reports on simulated environmental crime scenarios, synthesizing data and legal information to make evidence-based recommendations
	Competencies: • Collaborate effectively with other students in group activities, applying legal and ethical principles to environmental crime scenarios. • Design strategic initiatives to support environmental law enforcement efforts at regional and international levels, demonstrating leadership and decision-making competencies

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<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Exercises</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Field work Demonstrations</td><td>2</td><td>5</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings and in the lectures.
Students are encouraged to approach lecturers if any of the concepts or themes covered in the course are unclear.
Students are expected to check their emails (daily) and Google Classroom regularly in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Introduction to Environmental Crime
• Legal Frameworks for Environmental Protection in Kosovo
• Types of Environmental Crime
• Socio-Economic Impacts of Environmental Crime
• Methods of Environmental Crime Detection and Investigation (Incorporate drones for practical investigation techniques.)
• Data Analysis in Environmental Investigations
• Role of Technology in Environmental Crime Prevention (Focus on drones for surveillance and Emeritus for online case studies.)
• Environmental Law Enforcement: Strategies and Challenges
• International Cooperation in Combating Environmental Crime
• Case Studies in Environmental Crime</td></tr>
<tr><td colspan="5">Instructional and Technology Information</td></tr>
</table>

List of required textbooks and learning materials:	• Situ, Y., & Emmons, D. (2022). *Environmental Crime: The Criminal Justice System's Role in Protecting the Environment*. Oxford University Press. • G. Pink, R. (2016). *White, Environmental Crime and Collaborative State Intervention*, Springer. • Heinämäki, L. (2021). *Human rights and the environment*. Yearbook of International Environmental Law.
Additional textbooks and learning materials:	• Brisman, A., & South, N. (2021). *Routledge International Handbook of Green Criminology and Human Rights*. Routledge.
Citation format:	APA style
Technologies/software/ programs to be used:	• DroneDeploy - A platform for drone-based remote sensing, allowing students to capture, process, and analyze aerial imagery if drone data collection is included in fieldwork. • Emeritus platform (EU Horizon project platform for the identification and analysis of waste and other environmental crimes through aerial imagery, that IBCM is a part of. • ArcGIS - A commercial GIS software that offers advanced spatial analysis tools, is industry-standard, and has an educational license. • Google Maps Platform - Creating custom maps and visualizations and embedding GIS data into web applications with a more straightforward interface for basic mapping needs. • Microsoft Excel or Google Sheets – For data analysis and calculations related to energy production, efficiency metrics, and economic feasibility of renewable energy projects.
Course Assignments and Assessments	
Assignments and descriptions:	Demonstrations/interactive exercises 25 % Active participation/forum discussions 10 % Case studies 25 % Final exam 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers),

	• Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	Introduction to Environmental Crime
Week 2	Overview of Legal Protections for the Environment Types of Environmental Crime
Week 3	Illegal Logging and Forestry Crimes (Practical Exercise: Drone usage for nearby forest monitoring - Bajgora area)
Week 4	Wildlife Trafficking and International Crime Network (Training: Utilizing the Emeritus platform for case studies on wildlife trafficking)
Week 5	Waste Disposal and Pollution Control Impact of Mining and Industrial Pollution (Training: Drones for Trepca tailings sites examination in Mitrovica)
Week 6	Socio-Economic Impacts of Environmental Crime
Week 7	Identifying and Investigating Environmental Crime (Training: Drones for environmental site investigation - Mitrovica South landfill)
Week 8	Using Technology in Environmental Monitoring (Exercise: Using drones and GIS tools for monitoring.)
Week 9	Environmental Law Enforcement Techniques (Emeritus platform modules and case studies)
Week 10	Case Study: Kosovo's Environmental Challenges (Exercise: Analysis and reporting through Emeritus simulation modules)
Week 11	Data Analysis and Reporting in Environmental Crime
Week 12	Interagency Cooperation in the Western Balkans region (Workshop: Utilizing Emeritus to simulate interagency collaboration.)
Week 13	International Conventions and Environmental Crime Environmental Advocacy and Public Awareness
Week 14	Prosecuting Environmental Crimes in Kosovo Ethics and Responsibility in Environmental Law Enforcement
Week 15	Preventive Strategies and Policy Development (Group Exercise: Policy simulation related to Kosovo Laws, using the Emeritus platform examples and case studies.)

5.6.6th Semester

General Course Information

Course name:	Business Planning
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	6th Semester, Year 3
Class Status:	Mandatory
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	E-mail, consultations in person
Office hours:	Wednesdays and Thursdays 9.00 – 15.00
Course Description	
Course overview:	This course equips students with the skills and knowledge to transform a feasibility plan into a comprehensive business plan for a new venture, culminating in a business plan competition. Emphasizing business plans as essential tools for launching and growing a business, the course prepares students for strategic business planning within both startups and larger institutions. Students will analyze, construct, and refine business plans, integrating key concepts from core management and business disciplines. By the end of this course, students will demonstrate expertise in essential business plan components, including customer segmentation, value proposition, financial forecasting (income statements and balance sheets), competitor analysis, and risk assessment in small business development.
Course learning outcomes:	The students shall acquire knowledge to: • Identify key startup frameworks and explain their relevance to business success; • Determine effective tools for capital raising and idea development; • Construct a viable business plan, incorporating practical business insights;
	The students shall acquire skills to: • Develop comprehensive market analyses and demand documentation, creating actionable plans for new ideas; • Analyze market trends and competitor landscapes to inform strategic planning; • Create a detailed written business plan and present an effective oral pitch to communicate the new venture's potential.
	The students shall acquire competencies to: • Design a business plan to establish a foundation for new venture creation;

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Demonstrate effective stakeholder communication strategies to secure support and resources;
Engage in negotiation for financing and support during the business plan’s implementation phase.

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<tr><td>Learning outcomes verification:</td><td>Verification is achieved through written business plans (60% of total grade), oral presentations (30% of total grade), and various in-class exercises throughout the semester. These methods measure students' understanding of business planning theories, strategy development, communication skills, teamwork, and practical decision-making in real-world scenarios, ensuring comprehensive competency in business planning.</td></tr>
<tr><td>Workload Allocation:</td><td>
<table>
<tr><th>Activity</th><th>Hours</th><th>Weeks</th><th>Total</th></tr>
<tr><td>Lectures</td><td>4</td><td>7</td><td>28</td></tr>
<tr><td>Student Individual study</td><td>8</td><td>10</td><td>80</td></tr>
<tr><td>Case studies</td><td>4</td><td>2</td><td>4</td></tr>
<tr><td>Field research/field trip</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Guest lecture</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Homework</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Examination</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
</table>
</td></tr>
<tr><td>Communication/feedback channels:</td><td>Feedback is provided through written comments on assignments, grading, immediate verbal feedback during class activities, peer evaluations, performance reviews for presentations, exam feedback, progress meetings, and comprehensive feedback reports.</td></tr>
<tr><td>Main course themes and topics:</td><td>

The purpose of a business plan
Description of the business, products/services, market, location, competition, risks, opportunities, management, personnel, and loan application effects
Protecting the idea and addressing legal issues for entrepreneurs
Defining products/services, target markets, marketing goals, sales/profit goals, potential challenges, and marketing budget
Benefits, Unique Selling Proposition (USP), best and worst contributors to overhead and profits
Current customers, buying habits, reasons for purchasing, best customers/prospects, market share analysis
Competitors, competitive advantages and disadvantages, overall competitive position
Financial data: sources/applications of funding, capital equipment list, balance sheet, break-even analysis, projected income statement, cash flow projections, and spreadsheet modeling.

</td></tr>
<tr><td colspan="2">Instructional and Technology Information</td></tr>
</table>

List of required textbooks and learning materials:	• Verzuh, E. (2021). *The Fast Forward MBA in Project*. • Barringer, B. R. (2015). *Preparing Effective Business Plans: An Entrepreneurial Approach*. Pearson Education Limited. • Barrow, C., Barrow, P., & Brown, R. (2018). *The Business Plan Workbook: A Step-By-Step Guide to Creating and Developing a Successful Business*. Kogan Page.
Additional textbooks and learning materials:	• Harvard Business Review. (2020). *HBR Guide to Business Plan*. Harvard Business Review Press.
Citation format:	APA Style
Technologies/software/programs to be used:	MS Office/ Projector/ PC
Course Assignments and Assessments	
Assignments and descriptions:	Business Plan (Written part) 60% Oral Presentation–Pitching event of business plan 30% Active Participation 10%
Course Policies and Procedures	
Attendance policy:	IBCM Policy is applied
Academic integrity statement:	Plagiarism policy is applied.
Late work or assignments policy:	Late assignments are not accepted
Instructional methods:	Lectures by instructors, review sessions
Student Support Resources	
IT Support and Resources:	Students can get IT Support in IBCM IT Office.
Course lesson schedule	
Week 1	Introduction to Business Planning
Week 2	Business Description and Market Overview
Week 3	Market Research: Understanding Customers
Week 4	Competitor Analysis
Week 5	Unique Selling Proposition and Market Positioning
Week 6	Legal Considerations and Protecting Business Ideas
Week 7	Product and Service Definition
Week 8	Marketing Strategy and Budget
Week 9	Financial Planning: Funding and Capital Requirements
Week 10	Financial Data: Income Statement and Balance Sheet
Week 11	Cash Flow Projections and Break-Even Analysis
Week 12	Spreadsheet Modeling for Financial Forecasting
Week 13	Risks and Opportunities Assessment

Week 14	Drafting and Reviewing the Business Plan
Week 15	Submitting the narrative and financial part of the Business Plan and Oral Presentations

General Course Information	
Course name:	Renewable Energy
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	6th Semester, Year 3
Class Status:	Elective
Instructor Information	
Name and Last Name:	
Contact information:	
Preferred Method of Contact:	e-mail
Office hours:	Weekly office hours: with email upon request
Course Description	
Course overview:	This course provides the fundamentals and applications of renewable energy sources, with a focus on their potential and challenges. Students will examine solar, wind, hydro, geothermal and biomass energy sources, and emerging renewable energy technologies. The course also covers energy efficiency, environmental impacts, and policy considerations that influence renewable energy deployment. Practical applications include case studies from Kosovo and a lab session focused on renewable energy technologies in electronics.
Course learning outcomes:	*Knowledge:* • Identify the primary types of renewable energy sources (solar, wind, hydro, geothermal, biomass) and their relevance to Kosovo's energy sector. • Understand the environmental, social, and economic implications of using renewable energy in place of fossil fuels
	Skills: • Evaluate current and potential renewable energy projects in Kosovo and their contributions to sustainability goals • Demonstrate responsibility and ethical awareness regarding environmental sustainability and the adoption of renewable energy. • Assess the energy requirements and calculate the expected outputs from different renewable sources in Kosovo's context.
	Competencies:

<table>
<tr><td></td><td colspan="4">• Collaborate effectively with other students in group activities to develop sustainable energy solutions for real-world applications within Kosovo context
• Develop basic models for renewable energy systems tailored to Kosovo's geography and climate.</td></tr>
<tr><td>Learning outcomes verification:</td><td colspan="4">Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.</td></tr>
<tr><td rowspan="10">Workload Allocation:</td><td>Activity</td><td>Hours</td><td>Weeks</td><td>Total</td></tr>
<tr><td>Lectures</td><td>2</td><td>15</td><td>30</td></tr>
<tr><td>Exercises</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Practical Work/Labs/Forum</td><td>1</td><td>5</td><td>5</td></tr>
<tr><td>Consultations</td><td>1</td><td>15</td><td>15</td></tr>
<tr><td>Field Trip</td><td>5</td><td>2</td><td>10</td></tr>
<tr><td>Self-study</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>Assignments/Exams</td><td>2</td><td>3</td><td>6</td></tr>
<tr><td>Assessment</td><td>2</td><td>2</td><td>4</td></tr>
<tr><td>Total</td><td></td><td></td><td>125</td></tr>
<tr><td>Communication/feedback channels:</td><td colspan="4">Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours.
Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures.
Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear.
Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.</td></tr>
<tr><td>Main course themes and topics:</td><td colspan="4">• Introduction to Renewable Energy
• Solar Energy
• Wind Energy.
• Hydroelectric Power
• Geothermal Energy
• Biomass Energy
• Emerging Renewable Technologies.
• Energy Efficiency and Conservation.
• Environmental Impact of Renewable Energy.
• Policy and Economics</td></tr>
</table>

	• Energy Storage and Grid Integration – Battery technologies, storage systems, and grid compatibility. • Case Studies – Analysis of local and regional renewable energy projects. • Practical Lab – Sessions at Electronics Laboratory on solar cell energy conversion and efficiency. • Project and Research Development – Group projects on designing renewable energy solutions for specific sites in Kosovo.
Instructional and Technology Information	
List of required textbooks and learning materials:	• Schobert, H., H. (2022). *Energy and Society: An Introduction*. CRC Press. • Wright, R., T., & Boorse, D. (2017). *Environmental science: Toward a Sustainable Future*. • Beering, S., C. (2011). *Building a sustainable energy future: U. S. Actions for an Effective Energy Economy Transformation*. DIANE Publishing.
Additional textbooks and learning materials:	BIAS Bio energy Environmental Impact Analysis –Analytical Framework, 2011, Food and Agriculture Organization of the United Nations, Rome
Citation format:	APA style
Technologies/software/ programs to be used:	• Microsoft Excel or Google Sheets – For data analysis and calculations related to energy production, efficiency metrics, and economic feasibility of renewable energy projects. • Arduino and Raspberry Pi– Combined with kits, this can be used for practical sessions in the Laboratory to build and test small energy conversion projects or to simulate renewable energy monitoring systems. • QGIS or ArcGIS – Geographic Information Systems (GIS) software for spatial analysis, helping students understand site selection, resource mapping, and environmental impact assessment for renewable projects in Kosovo. • Google Earth Pro – For preliminary site assessments, visualizing locations, and conducting basic geographic analysis.
Course Assignments and Assessments	
Assignments and descriptions:	In class lab assignments/interactive exercises 15 % Active participation/forum discussions 10 % Case studies 35 % Final exam (Group presentation) 40 %
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.

Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.

Course lesson schedule	
Week 1	Introduction to Renewable Energy
Week 2	Solar Energy Basics and Applications Solar Photovoltaic Systems
Week 3	Wind Energy and Turbine Fundamentals Wind Farms and Local Feasibility in Kosovo
Week 4	Hydroelectric Power: Large and Small-Scale Systems Field trip
Week 5	Geothermal Energy: Basics and Regional Potential
Week 6	Biomass Energy and Waste-to-Energy Systems
Week 7	Emerging Renewable Technologies Energy Efficiency Techniques
Week 8	Policy, Subsidies, and Market Economics in Kosovo
Week 9	Energy Storage and Grid Integration Field trip
Week 10	Case Study Analysis: Local Renewable Projects
Week 11	Practical Lab: Solar Cell Conversion in Electronics
Week 12	Introduction to Project and Research Development
Week 13	Group Project Work: Site-specific Energy Solutions
Week 14	Group Presentations: Project Progress
Week 15	Final Project Presentations

General Course Information	
Course name:	Environment and Health
Course number:	
Study Programme:	Environmental Management and Technology
Number of ECTS:	5 ECTS
Semester and Year:	6th Semester, Year 3

Class Status:	Elective			
Instructor Information				
Name and Last Name:				
Contact information:				
Preferred Method of Contact:	e-mail			
Office hours:	Weekly office hours: with email upon request			
Course Description				
Course overview:	The course uses a participatory approach to discuss how the environmental health risks are associated with exposures to environmental hazards. This course will also provide an overview of several pressing environmental problems such as pollution or climate change, and explore how these issues impact individual human beings. Through the course students will learn to identify chemical, physical, and microbial agents that originate in the environment and can impact human health. Course uses an interdisciplinary approach to analysis and information processing for reaching conclusion on potential threats to human health.			
Course learning outcomes:	*Knowledge:* • Describe the concept of environmental health and discover the main sources and types of environmental agents, different dimensions and interpretations • Understand the relation between population growth and dissemination of environmental pollutants • Explain health mechanisms underlying the environmental impact on human health			
	Skills: • Critically evaluate current research on environmental health • Employ techniques used in toxicology and epidemiology to evaluate environmental hazards and exposures • Seek, evaluate, compile and present information in the area of environmental toxicology.			
	Competencies: • Describe specific applications of environmental health concepts to fields such as food safety, water quality control, and occupational health • Develop ideas and topics, and to structure an argument by putting forward different points of view.			
Learning outcomes verification:	Learning objectives will be achieved through a combination of lectures, videos, online discussion forums, interactive exercises, comprehension questions, quizzes, assignments, and weekly readings.			
Workload Allocation:	**Activity**	**Hours**	**Weeks**	**Total**

	Lectures	2	15	30
	Class discussion and reflections	1	10	10
	Practical Work/Labs/Forum	1	5	5
	Consultations	1	15	15
	Homework	1	15	15
	Self-study	2	15	30
	Assignments/Exams	2	10	20
	Total			125
Communication/feedback channels:	Professor provide all students with an overview of the course including topics and reading materials for each scheduled class. The readings and learning materials will be posted in Google Classroom. Professor must be available to students during scheduled class times and consultation hours. They should also acknowledge emails within 48 hours. Students are expected to complete the assigned readings before the class. Students are expected to attend and participate in-class activities. Students are expected to understand all materials covered in assigned chapters and readings as well as in the lectures. Students are encouraged to approach Lecturers in case any of the concepts or themes covered in the course are unclear. Students are expected to regularly check their emails (daily) and Google Classroom in case of any changes or announcements, as well as the ASC timetable.			
Main course themes and topics:	• The Environment at Risk • Environmental Epidemiology • Environmental Toxicology • Environmental Policy and Regulation • Zoonotic and Vector-Borne Diseases • Toxic Metals and Elements • Radiation • Water and air quality • Food Safety • Solid and Liquid Wastes • Occupational Health			
Instructional and Technology Information				
List of required textbooks and learning materials:	• Mph, N. S. P., Cph, L. T. P. M., & Bces, N. D. P. M. (2024). *Environmental health: Foundations for Public Health*. • Spellman, F. R., & Stoudt, M. L. (2013). *The Handbook of Environmental Health*. Rowman & Littlefield.			
Additional textbooks and learning materials:	All reading materials for the course will be available on the course (Google Classroom)			
Citation format:	APA style			

Technologies/software/ programs to be used:	N/A
Course Assignments and Assessments	
Assignments and descriptions:	In-class participation (10%) Seminar (Part I) – Literature review (30%) Seminar (Part II) – Climate change & its impact on health: Development, Human Environment and Health (40%) Seminar Presentation - (20 %)
Course Policies and Procedures	
Attendance policy:	College regulations apply to attendance.
Late work or assignments policy:	Late work will receive a grade reduction from the maximum score. Further submissions may be allowed with additional grade reductions at the discretion of the professor.
Student Support Resources	
IT Support and Resources:	• Access to a computer or electronic device with a word processing application (see the computer lab, lab equipment, library, and other campus locations if you don't have a device at home) • Email account (college email) • Access to Microsoft Office (available on all campus computers), • Google Drive, or another word processor that permits student to save files in Word format • Adobe Acrobat Reader • Stat Soft Software • Zoom and google meet Additional Recommended Course Materials • USB drive for saving homework • A notebook for taking reading and class discussion notes.
Course lesson schedule	
Week 1	• Introductions • Course description and expectation; • World Population
Week 2	• Fundamentals of Environmental Health • Environmental impact on human health
Week 3	Environmental Epidemiology
Week 4	• Water supplies and quality • Environmental Health in Recreational Areas
Week 5	• Toxicology • Toxic Metals and Elements
Week 6	Pesticides and Other Organic Chemicals
Week 7	Air pollution impact
Week 8	Vectors & Their Control

Week 9	Solids & Hazardous Waste Management
Week 10	Radioactivity
Week 11	Environmental Safety
Week 12	Food Protection and Safety
Week 13	Occupational Health
Week 14	Principles of Environmental Health Administration
Week 15	Field trip

General Course Information	
Course name:	Internship
Course number:	/
Study Programme:	Environmental Management and Technology
Number of ECTS:	10 ECTS
Semester and Year:	6th Semester, Year 3
Class Status:	Mandatory
Course Description	
Course overview:	The 6th Semester Internship provides students with practical, hands-on experience in a professional setting relevant to environmental management and technology. This course enables students to apply theoretical knowledge, analytical skills, and ethical principles gained throughout their studies in a real-world environment. By working within a relevant national or international business, public or private institution, non-profit organization, or similar entity, students gain insights into the operational dynamics, challenges, and impacts of environmental management and technology work. The internship serves as both a professional development experience and a final integration of students' academic learning.
Prerequisites:	Successful completion of previous semesters in the Environmental Management and Technology program.
Course learning outcomes:	Upon completion of this internship, students will be able to: • Demonstrate the ability to apply environmental management and technology theories and concepts in a professional setting; • Engage in effective communication and collaboration with private, public or non-profit sector professionals. • Analyze and reflect on real-world challenges in environmental management and technology, offering informed, practical solutions; • Exhibit professional behavior, ethical responsibility, and a commitment to environmental management values. • Evaluate their role and impact within the organization, reflecting on their personal and professional growth.

Learning outcomes verification:	Learning outcomes will be verified through regular evaluations by the internship supervisor, student self-assessments, and a final internship report that reflects on key learnings and contributions.
Communication/feedback channels:	Students will maintain regular contact with the Internship Coordinator and on-site supervisor via email and periodic check-in meetings. Feedback will be provided during consultations, mid-term evaluations, and upon completion of the internship.
Main course themes and topics:	1. Application of environmental management and technology theories in practice 2. Professional ethics and accountability in environment 3. Communication, collaboration, and teamwork in environmental management 4. Problem-solving and critical thinking in environmental management contexts 5. Personal and professional development in a real-world setting
Instructional and Technology Information	
List of required textbooks and learning materials:	No specific textbooks are required; students will rely on knowledge acquired in prior coursework.
Additional textbooks and learning materials:	Supplemental readings may be provided based on the internship organization's requirements and focus area.
Citation format:	APA
Technologies/software/programs to be used:	As per need.
Course Assignments and Assessments	
Assignments and descriptions:	**Self-Assessment Reflection:** A short-written reflection submitted mid-internship, addressing personal achievements and areas for improvement. **Final Internship Report**: A comprehensive report detailing the experience, key learning outcomes, challenges faced, and solutions proposed, along with an evaluation of the student's impact within the organization.
Course Policies and Procedures	
Attendance policy:	Full attendance is required during scheduled internship hours, with any absences communicated to both the on-site supervisor and Internship Coordinator.
Late work or assignments policy:	Final report submission must adhere to the deadline set by the Internship Coordinator. Extensions may be granted under extenuating circumstances, with prior approval.
Student Support Resources	

IT Support and Resources:	Students can access campus IT support for any technology issues, as well as the library for resources relevant to their internship and final report.

General Course Information	
Course name:	Bachelor Thesis
Course number:	/
Study Programme:	Environmental Management and Technology
Number of ECTS:	10 ECTS The students' workload (hours per semester, ECTS): Activity — Ac.hours Research Planning and Literature Review — 48 Data Collection and Analysis — 40 Thesis Writing — 50 Consultations with Supervisor — 10 Self-Study and Revisions — 42 Draft Submissions and Feedback — 35 Final Thesis Preparation and Submission — 25 Total student workload — 250
Semester and Year:	6th Semester, Year 3
Course Status:	Mandatory
Course Description	
Course overview:	The BSc Thesis serves as the capstone project for the Environmental Management and Technology program, allowing students to conduct an independent, in-depth research study on a topic relevant to environmental management and technology. This course enables students to apply theoretical knowledge, research methodologies, and analytical skills to address complex issues in environmental management. Under the guidance of a faculty supervisor, students identify a research question, conduct a literature review, gather and analyse data, and present evidence-based conclusions in a formal thesis document. This project demonstrates students' readiness to engage in professional, research-driven roles in environmental management and technology or pursue further academic studies.
Prerequisites:	Completion of all required coursework in the Environmental Management and Technology program.
Course learning outcomes:	Upon completion of the BSc Thesis, students will be able to: • Formulate a clear, researchable question in environmental management and technology; • Conduct a comprehensive literature review to contextualize their research question within the existing field;

	• Design and execute a research methodology appropriate to their study, gathering and analysing data rigorously; • Critically assess their findings, discussing implications, limitations, and potential areas for further research; • Demonstrate effective academic writing, structuring, and presentation in the final thesis document.
Learning outcomes verification:	Outcomes will be verified through milestone meetings with the supervisor, a thesis proposal review, and the final submission and evaluation of the BSc Thesis by a faculty committee.
Communication/feedback channels:	Students are required to meet with their supervisor regularly, with consultations scheduled bi-weekly. Feedback is provided at each milestone: thesis proposal approval, draft submissions, and final submission.
Main course themes and topics:	• Research question formulation in international business management • Literature review techniques and academic writing • Research methodology design (quantitative, qualitative, or mixed methods) • Data collection, organization, and analysis • Discussion of findings, implications, and limitations • Structuring and formal academic presentation of the thesis
Course Assignments and Assessments	
Assignments and descriptions:	Assignments and descriptions: 1. Thesis Proposal: A brief document outlining the research question, objectives, literature review, and proposed methodology. The proposal must be approved by the supervisor before further research begins. 2. Draft Submissions: Two draft submissions (mid-thesis and final draft) to assess progress, provide feedback, and adjust as needed. 3. Final Thesis: A comprehensive, professionally formatted thesis document presenting the research question, methodology, findings, analysis, and conclusions. The final submission will be evaluated by a faculty committee.
Course Policies and Procedures	
Attendance policy:	IBCM Bachelor thesis policy.
Late work or assignments policy:	Milestones, including proposal submission and drafts, must adhere to deadlines set by the supervisor. Extensions may be granted in exceptional cases with prior approval.
Student Support Resources	
IT Support and Resources:	Students have access to campus IT support for any technology-related issues, as well as library resources for academic materials and journals relevant to their thesis research.

6. ANNEX I

STUDYING AT IBCM

Education at IBCM is unique thanks to both the content of our study programs and our learning model: *From Theory to Practice*, which enables four steps inside the learning process – conceptualization, experimentation, experience and reflection, all of them based on a problem-based learning (PBL) methodology. IBCM is the first College in this area to implement such a model and here, we particularly insist on PBL. Since the very beginning of IBCM, we have consistently applied this innovative learning model in our curricula, and up to know, we are sure it works very well.

Learning activates

Our learning model *From Theory to Practice*, incorporated with PBL, teaches you to think for yourself, conduct individual research and group research, interact and learn from one another. In such an environment:

- you take action instead of just listening and reading
- you learn to ask the right questions, research the right issues and have the right discussions
- you acquire essential skills and prepare yourself for your professional career
- you meet people from practice, since we organize field visits and guest speakers from relevant institutions, linked to topics you will study.

Integrated, multi- and interdisciplinary approach

Education and research at IBCM, in relation to EMAT programmer, focus on social themes that are studied from various disciplines at all relevant levels. We recognize the value of bright, young researchers in contributing to the development of fresh and innovative ideas. That is why we want to get our students acquainted with research and different fields of study right from the start by offering:

- During semesters, certain elective courses are offered, where student have the opportunity to collaborate with their fellows from other spurs, to follow courses different than ones offered at their spur, and finally, to write an interdisciplinary project that requires inter- and multidisciplinary way of thinking.

- Opportunities for exemplary bachelor's students, in order to further broaden your knowledge and insights, by offering best internship placements, with good employment opportunities.
- As part of your bachelor’s programme at IBCM you can get acquainted with a further studying options at any European University, and apply for internship placement, Master level or any relevant programme at another faculty.

What does a regular week of study at IBCM look like?

No more rushing from one subject to the other. Your week will no longer start with Maths, followed by Science and English. We ensure focused studying, which can contribute to your overall professional development.

Where does IBCM’s international strength lie?

IBCM is the most international and fully English spoken College in the area. Besides this fact, every day you will encounter different languages and cultures, and most study programmes have a decidedly international theme. IBCM bachelor's programmes place heavy emphasis on studying abroad, often including it as a core requirement for graduation. Our college has dozens of international partnerships and student-exchange agreements, and we encourage interdisciplinary and international collaboration.

Our academic environment

This focus on internationalism extends to the classroom, where interaction with students from different cultures, experiences and traditions impacts the education of each person. Interaction using problem-based learning requires that students directly engage one-another to tackle each question and issue. Various perceptions are immediately brought to the fore as students establish what each person already knows and set learning objectives together.

Career

At IBCM you can learn to be any of EMAT professionals and more. Our programmes will provide you with the knowledge and skills you need to successfully step into your professional career.

Why do you choose a specific programme?

- you find a programme interesting
- you want to study or do an internship abroad
- you hope to find a challenging job in your area of expertise after you graduate

From graduation to employment

Our learning methodology *From Theory to Practice* is highly effective, as can be seen from the achievements of our graduates. In the labour market they are considered independent, assertive professionals, to whom analyzing problems, structuring information, working as part of an international team, conducting and leading discussions and presenting ideas is second nature.

What are IBCM graduates from EMAT spur doing now?

The IBCM was offering Environmental and Agriculture Management (EAM) program that equipped students for a dynamic job market in both public and private sectors. Over 90% of recent EAM graduates are employed in roles like environmental manager, agricultural economist, and food safety consultant. Due to technological advancements, the program is now divided into Environmental Management and Technology and Agro-Economy, with updates to include smart meters, sensors, and AI for low-carbon power and energy efficiency. IBCM has restructured study programs to align with market needs. The restructured Environmental Management and Technology program is housed alongside Applied Information Technology, offering specialisations such as software development, data analysis, web design, and systems security.

The graduates of the faculty are employed across various public sector institutions, non-governmental organizations, and private companies, where they serve in roles related to policy analysis, environmental managers, project management, and community development activities. In addition, a significant number of our graduates have chosen to continue their studies at the master's and doctoral levels, specializing in areas such as environmental and agricultural management. Their solid foundation from our program has enabled them to pursue advanced studies at respected universities across Europe and beyond, further enhancing their expertise and career prospects.

What makes our program different?

EMA&T Bachelor offers the opportunity to:

- Study a broad selection of applied science-based environmental units to give you specialist skills and knowledge required by the industry and technological use.
- Learn from world-leading and ground-breaking researchers and teaching staff in areas including environmental management, IT, IoT, AI, etc.
- Develop the technical skills and expert knowledge to work in sustainable development now and in the future.
- Provide paddock-ready solutions to solve environmental problems using advanced technology.
- Participate in an international exchange program or complete a short-term overseas study experience and count it towards your degree.
- Study in class sizes that are small enough to provide great support from academic mentors, but large enough for peer-to-peer group work with other students.
- Study flexibly either on campus or hybrid with partner institutions. On campus classes give you the opportunity to interact and engage face-to-face with your peers and academic staff, and gain essential practical skills. If you choose a hybrid joint class, some units include mandatory intensive schools on campus.
- Complete your course in three years (full time).