

**Filters used for the printout**

Curriculum period: 2024-2025. Studies included in the printout: Courses. Languages of the descriptions: English. Language of the printout template: English.

**YTMSSST\_EM Sociotechnical Systems and Sustainability Transitions**

YTMSSST\_EM Sociotechnical Systems and Sustainability Transitions

**CURRICULUM PERIOD 2024-2025**

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	min 120 cr
Languages	English
Grading scale	Grading scale for degrees (distinction)
Content approval required	no
Locations	Lappeenranta
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Riina Saarenvesi, Administrative person Hanna-Mari Husu, Responsible teacher Antti Silvast, Responsible teacher Tarja Pettinen, Administrative person
Degree programme type	Master's Degree
Degree titles	Master of Social Sciences
Study field	Fields of education (Ministry of Education and Culture), Social sciences
Education classification	733299 Master of Social Sciences, Other or Unknown Field

**Content description****EN: Facts**

- Degree Master of Social Sciences (M.Soc.Sc.), (Yhteiskuntatieteiden maisteri in Finnish)
- Higher university degree, gives eligibility to apply for scientific doctoral studies
- Extent 120 ECTS credits

The Master's degree (120 ECTS) consists of core studies, advanced specialisation studies and multidisciplinary studies in critical systems of the society. The Master's Thesis and Seminar is included in the advanced specialisation studies. Elective studies can be any courses offered by LUT if the required prerequisites are fulfilled. Studies in other universities/from abroad may be included upon application, too.

**Learning outcomes**

**EN:** The Master's programme in Sociotechnical Systems and Sustainability Transitions specialises in the systems that are critical to society and the sustainable use of natural resources (in particular energy, food and water). The programme examines governance, management and cooperation between different actors (public sector, enterprises and voluntary sector) in the context of sustainable transition. The programme includes solution-oriented approaches and it focuses on decision-making at global, national and local levels. Students who have completed their M.Soc.Sc. degree in Sociotechnical Systems and Sustainability Transitions are able to:

- understand the requirements of sustainability transition
- understand the governance of various sociotechnical systems in the transition processes
- apply theories based on sociotechnical systems approach to building more sustainable transition governance and policy

- recognise the most significant environmental, social and economic impacts of transition processes
- assess the complex interlinkages between the local and global sociotechnical systems
- apply innovative and problem-solve thinking in the context of sociotechnical systems

### Additional information

**EN:** This master's programme will start in autumn 2024

## DEGREE STRUCTURE

Part of the degree	Credits
SOCIOTECHNICAL SYSTEMS AND SUSTAINABILITY TRANSITIONS	min 120 cr
<b>DRAFT</b>	
YTMSSSTCORE_EM CORE STUDIES	min 31 cr
<b>DRAFT</b>	
YTS010000 Introduction to M.Sc. studies	1 cr
<b>DRAFT</b>	
YTS010200 Methodological Tools to Study Sustainability in Social Sciences	5 cr
<b>DRAFT</b>	
YTS010300 Methodological Tools to Study Technology-topics in Social Sciences	5 cr
<b>DRAFT</b>	
YTS010400 System Theory and System Interdependence	5 cr
<b>DRAFT</b>	
YTS010500 Transition Studies and Innovation Policy	5 cr
<b>DRAFT</b>	
YTS010600 Economy and Society	5 cr
<b>DRAFT</b>	
YTS010700 Public Policy Analysis	5 cr
<b>DRAFT</b>	
YTDKIELI_EM LANGUAGE AND COMMUNICATION STUDIES	min 4 cr
<b>DRAFT</b>	
KE00BZ81 Academic Writing	3 cr
<b>DRAFT</b>	
COMPLETE AT LEAST 1 ECTS IN ENGLISH (grouping module)	
YTMYSVOPSSST ADVANCED SPECIALISATION STUDIES	min 60 cr
<b>DRAFT</b>	
YTMSSSTSPEC SOCIOTECHNICAL SYSTEMS AND SUSTAINABILITY	min 60 cr
<b>DRAFT</b>	
YTS010100 Master's Thesis and Seminar	30 cr
<b>DRAFT</b>	
LUTKYPST Maturity test in Master's degree	0 cr
<b>DRAFT</b>	
YTS011400 Introduction to Food-Energy-Water Systems	5 cr
<b>DRAFT</b>	
YTS011500 Natural Resources Policy and Governance	5 cr
<b>DRAFT</b>	
YTS011600 Renewable Energy Policy	5 cr
<b>DRAFT</b>	
YTS011700 Sustainable Water Use Governance	5 cr
<b>DRAFT</b>	
YTS011800 Food Security Governance	5 cr
<b>DRAFT</b>	

<b>YTS011100</b> Smart Cities and Urban Transitions	5 cr
<b>DRAFT</b>	
<b>YTMOKRJ</b> MULTIDISCIPLINARY STUDIES, CRITICAL SYSTEMS OF THE SOCIETY	min 25 cr
<b>DRAFT</b>	
COMPULSORY STUDIES (grouping module)	
<b>A350A0501</b> Sustainable Strategy	6 cr
<b>DRAFT</b>	
<b>YTS011900</b> Programming for Social Scientists	5 cr
<b>DRAFT</b>	
<b>YTS012000</b> Solving Societal Challenges with Data	5 cr
<b>DRAFT</b>	
ALTERNATIVE STUDIES (grouping module)	
<b>BH10A3000</b> Energy and Society	4 cr
<b>DRAFT</b>	
<b>BH60A4402</b> Sustainability in Socio-Technological context	6 cr
<b>DRAFT</b>	
<b>BJ03A1011</b> Introduction to Water Treatment Technologies	5 cr
<b>DRAFT</b>	
<b>BH60A7200</b> Circular.now	3 cr
<b>DRAFT</b>	
<b>BH60A7400</b> Climate.Now	2 cr
<b>DRAFT</b>	
<b>VTS010800</b> Role of Software in Societies	5 cr
<b>DRAFT</b>	
<b>CS30A1365</b> Sustainability-oriented innovation	3 cr
<b>DRAFT</b>	
<b>CS39A0090</b> Networks and ecosystems	6 cr
<b>DRAFT</b>	
<b>A380A0300</b> Introduction to Digital Marketing	3 cr
<b>DRAFT</b>	
<b>A130A0551</b> Organizational Behaviour	6 cr
<b>DRAFT</b>	
<b>CS39A0070</b> Managing digital transformation	6 cr
<b>DRAFT</b>	
<b>A350A0601</b> Contemporary Issues in Strategic Management and Innovation	6 cr
<b>DRAFT</b>	
<b>VAPVALYTM</b> ELECTIVE STUDIES	min 0 cr
<b>DRAFT</b>	
ADDITIONAL MINOR STUDIES (grouping module)	

## FILTERED COURSES

### **YTS010000** Introduction to M.Sc. studies

#### **YTS010000** Introduction to M.Sc. studies

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	1 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Learning outcomes

**EN:** Upon completion of the course, the student:

- Has the basic knowledge of studying at LUT University and use of the Moodle learning environment.
- Has the basic knowledge of the research areas at Social Sciences and School of Engineering Science.
- Knows how to plan an individual study plan and to follow the progress of the studies in SisU.
- Knows the practices and regulations regarding examinations and the Master's Thesis.
- Is familiar with the Academic Library's services, collections and databases.
- Understands how to use the information sources in accordance with good practices and respecting the copyrights, write course assignments with correct references.

### Content

**EN:** Introduction course for students who have Bachelor's degree from other university than LUT University. The Orientation Days activities.

Practical study-related information. LUT library collections, databases, reference practices, copyrights, information security, career planning and cultural difference related issues.

Degree requirements and planning of Master's studies, preparation of the individual study plan. Study and exam culture in LUT.

Research areas of Social Sciences and School of Engineering Science.

### Additional information

**EN:** Will be organised first time in academic year 24-25.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	1 cr
Course Completion	-----	1 cr

## YTS010200 Methodological Tools to Study Sustainability in Social Sciences

### YTS010200 Methodological Tools to Study Sustainability in Social Sciences

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%

Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Antti Puupponen, Responsible teacher Jaana Laine, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enroll into the master's program.

### Learning outcomes

**EN:** After completing the course, students:

- Have diverse know-how to use various methodological tools: know how to search and apply method information to design and conduct social scientific research on sustainability.
- Can report and evaluate social scientific sustainability research that utilizes different methods.
- Know the data collection process of several qualitative (e.g., interviews, archival) and quantitative (e.g., survey experiments, longitudinal surveys) data types.
- Know how to apply several qualitative (e.g., discourse analysis, narrative analysis, frame analysis) and quantitative (e.g., variance analysis, longitudinal regression analysis, structural equation models) analysis methods to investigate sustainability in social sciences.
- Can utilize computer software for data analysis (e.g., Stata, NVivo).

### Content

**EN:**

- Planning, conducting, reporting, and evaluating social scientific research on sustainability.
- Various qualitative and quantitative methodological tools for data collection and analysis.
- Choosing appropriate methods and research designs for research questions within sustainability theme.

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** Course material and literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## YTS010300 Methodological Tools to Study Technology-topics in Social Sciences

### YTS010300 Methodological Tools to Study Technology-topics in Social Sciences

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5

University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enroll into the master's program.

### Learning outcomes

**EN:** After completing the course, students:

- Have diverse know-how to use various methodological tools: know how to search and apply method information to design and conduct social scientific technology research.
- Can report and evaluate social scientific technology research that utilizes different methods.
- Know the data collection process of social media data.
- Know how to apply several qualitative (e.g., content analysis, thematic analysis, analysis of images) and quantitative (e.g., topic models, social network analysis, sentiment analysis) analysis methods to investigate technology-topics in social sciences.
- Can utilize computer software for data analysis (e.g., Stata, NVivo).

### Content

**EN:**

- Planning, conducting, reporting, and evaluating social scientific research of technology topics.
- Various qualitative and quantitative methodological tools for data collection and analysis.
- Choosing appropriate methods and research designs for research questions within technology research topics.

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** Course material and literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## YTS010400 System Theory and System Interdependence

YTS010400 System Theory and System Interdependence

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr

Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Understand the meaning of social systems and principles of system theory and its main concepts
- Know how to deploy system theory to analyse empirical phenomena
- Understand socio-technical system change and reproduction
- Know similarities and differences regarding other approaches and concepts.

### Content

**EN:**

- Introduction to system theory; what are social systems; what are socio-technical systems?
- The key concepts of system theory
- Systems' relationship to environment and other systems; what are subsystems
- System change and reproduction
- The role of communication in systems
- Open and closed systems
- System stratification, integration and disintegration
- System theory's similarities and differences regarding other approaches such as field theory and the concept of social structure

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** The literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## YTS010500 Transition Studies and Innovation Policy

YTS010500 Transition Studies and Innovation Policy

Curriculum period

2024-2025

Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Understand societal transitions, policy innovation, and their drivers
- Understand the role of innovation policy and socio-technical change in transitions
- Recognize the impact of transitions on various stakeholders
- Describe suitable strategies for stakeholder engagement in transitions
- Be able to explain the ethical, equity, and social justice implications of transitions and policy choices

### Additional information

**EN:** Will be organised first time in academic year 24-25. Recurrence of teaching: Every other year.

### Study materials

**EN:** The literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## YTS010600 Economy and Society

### YTS010600 Economy and Society

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%



Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences that gives eligibility to enroll into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Understand the social content of economic reality
- Understand economy as evolving different cultural and institutional settings, political conflicts, disputes around values and ideas, and social behaviors
- Know the key topics and concepts in economic sociology and political economy from a critical perspective
- Know the main economic controversies of modernity and the core theories on the relationship between capitalism and democracy
- Understand the relationship between technology, innovation and the economy

### Content

**EN:**

- The social character of the economy: core topics in economic sociology, political economy and heterodox economics
- The origin and peculiarities of the capitalist economic system
- The importance of innovation and technology
- Capitalism and democracy: the role of politics in a liberal economic order
- Welfare states and markets: the limits of state regulation and social control of the capitalist economy
- The relationship between the capitalist market economy and modern culture: behaviors, values, ideas and institutions

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** The literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## YTS010700 Public Policy Analysis

### YTS010700 Public Policy Analysis

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr

Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher Ilona Bontenbal, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enroll into the master's program.

### Learning outcomes

**EN:** After taking this course, students will:

- be able to explain what a policy analysis is,
- be familiar with the scientific terminology of policy analysis,
- understand the approaches and results of extant policy analyses,
- have gained more experience in discussing policy analyses, and
- be able to conduct a policy analysis.

### Content

**EN:** From environment to pensions, policies are a central instrument for steering societies. To better understand these policies, a range of analyses instruments can be utilized. This course explains what policy analyses are and discusses when and why such analyses are conducted. Moreover, it explains what methods can be used for analyzing policies. Finally, it highlights what findings policy analyses can render.

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** Fischer, F., Miller, G.J., & Sidney, M. S. (eds.) (2019). Handbook of public policy analysis: Theory, politics, and methods. New York: Routledge.

Knoepfel, P., Larrue, C., Varrone, F., & Hill, M. (2007). Public policy analysis. Bristol: Policy Press.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## KE00BZ81 Academic Writing

### KE00BZ81 Academic Writing

Abbreviation: KE00BZ81

Curriculum period	2024-2025
Validity period	since 1 Aug 2024

Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Anneli Rinnevali, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs) Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Details available in Completion methods under the header Teaching

### Learning outcomes

**EN:** Proficiency level: B2-C1 Students are able to identify the characteristics of academic writing to demonstrate their proficiency in applying academic writing conventions, both generic and discipline-specific, to their writing to demonstrate their ability to critical thinking and analysis to demonstrate ability in collaborative situations to produce a 6-page academic paper in pairs or in groups of three

### Study materials

**EN:** Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
▫LAB/LUT: Course Completion	-----	3 cr

## YTS010100 Master's Thesis and Seminar

### YTS010100 Master's Thesis and Seminar

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	30 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

## Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enroll into the master's program.

## Learning outcomes

**EN:** After completion of the course, students will be able to:

- define their research topic and write a research plan,
- acquire research data and select research methods,
- write a Master's thesis,
- understand research ethical questions involved in research and the correct use of references, and
- critically discuss, give and receive feedback on research.

After completion of the thesis, students will have:

- experience in conducting scientific research,
- in-depth knowledge of their thesis topic, and
- experience in leading a research project.

## Content

**EN:** Writing a Master's thesis is a very exciting task, but it can also be challenging. The Master's Thesis Seminar helps you with this task. It discusses how to pick a thesis topic, how to plan a thesis, and how to write it. Exercises help you in planning your thesis. Moreover, you can get feedback on any text you might already have. Afterwards, you are in a good position to finish writing your thesis.

## Additional information

**EN:** Will be organised first time in academic year 24-25. There will be separate groups for the Master programmes in digital social sciences and in sociotechnical systems and sustainability transition. Will be organised first time in academic year 24-25.

## Study materials

**EN:** The course literature will be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-4. period	30 cr
Course Completion		30 cr

## LUTKYPST Maturity test in Master's degree

### LUTKYPST Kypsyysnäyte maisterin tutkinnossa

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	0 cr
Languages	English, Finnish, Swedish
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Lappeenranta-Lahti University of Technology LUT 100%
Responsible persons	Tiina Kronqvist, Responsible teacher Mervi Lensu, Responsible teacher Taina Pekari, Responsible teacher
Study level	Other studies

Study field	Fields of education (Ministry of Education and Culture), Business, administration and law Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs) Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction
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### Equivalences to other studies

K1 Maturity test in Master's degree (content)

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>		0 cr
Finnish language		0 cr
Content		0 cr

## YTS011400 Introduction to Food-Energy-Water Systems

### YTS011400 Introduction to Food-Energy-Water Systems

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Understand food, energy, and water as sociotechnical systems
- Understand the interconnectedness of food, energy and water sectors
- Is able to evaluate how sustainability change affects systems
- Know how to deploy theories and analytical tools to analyse food, energy, water systems

### Content

**EN:**

- Introduction to sociotechnical systems in food, energy, water sectors and infrastructures
- Sustainability and sustainable change in food, energy, water sectors

- The interdependence of food, energy and water systems
- Security, risks, demands, and future development of food, energy, and water systems
- The impact of food, energy, and water systems for social sustainability
- Theories, methodological approaches, and key concepts regarding food, energy, water systems.

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** The literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## YTS011500 Natural Resources Policy and Governance

### YTS011500 Natural Resources Policy and Governance

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Learning outcomes

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program. After completing this course, the students will:

- Understand major processes and institutions of natural resource policy and governance
- Understand the major aspects of implementation of natural resource policy and governance in rural/urban and in local/global contexts
- Be aware of political, economic, and social institutions and organizations and their impact on natural resources
- Understand the impact of natural recourse policy and government to prosperity/poverty, equality/in-equality, and security/conflicts
- Be able to explain major theories and research methods

### Content

**EN:**

- Main natural resources policies; goals and means of implementation
- Governance of natural resources in rural/urban and in local/global contexts

- Major political, economic, and social institutions and organizations
- Natural resources in creating prosperity/poverty, equality/inequality, and security/conflicts
- Theories and research methods

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** Literature will be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## YTS011600 Renewable Energy Policy

### YTS011600 Renewable Energy Policy

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Understand the international, national, and local contexts of renewable energy.
- Be able to evaluate the challenges and opportunities of renewable energy policy and understand its role in the energy transition.
- Understand industrial policy contribute to renewable energy development and the interactions between different policy instruments.
- Recognize the interlinkages between energy security and sustainability transitions.
- Produce a policy brief on specific energy issues

### Content

**EN:**

- Renewable Energy Technologies and their Impacts

- Actors and Institutions in Renewable Energy Policy Making
- European Renewable Energy Policy Framework
- Energy Security, Industrial Policy, and Geopolitics
- Energy Mixes for Sustainable Energy Transitions
- Energy Justice Considerations for Policymaking
- Community-Based Renewable Energy Initiatives

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** The pre-reading package and other literature for the course will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## YTS011700 Sustainable Water Use Governance

### YTS011700 Sustainable Water Governance

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Understand major processes and institutions of sustainable water use governance
- Know how power relations, inequality, and security relate to water use governance
- Understands water infrastructure and governance
- Be aware of the possibilities of co-governance (stakeholders, local movements)
- Recognizes risks in water use governance
- Be able to explain major theories and research methods



## Content

### EN:

- Sustainable water use governance both in rural/urban and in local/global contexts
- Political, economic, and social processes and institutions connected with sustainable water use governance
- Power relations, inequality, and security
- Water infrastructure and governance, co-governance, stakeholders, local movements
- Risk, threats, conflicts, and vulnerabilities (such as flood, drought, transboundary water sharing)
- Theories and research methods

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** Literature will be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## YTS011800 Food Security Governance

### YTS011800 Food Security Governance

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- Obtain an overview of the state of global food security and the causes of problems.
- Understand the different regional and political contexts of food security.
- Understand the roles of the different actors, their capacities and approaches to food security issues.

## Content

**EN:** Food insecurity is a major global problem. Countries affected by poverty, conflict and challenging environmental and climatic conditions are particularly vulnerable to food insecurity. However, wealthy countries also have people suffering from poverty and nutritional inequalities. Content:

- Policies to improve and manage food security in the context of sustainability transitions.
- The role of public policy and the business and the voluntary sector in addressing food security problems.
- Overview of the complex web of food regulation, production, distribution and consumption and the related decision-making, communication and lobbying processes.

## Additional information

**EN:** Will be organised first time in academic year 24-25.

## Study materials

**EN:** Course material and literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## YTS011100 Smart Cities and Urban Transitions

### YTS011100 Smart Cities and Urban Transitions

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

## Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

## Learning outcomes

**EN:** After completing the course, students will

- Have a broad understanding of technological transitions in cities from the perspectives of citizens' well-being, and energy and resource efficiency.
- Have tools to review the latest research literature on technological urban transitions.
- Understand the social scientific approach to urban planning from the perspectives of sustainability and social factors.

- Understand the significance of social scientific theories in explaining issues on urban smart technologies.
- Students can examine smart technologies from several social scientific perspective: e.g., How do citizens adapt or reject urban technologies, how smart city transitions impact urban planning.

## Content

### EN:

- Empirical research and social scientific theories on smart technologies in urban environments of today and in the future.
- Perspectives of different smart technologies in the context of urban transitions (e.g., internet of things and smart grids).
- Ethical consideration of indoor and outdoor smart technologies.
- The impact of smart technologies on citizens' behaviour and wellbeing (e.g., stress, social contacts, and physical activity).
- The impact of smart technologies on urban planning (e.g., urban food, optimization of local energy and mobility systems, ensuring liveable and regenerative circular economies in cities).
- Review of social factors around smart cities and how to examine them from the perspectives of social sciences and sustainability.

## Additional information

**EN:** Will be organised first time in academic year 24-25.

## Study materials

**EN:** Will be informed later.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## A350A0501 Sustainable Strategy

### A350A0501 Sustainable Strategy

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Anni Tuppuru, Responsible teacher Suvi Tiainen, Administrative person Paavo Ritala, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

## Tweet text

**EN:** Location: Lappeenranta

## Learning outcomes

**EN:** This course concentrates on the topical phenomena and concepts related to the creation and development of sustainable strategy in organisations. In particular, the focus is on the intersection of firm strategy and economic, social, and environmental dimensions of sustainability. These topics are investigated both from the viewpoints of academic research and practical relevance. Students will learn to discuss and synthesize the relevant academic evidence, examine the links of contemporary topics to previous research and assess the practical relevance of the issues through concrete examples. The learning outcomes of the course are the following:

1. To assess the topic of sustainable strategy in the firm level as well as within the broader institutional context from both academic and practitioner perspectives.
2. To discuss and debate on different and conflicting perspectives regarding sustainability in business.
3. To be able to analyze the practical relevance of sustainable business strategy.

## Content

**EN:** The content of the course is based on topical issues related to sustainable strategy from different approaches, e.g., sustainable strategy and sustainable business models, and strategic opportunities and challenges of circular and regenerative economy. Thematic lectures in the beginning of the course introduce the central concepts. After that the students start to accumulate deeper understanding on a chosen topic by familiarizing to literature and conducting an essay. During the second half of the course the students will be working in groups of four to conduct research on sustainable strategy issue. Interactive workshop and seminars are organized to discuss the individual and group assignments.

## Additional information

**EN:** Blended learning  
\*\*\*

The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth, 9 industry, innovation and infrastructure, 12 responsible consumption and production

## Study materials

**EN:** Mainly academic literature related to the subjects of the assignments. In addition lecture materials, practitioner-oriented articles, videos, and podcasts on sustainable business provided in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	6 cr
Course Completion		6 cr

## YTS011900 Programming for Social Scientists

### YTS011900 Programming for Social Scientists

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Intermediate studies

Study field Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

### Learning outcomes

**EN:** After completing this course, the students will:

- be able to explain what programming is used for,
- understand the opportunities that programming brings for social scientists,
- be aware of the most popular programming languages,
- have experience in using one programming language.

### Content

**EN:** Programming skills are in high demand, also outside the traditional jobs of software engineers. To participate in multidisciplinary innovation and problem solving, it is advantageous for social scientists to understand the logic and basics of programming. Understanding the basics of the field of software engineering facilitates multidisciplinary collaboration. Social scientists equipped with basic programming skills are in head start in the job markets and have more tools to use for social scientific research and solving socially relevant issues.

### Additional information

**EN:** Will be organised first time in academic year 24-25.

### Study materials

**EN:** Will be informed later.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion	-----	5 cr

## YTS012000 Solving Societal Challenges with Data

### YTS012000 Solving Societal Challenges with Data

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Hanna-Mari Husu, Responsible teacher Jaana Laine, Responsible teacher Antti Puupponen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

## Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program.

## Learning outcomes

**EN:** After completing this course, the students will:

- know where and how they can obtain open data,
- be able to assess the quality and restrictions of data sources,
- be aware of the opportunities of multidisciplinary collaboration,
- have experience in planning projects solving societal challenges.

## Content

**EN:** Massive amount of data is generated every day by public and private organizations around the world. Digital footprints are collected as part of people's everyday lives and their everyday activities, for example when shopping online, browsing the internet, or using social media. Big data collected has attracted increasing attention over the recent years, and increasing amount of survey, register, and other traditional type of data are openly available. Much of this data remains unutilized, even though powerful analyses for solving societal challenges become possible. This course explores the opportunities and challenges of open data and the benefits of multidisciplinary approach to problem solving.

## Additional information

**EN:** Will be organised first time in academic year 25-26.

## Study materials

**EN:** Chen, S.H. (ed.) (2018). Big data in computational social science and humanities. Cham: Springer. Additional literature will be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## BH10A3000 Energy and Society

### BH10A3000 Energy and Society

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%
Responsible persons	Minna Loikkanen, Administrative person Eeva-Lotta Apajalahti, Responsible teacher Alicja Dankowska, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

**Tweet text**

**EN:** The place of teaching: Lappeenranta; blended teaching

**Learning outcomes**

**EN:** Upon completion of the course the student will be able to:

1. perceive energy systems as sociotechnical systems
2. understand societal, political, historical and cultural aspects of energy system change
3. analyse how media mediates ongoing energy transition and what is the role of different actor groups such as corporate representatives, civic society, entrepreneurs, industry associations and politicians influence ongoing energy transition
4. argue and write own perspectives as experts and engage with wider societal discussions on some aspects of energy.

**Content**

**EN:** The course focuses on societal, political, historical and cultural perspectives on energy systems development and ongoing energy transition. The course's approach to the energy systems is sociotechnical, which means that social processes and human agency shape technology and energy system as much as technology and energy system shape social processes and everyday modern way of living. The six approaches of the course are 1) energy systems as sociotechnical systems, 2) historical approach to energy system change, 3) cultural framing of energy technology, 4) energy policy and actor groups, 5) energy citizenship, 6) power and interplay of energy market actors in energy field.

**Additional information**

**EN:** The course is held face-to-face at Lappeenranta campus. "Lectures" are based on pre-assignments, pair/group discussions and workshop type of tasks during the lecture meetings. The course is primarily for students of Energy Technology, but it is open for other LES students as well as students from other LUT schools.

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The course is related to UN's Sustainable Development Goals (SDG): 7 affordable and clean energy, 9 industry, innovation and infrastructure, 11 sustainable cities and communities, 16 peace, justice and strong institutions.

**Study materials**

**EN:** Materials are provided during the course

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 3. period-4. period	4 cr
Course Completion		4 cr
<b>Method 2</b>	Recurrence 1: 3. period-4. period	4 cr
Course Completion		4 cr

**BH60A4402 Sustainability in Socio-Technological context****BH60A4402 Sustainability in Socio-Technological context**

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%

Responsible persons	Annukka Ilves, Administrative person Jarkko Levänen, Responsible teacher Miika Marttila, Responsible teacher Lassi Linnanen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

**Tweet text****EN:** Location: Lappeenranta**Equivalences (free text field)****EN:** BH60A4400 Introduction to Sustainability**Learning outcomes****EN:** After successfully completing the course, students are able to:

- 1) Outline the different dimensions of sustainability; ecological, social, economic and cultural,
- 2) Explain the interaction between the environment, society and business and the relationships, of various actors in these fields and their impacts on the society and the environment ,
- 3) Explain the core idea and thinking behind sustainability and its importance in order to limit or decelerate environmental damages and improve our quality of life while pursuing a more sustainable lifestyle and business within the planetary boundaries,
- 4) Apply practically the learned principles and concepts of sustainability in relation to current production and consumption habits,
- 5) Analyze environmental impacts of a product within a selected system,
- 6) Know and be able to apply different value-adding activities and tools that promote sustainability; and
- 7) Reflect on sustainability principles and desirably in thinking and lifestyles.

**Content**

**EN:** The general objective of the course is to provide a comprehensive overview on the concepts of sustainability, sustainable business, and sustainable transition. The course introduces global sustainability challenges that the planet and societies are facing due to human activities and natural causes. Sustainability challenges and their interconnections are learnt and understood in order to realize the need for the sustainability transition.

**Additional information****EN:** The course is based on independent digitalized studying supported by two lectures during the period 1.**Study materials****EN:** Will be announced in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	6 cr
Course Completion	-----	6 cr



## BJ03A1011 Introduction to Water Treatment Technologies

### BJ03A1011 Introduction to Water Treatment Technologies

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Chemical Engineering 100%
Responsible persons	Armi Rissanen, Administrative person Susana Rodriguez Couto, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

#### Tweet text

**EN:** Location: Blending teaching; Mikkeli (contact teaching)

#### Prerequisites

**EN:** As an introductory course (with the 1st lecture on conventional water treatment technologies), Laboratory safety course (BJ02A0060) should be completed before participating in the laboratory sessions of the course.

#### Recommended prerequisites

BJ02A0060 Laboratory Safety Course

#### Equivalences (free text field)

**EN:** Replaces the course BJ03A1010 Introduction to Advanced Water Treatment, 5 ECTS

#### Learning outcomes

**EN:** By the end of the course, the student is expected to be able to: describe conventional and advanced biological, chemical and physical treatment of contaminated water and wastewater; and to suggest suitable treatment method(s) based on the composition of the water/ wastewater and the efficiency of the studied technology(ies).

#### Content

**EN:** Learning the principles of water treatment techniques such as biological methods, coagulation/flocculation, adsorption/ion exchange, advanced oxidation processes (AOPs), membrane technology, and electrochemical methods. Comparison of different water treatment techniques will be considered in the course from economic, environmental and technical perspectives. Problem-based learning (PBL) using real case scenarios will be conducted as a group work. Weekly homework assignments related to the topic of each week will be proposed (to be prepared individually or in groups).

#### Additional information

**EN:** Suitable for doctoral studies.

The course is related to UN's Sustainable Development Goals (SDG): 6 clean water and sanitation.

#### Study materials

**EN:** Lecture notes. Moodle. Literature from published scientific articles and from the teacher's own books.

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 1. period	5 cr
Course Completion		5 cr
<b>Method 2</b>	Recurrence 1: 1. period	5 cr
Course Completion		5 cr

## BH60A7200 Circular.now

### BH60A7200 Circular.now

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%
Responsible persons	Sanni Väisänen, Responsible teacher Annukka Ilves, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

#### Tweet text

**EN:** Location: Lappeenranta, Lahti, kokonaan verkossa / full digi

#### Learning outcomes

**EN:** After successfully completing the course, students are able to:

1. explain the targets of circular economy and understand possibilities to implement circular economy in different sectors,
2. understands capability of the selected products, production systems and services to fulfil the requirements of circular economy

#### Content

**EN:** Introduction to circular economy: circular economy aspects related to food systems, forest systems, product design, transportation sector and sharing economy.

#### Additional information

**EN:** \*\*\*The course is related to UN's Sustainable Development Goals (SDG):

7 affordable and clean energy, 9 industry, innovation and infrastructure, 11 sustainable cities and communities, 12 responsible consumption and production, 13 climate action.

**NOTE!** BH60A7200 Circular.Now and BH60A5401 Introduction to Circular Economy are alternative, both cannot be included in the degree!

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 1. period-Summer	3 cr
Course completion		3 cr
<b>Method 2</b>	Recurrence 1: 1. period-Summer	3 cr
Course completion		3 cr

**BH60A7400 Climate.Now****BH60A7400 Climate.Now**

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	2 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%
Responsible persons	Sanni Väisänen, Responsible teacher Michael Child, Responsible teacher Annukka Ilves, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

**Learning outcomes**

**EN:** The content and learning outcomes of the Climate Change course are based on:

- classifying climate change as a scientific phenomenon,
- explaining how it can be prevented (mitigation),
- summarizing how adaptation to it is possible.

In addition to discussing the scientific basis, the objectives of the course also include discussing the theme of climate change by:

- analyzing it as a global human challenge
- interpreting it as an ethical challenge to our understanding of human life
- commenting on it as a challenge related to the students' fields of study
- appraising it as a challenge regarding the students' personal roles as influencers

**Content**

**EN:** Introduction to Climate change: climate system, future of the climate, impacts, mitigation and adaptation, big issues, applied perspectives and assignments.

Students complete a Massive Open Online Course called Climate.now as well as specified additional assignments.

**Additional information**

**EN:** NOTE! BH60A7400 Climate.Now and BH60A5900 Climate Changeare alternative, both cannot be included in the degree!

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The course is related to the UN's Sustainable Development Goals (SDG):

1 no poverty

2 zero hunger

3 good health and well-being

4 quality education

5 gender equality

6 clean water and sanitation

7 affordable and clean energy

8 decent work and economic growth

9 industry, innovation and infrastructure

10 reduced inequalities

11 sustainable cities and communities

12 responsible consumption and production

13 climate action

### Study materials

**EN:** To be provided on course Moodle pages.

### Literature

<https://digicampus.fi/login/index.php>

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 3. period-4. period	2 cr
Course completion		2 cr
<b>Method 2</b>	Recurrence 1: 3. period-4. period	2 cr
Course completion		2 cr

## VTS010800 Role of Software in Societies

### VTS010800 Role of Software in Societies

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Anna Rantasila, Responsible teacher Erno Vanhala, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

### Prerequisites

**EN:** Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master's program. Some skills of programming (e.g. Python, R, JavaScript)

### Learning outcomes

**EN:** After completing this course you will:

- understand how software impacts different aspects of society
- can reflect on the role of software development in different aspects of contemporary life
- recognise how questions of society and communication are related to themes in software engineering
- understand also the dark side of software engineering

learn to handle data to provide additional information

### Content

**EN:** This course provides broad overview on how software impacts contemporary societies, and what role it plays in the current situation and future developments of environment, industries, work, leisure, and civil society. The course has visiting lecturers from different areas of Software Engineering, who conduct lectures and workshops.

### Study materials

**EN:** Literature will be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
Course Completion		5 cr

## CS30A1365 Sustainability-oriented innovation

### CS30A1365 Sustainability-oriented innovation

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Nina Tura, Responsible teacher Armi Rissanen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

### Tweet text

**EN:** Location: kokonaan verkossa / full digi

### Prerequisites

**EN:** It is preferred that student has accomplished: Innovaatio- ja teknologiajohtamisen peruskurssi (Basics in innovation and technology management) or equivalent.

### Learning outcomes

**EN:** The course aims to familiarize students with the concept of sustainability-oriented innovation and its applications to innovation management.

Aims:

After completion of the course, students will be able to:

- 1) Understand and explain the key concepts and theoretical principles related to sustainability and innovation.
- 2) To be able to examine the different types of sustainability-oriented innovations and companies executing such innovations.
- 3) Recognize and understand the characteristics of new emerging concepts, markets and business models (such as circular economy) having potential for sustainable value creation.
- 4) Critically examine sustainable value creation including possibilities for negative value creation (e.g. tensions and trade-offs)

5) To be able to critically analyze organizations' development and management requirements related to sustainability-oriented innovation.

6) To understand and apply practically learned principles and concepts in relation to innovation management practices and innovation processes.

### Content

**EN:** The idea of the course is to learn and understand the links between innovation management and sustainability and familiarize students with the emerging concepts of sustainability-oriented innovation. The course aims to enhance the development of students' sustainability competences (e.g. critical and anticipatory thinking, collaboration, communication, strategic action and systems thinking) to be used in future decision-making.

### Additional information

**EN:** Course utilizes Moodle-platform.

\*\*\*

Opintojakso liittyy YK:n kestävän kehityksen tavoitteisiin (SDG): 8 ihmisarvoista työtä ja talouskasvua, 9 kestävää tuotoksellisuutta ja innovaatioita ja infrastruktuureja, 11 kestävät kaupungit ja yhteisöt, 12 vastuullista kuluttamista, 13 ilmastotekoja, 17 yhteistyö ja kumppanuus

### Study materials

**EN:** Recent academic literature and online lectures.

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 3. period	3 cr
Course Completion		3 cr
<b>Method 2</b>	Recurrence 1: 3. period	3 cr
Course Completion		3 cr

## CS39A0090 Networks and ecosystems

### CS39A0090 Networks and ecosystems

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Satu Rinkinen, Responsible teacher Armi Rissanen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

### Tweet text

**EN:** Location: Lahti

### Learning outcomes

**EN:** After completing the course the student understands the role of networks in innovation activity and innovation management. After the course the student is able to analyze and describe an organisation's role in business and innovation ecosystems, and to utilize the ecosystem-based view when planning and developing innovation activities.

## Content

**EN:** The core content of the course includes:

- Network-based view on business and innovation
- Innovation networks
- Business and innovation ecosystem characteristics
- Ecosystems as affiliation and as a structure
- Ecosystem evolution

## Study materials

**EN:** Materials will be informed and provided on the course's Moodle page.

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 3. period-4. period	6 cr
Course Enrolment	-----	0 cr
Course Assessment	-----	6 cr

## A380A0300 Introduction to Digital Marketing

### A380A0300 Introduction to Digital Marketing

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Liisa-Maija Sainio, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

## Tweet text

**EN:** Location: Lappeenranta

## Learning outcomes

**EN:** After completing the course, the student should be able to:

1. Define the key concepts of digital marketing.
2. Evaluate suitable digital marketing communication tactics to attract, convert, retain and grow customers.
3. Analyze digital analytics data and make data-driven insights.

## Content

**EN:** Web design, conversion optimization, content marketing search engine optimization, online advertising, social media marketing, web analytics.

## Study materials

**EN:** Articles and online material informed/provided by the lecturer

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 4. period	3 cr
Course Completion		3 cr
<b>Method 2</b>	Recurrence 1: 4. period	3 cr
Course Completion		3 cr

## A130A0551 Organizational Behaviour

### A130A0551 Organizational Behaviour

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Anna-Maija Nisula, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

#### Tweet text

**EN:** Location: full digi

#### Learning outcomes

**EN:** The goal of the course is to familiarize students with the organizational behavior as a theoretical phenomenon. The course focuses on human behavior, factors affecting human behavior and consequences of human behavior in organizations.

After completing the course students should be able to:

- define the key concepts of organizational behavior and identify these concepts by definition
- understand and describe the key theoretical entities that are composed by the association of the basic concepts.

#### Content

**EN:** The course targets on human behavior in organizations as an individual, team and organizational level phenomenon, all of which are interconnected. At the *individual level*, the central themes are personality, psychological capital and values, perceptions and decision making, attitudes, motivations and moods and emotions. At the *group or team level*, the central themes concern management of teams or groups of people, role of group dynamics, power and politics as well as conflicts and negotiation for team behavior. At the *organizational level*, the central themes concern organizational structure, culture, and change. As groups and organizations constitute of individuals it is important to understand individual behaviors, which have an influence to the behaviors of other individuals (groups and organizations) and vice a versa, group and organizational factors have an influence on individual's behavior.

#### Additional information

**EN:**

This course is on-line course and emphasizes students'; self-directed learning via Moodle assignments



## Study materials

- EN:** 1. Robbins, S. P. ; Judge, T. A. (2009). Organizational Behavior. 13th Edition, New Jersey: Pearson/Prentice Hall.  
2. Materials announced by the lecturer.

Completion method and assessment items	Recurrence	Credits
<b>Method 1</b>	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr
<b>Method 2</b>	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

## CS39A0070 Managing digital transformation

### CS39A0070 Managing digital transformation

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Juhani Ukko, Responsible teacher Armi Rissanen, Administrative person Minna Saunila, Responsible teacher Mira Holopainen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

### Tweet text

**EN:** Location: Lahti

### Learning outcomes

- EN:** After completing the course the student will be able to:
- understand the relationship between strategy and digital transformation
  - understand the impact of digital solutions on business processes and human operations
  - define the realization, measurement, and management of digital transformation

### Content

**EN:** Background and basics of digital transformation. Digitalization as part of a company's strategy. Adoption of digitalization in the organization. Measuring and evaluating the effects of digitalization.

### Additional information

**EN:** Will be provided first time in the academic year 2023-24.  
The course is related to UN's Sustainable Development Goals (SDG):

- 8 decent work and economic growth
- 9 industry, innovation and infrastructure
- 17 partnership for the goals

**Study materials**

**EN:** Materials will be announced later in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

**A350A0601 Contemporary Issues in Strategic Management and Innovation****A350A0601 Contemporary Issues in Strategic Management and Innovation**

Curriculum period	2024-2025
Validity period	since 1 Aug 2024
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Paavo Ritala, Responsible teacher Henri Hussinki, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

**Tweet text**

**EN:** Location: Lappeenranta

**Learning outcomes**

**EN:** This course focuses on the topical phenomena and concepts related to strategic management and innovation, which will be investigated from different viewpoints of academic research and business practice. Students will learn to assess, debate and synthesize the recent literature and examine the links of contemporary topics to previous research.

The learning outcomes of the course are the following:

1. To assess and synthesize contemporary phenomena in strategic management and innovation
2. To constructively discuss and debate contemporary strategy and innovation phenomena

**Content**

**EN:** The content of the course is based on current topics of strategic management and innovation, including phenomena linked to broad mega trends such as digitalization and sustainable development. The course syllabus with detailed contents will be distributed in the beginning of the course. The course will utilize online methods and tools (blog posts and discussion threads) for student-driven content creation, discussion and reflection.

**Study materials**

**EN:** Independent content creation based on academic and practical sources and familiarization of other students' input.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period	6 cr
Course Completion		6 cr