Filters used for the printout

Curriculum period: 2025-2026. **Studies included in the printout:** Courses. **Languages of the descriptions:** English. **Language of the printout template:** English.

LUTMEXCHSPRING Exchange Studies (Spring Semester)

LUTMEXCHSPRING Exchange Studies (Spring Semester)

CURRICULUM PERIOD 2025-2026

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	min 20 cr
Languages	English
Grading scale	Grading scale for degrees (distinction)
Content approval required	no
Locations	⚠ [information missing]
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT Business School 100%
Responsible person	Suvi Tiainen, Responsible teacher
Degree programme type	Master's Degree
Degree titles	Master of Science (Economics and Business Administration)
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law
Education classification	732101 Master of Science (Economics and Business Administration), Business Economics

Content description

EN: Whether you are planning to stay for a semester or a year, the exhange students coming to LUT have a proud history of enjoying themselves.
LUT will offer a large number of courses in many academic fields and the choice is yours! However, in order for you to make the most of your stay, please be proactive and take responsibility for your study plan and your studies.

Most of the courses are intended for Master's level or final year Bachelor students, but there are also choices available for those in their Bachelor studies. As the majority of courses are taught at the Master's level, students are expected to have bachelor level knowledge of relevant subjects.

The courses you include in your learning agreement may be subject to chance. A learning agreement is not considered as a course registration.
When starting your studies at LUT you need to enroll to courses and exams.

It is possible to study approximately 30 ECTS credits per one semester. Minimum number of credits per semester is 20.

We at Lappeenranta-Lahti University of Technology LUT (LUT University) invite you to join our high-standard and cross-cultural education and research community.

More information about exhange study experience at LUT www.lut.fi/exhange

DEGREE STRUCTURE

Part of the degree	Credits
EXCHANGE STUDIES (SPRING SEMESTER) DRAFT	min 20 cr
LUTMEXCHSPRINGK EXCHANGE STUDIES (SPRING SEMESTER) DRAFT	min 0 cr
MASTER'S LEVEL STUDIES (grouping module)	
KAMEXCHSPRING_LPR BUSINESS ADMINISTRATION DRAFT	min 0 cr
A220A0752 Analytics for Business DRAFT	6 cr
A330A0061 B2B Marketing DRAFT	6 cr
A350A2000 Business Ethics DRAFT	3 cr
A210A0050 Comparative International Accounting: Theory and Practice DRAFT	6 cr
A350A0601 Contemporary Issues in Strategic Management and Innovation DRAFT	6 cr
A210A0200 Empirical Strategy Research DRAFT	6 cr
A330A0550 Essential Sales and Negotiation Skills DRAFT	3 cr
A310A0201 External Resource Management DRAFT	6 cr
A240A0070 Fuzzy Data Analysis DRAFT	6 cr
A220A0053 Investment and Business Analysis with Excel DRAFT	6 cr
A320A3001 Melting Pot of Entrepreneurial Competencies DRAFT	6 cr
A240A0020 Optimization in Business and Industry DRAFT	6 cr
A320A6000 Prototype Project at J. Hyneman Center DRAFT	6 cr
A210A0350 Real Options and Managerial Decision Making DRAFT	6 cr
A330A0450 Responsible International Business DRAFT	3 cr
A310A0651 Risk Management in Supply Chain DRAFT	6 cr
A310A0603 Supplier Development and Relationship Management DRAFT	6 cr
A220A0550 Advanced Decision-making DRAFT	6 cr
A350A3000 Advanced Topics in Business Ethics DRAFT	3 cr
A330A0500 Brand Management DRAFT	3 cr
A350A0551 Project Course on Sustainable Business DRAFT	6 cr

A330A0600 Digital Marketing Certificate 3 cr
DRAFT

A240A0100 Behavioral Economics and Management 6 cr
DRAFT

A220A0651 Valuation of Financial Securities: Theory and Practice 6 cr
DRAFT

TUDEXCHSPRING_LPR INDUSTRIAL ENGINEERING AND MANAGEMENT min 0 cr
DRAFT

CS30A0940 Intelligent product-service systems 6 cr
DRAFT

CS30A1570 Complex Systems 6 cr
DRAFT

CS30A1620 Artificial Inventiveness 1 cr
DRAFT

CS30A1641 Inventive Product Design and Advanced TRIZ 6 cr
DRAFT

CS30A1671 Service Innovation and Management 6 cr
DRAFT

CS31A0720 Basics of ERP systems 6 cr
DRAFT

CS30A1365 Sustainability-oriented innovation 3 cr
DRAFT

CS30A0810 Must-Have Math for Decision Makers 3 cr
DRAFT

CS34A0780 Start-ups and venture formation 6 cr
DRAFT

CS34A0060 Academic entrepreneurship 6 cr
DRAFT

CS30A1630 System modelling 6 cr
DRAFT

YTMEXCHSPRINGOTHERS_LPR SOCIAL SCIENCES min 0 cr
DRAFT

YTS010400 System Theory and System Interdependence 5 cr
DRAFT

YTS011500 Natural Resources Policy and Governance 5 cr
DRAFT

KIEEXCHSPRING_LPR LANGUAGE STUDIES min 0 cr
DRAFT

FINNISH (grouping module)

K200CE69 Finnish 1 3 cr
DRAFT

K200CE70 Finnish 2 3 cr
DRAFT

K200CH62 Finnish 3 3 cr
DRAFT

K200CH63 Finnish 4 3 cr
DRAFT

K200CL50 Finnish for Work 1 5 cr
DRAFT

K200CG35 Finnish for Work 2 5 cr
DRAFT

K200CU41 Suomi with Love 1 3 cr
DRAFT

K200CS72 Independent study in Finnish 2 cr
DRAFT

K200CQ88 Finnish Conversation 2 5 cr
DRAFT

K200CP87 Finnish Conversation 1 3 cr
DRAFT

ENGLISH (grouping module)

KE00BZ84 English for Professional Development (Business) 4 cr
DRAFT

KE00BZ85 English for Professional Development (Technology) 4 cr
DRAFT

KE00BZ83 English for Professional Development (ESTIEM) 4 cr
DRAFT

KE00CG81 Business Writing 3 cr
DRAFT

KE00BZ81 Academic Writing 3 cr

KE00CG33 Writing for Digital Media 4 cr
DRAFT

KE00CQ38 Introduction to Copywriting 2 cr
DRAFT

KE00CG79 Professional Reading 3 cr
DRAFT

KE00CG82 Online Presentations 3 cr
DRAFT

KE00BX35 English Pronunciation 1 cr
DRAFT

KE00CC64 English Prep Course 3 cr
DRAFT

KE00DG83 English and AI: Terminology, Ethics and Writing 1 cr
DRAFT

KE00DB63 Copywriter´s Portfolio 2 cr
DRAFT

KE00CX55 Responsible Communication 1 cr
DRAFT

KM00BX75 Each one teach one 3 cr
DRAFT

GERMAN (grouping module)

KD00CH39 German 1 3 cr
DRAFT

KD00CH40 German 2 3 cr
DRAFT

KD00CH41 German 3 3 cr
DRAFT

KD00CH43 German for Work 2 3 cr
DRAFT

KD00CT54 German for Work 3 3 cr
DRAFT

KD00CZ29 Spoken German Skills 3 cr
DRAFT

FRENCH (grouping module)

KF00CH30 French 1 3 cr
DRAFT

- **KF00CH31** French 2 — 3 cr
  DRAFT
- **KF00CH32** French 3 — 3 cr
  DRAFT
- **KF00CG43** French for Work 1 — 3 cr
  DRAFT
- **KF00CG44** French for Work 2 — 3 cr
  DRAFT
- **KF00CL06** Le monde francophone — 5 cr
  DRAFT

SPANISH (grouping module)

- **KP00CK94** Spanish 1 — 3 cr
  DRAFT
- **KP00CH26** Spanish 2 — 3 cr
  DRAFT
- **KP00CH27** Spanish 3 — 3 cr
  DRAFT
- **KP00CP90** Spanish 6 — 3 cr
  DRAFT
- **KP00BX61** Spanish for Working Life 1 — 3 cr
  DRAFT
- **KP00BX62** Spanish for Working Life 2 — 3 cr
  DRAFT

CHINESE (grouping module)

- **KC00DB86** Chinese 1 — 2 cr
  DRAFT
- **KC00DB87** Chinese 2 — 3 cr
  DRAFT
- **KC00DB88** Chinese 3 — 4 cr
  DRAFT

SWEDISH (grouping module)

- **KR00CL24** Swedish for Beginners — 3 cr
  DRAFT

INTERCULTURAL COMPETENCE AND COMMUNICATION (grouping module)

- **KM00BX75** Each one teach one — 3 cr
  DRAFT
- **KM00CO04** Finnish Culture and Society — 3 cr
  DRAFT
- **KE00CF69** Intercultural Competence and Communication — 5 cr
  DRAFT

BACHELOR'S LEVEL STUDIES (grouping module)

- **KAKEXCHSPRING_LPR** BUSINESS ADMINISTRATION — min 0 cr
  DRAFT
  - **KAKEXCHLITOSPRING_LPR** BUSINESS ADMINISTRATION ONLY FOR ENGINEERING AND SOCIAL SCIENCE STUDENTS — min 0 cr
    DRAFT
    - **VA10A1000** Basics of Management and Organisations — 5 cr
      DRAFT
    - **VA10A1100** Basics of Marketing and Sales — 5 cr
      DRAFT
    - **VA10A1400** Economics and the Business Environment — 5 cr
      DRAFT

VA10A1600 Introduction to Corporate Social Responsibility 5 cr
DRAFT

VA10A1700 Understanding and Managing a Business as a Dynamic Whole - Business Simulation Game 5 cr
DRAFT

A380A0131 Business Relationships in International Value Networks 6 cr
DRAFT

A130A0551 Organizational Behaviour 6 cr
DRAFT

A130A0620 Basics in MS Excel for Business Students 3 cr
DRAFT

A380A0400 Professional Selling 6 cr
DRAFT

A130A0680 Statistics for Economics 6 cr
DRAFT

A380A0500 Introduction to Corporate Social Responsibility and Sustainability 6 cr
DRAFT

A380A0310 Services Marketing and Customer Experience Management 3 cr
DRAFT

A380A6060 Applied International Business 6 cr
DRAFT

A380A6000 Cross-Cultural Encounters 3 cr
DRAFT

A380A0000 Cross-Cultural Issues in International Business 6 cr
DRAFT

A380A0300 Introduction to Digital Marketing 3 cr
DRAFT

LAKEXCHSPRING_LPR COMPUTATIONAL ENGINEERING min 0 cr
DRAFT

BM40A0202 Foundations of Computer Science 6 cr
DRAFT

BM20A8801 Discrete Mathematics 3 cr
DRAFT

BM20A7102 Statistics II 4 cr
DRAFT

SAKEXCHSPRING_LPR ELECTRICAL ENGINEERING min 0 cr
DRAFT

BL40A2011 Introduction to Cyber-Physical Systems 4 cr
DRAFT

BL40A1812 Introduction to Embedded Systems 6 cr
DRAFT

BL30A0001 Electric Circuits 4 cr
DRAFT

BL30A0350 Electromagnetism and Circuit Analysis 6 cr
DRAFT

BL40A2601 Wind Power and Solar Energy Technology and Business 5 cr
DRAFT

BL50A0021 Basic Electronics 1 3 cr
DRAFT

BL50A0210 Introduction to EMC 3 cr
DRAFT

ENKEXCHSPRING_LPR ENERGY TECHNOLOGY min 0 cr
DRAFT

- BH40A0102 Basics of Renewable Energy Engineering 3 cr
  DRAFT
- BH50A0220 Energy Systems 5 cr
  DRAFT
- BH40A1401 Fluid Mechanics I 3 cr
  DRAFT
- BH10A1900 Fundamentals of Energy Technology 2 cr
  DRAFT
- BH50A0240 Introduction to Power Plant Engineering 4 cr
  DRAFT

YMKEXCHSPRING_LPR ENVIRONMENTAL TECHNOLOGY min 0 cr
DRAFT

- BH60A5901 Climate Solutions 5 cr
  DRAFT
- BH60A7200 Circular.now 3 cr
  DRAFT
- BH60A0002 Basic Course in Environmental Technology A 6 cr
  DRAFT
- BH60A6801 Sustainable.now 3-5 cr
  DRAFT
- BH60A6000 Basic Course in Life Cycle Assessment 4 cr
  DRAFT

TUKEXCHSPRING_LPR INDUSTRIAL ENGINEERING AND MANAGEMENT min 0 cr
DRAFT

- CS30A1365 Sustainability-oriented innovation 3 cr
  DRAFT

LESKEXCHSPRING_LPR LUT SCHOOL OF ENERGY SYSTEMS min 0 cr
DRAFT

- LES10A260 Technical Computing Software 4 cr
  DRAFT
- LES10A410 Engineering Project Work 5-10 cr
  DRAFT

KOKEXCHSPRING_LPR MECHANICAL ENGINEERING min 0 cr
DRAFT

- BK10A6300 Engineering Design 3 cr
  DRAFT

TIKEXCHSPRING_LPR SOFTWARE ENGINEERING min 0 cr
DRAFT

- CT60A4304 Basics of database systems 3 cr
  DRAFT
- CT60A7650 Database Systems Management 3 cr
  DRAFT
- CT60A5532 Software Project Management 6 cr
  DRAFT
- CT70A9111 Software Development Skills: Front-End 1 cr
  DRAFT
- CT70A9120 Software Development Skills: Mobile 3 cr
  DRAFT
- CT70A9140 Software Development Skills: Full-Stack 3 cr
  DRAFT

CT10A7052 Software Engineering work practise 3 cr
DRAFT

CT70A9150 Introduction to DevOps 3 cr
DRAFT

YTKEXCHSPRING_LPR SOCIAL SCIENCES min 0 cr
DRAFT

VT10A1400 Environmental Communication 5 cr
DRAFT

VT10A1500 Political Communication, Social Movements and Activism 5 cr
DRAFT

FILTERED COURSES

A220A0752 Analytics for Business

A220A0752 Analytics for Business

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Azzurra Morreale, Responsible teacher Suvi Tiainen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: User knowledge of Matlab is required.

Learning outcomes

EN: This course enables to learn a significant understanding of data science: the fundamental concepts and principles that underlie techniques for extracting useful knowledge from data. These concepts underlie the analysis of data-centered business problems, the creation and evaluation of data science solutions, and the evaluation of general data science strategies, and proposals. Through several practical examples, at the end of the course the student will acquire a broad range of techniques and practical skills to independently plan and create analysis tools able to finding anomalies, patterns and correlations within large data sets to predict outcomes. Students will be also able to put some models and analysis methods into use with MATLAB

Content

EN: Data understanding and data preparation; principal component analysis, supervised regression methods: linear regressions, decision-trees , principal component regression) classification methods: logistic regression, classification trees; support vector machines); Performance measure and overfitting: (Mse(mean squared error); Roc curve & area under Roc (Auc), confusion matrix, cross-validation) unsupervised learning (clustering methods, including K-means and hierarchical clustering)

Additional information

EN: Priority to MBAN and MSF students. This course is only for master's level students including exchange students.

Study materials

EN: Lecture materials, assigned reading, course book (Data Science for Business: What you need to know about data mining and data-analytic thinking, by Foster Provost, Tom Fawcett, 2013- available as an eBook in the library database)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	6 cr
Course Completion		6 cr

A330A0061 B2B Marketing

A330A0061 B2B Marketing

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Joona Keränen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Basic knowledge of marketing. A130A0010 Basics of Marketing (previously CS10A0010) and A330A0300 Strategic Global Marketing Management recommended

Learning outcomes

EN: On successful completion of the course, students:
1. Are able to understand and analyze the special characteristics and contemporary trends in B2B markets, and know the key theoretical frameworks related to B2B marketing
2. Are able to understand why and how companies transition towards service- and solutions oriented value propositions in B2B markets, and analyze and categorize different service and solution strategies
3. Are able to evaluate the drivers, key characteristic, and related challenges of different value-based business strategies in B2B markets, and design resonating value propositions
4. Are able to apply the key principles, theoretical approaches, and key challenges in relationship marketing and network management
5. Are able to identify and analyze the key features of sustainability, and understand and evaluate how companies can create economic, environmental, and social value to different stakeholders
6. Are able to analyze the key features of digitalization, and examine its effects to business relationships and networks in B2B markets
7. Have developed skills in teamwork, active participation in discussions, oral presentations, writing reports, as well as in reflecting on and taking the responsibility for their own learning.

Content

EN: The course focuses on the following main contents: Special characteristics and contemporary trends in B2B marketing, transition strategies towards service & solution offerings, customer value management and value-based business strategies, principles of key account management, theoretical approaches to business relationship and network management, sustainability and social value in B2B markets, and digitalization.

Additional information

EN: Priority is given to LBS degree students.
The course is related to UN´s Sustainable Development Goals (SDG): 9 industry, innovation and infrastructure, 12 responsible consumption and production

Study materials

EN: Assigned readings (collection of articles). Lecture slides.

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

A350A2000 Business Ethics

A350A2000 Business Ethics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Laura Olkkonen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: This course aims for the following learning outcomes:
1. Evaluate business situations from the perspectives of different ethical theories
2. Recognize ethical challenges related to business and assess them analytically

Content

EN: Business professionals regularly face situations where they have to weigh the consequences of their decisions upon a variety of groups and individuals. These situations may include conflicting interests and values that cannot be met simultaneously. This course introduces how these situations can be approached from the perspective of central ethical theories and explores these theories with the help of contemporary cases.

Additional information

EN: The course is only for Master's level students.
Blended learning. Students can choose either online or in-person classes.

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The course is related to UN's Sustainable Development Goals (SDG): 3 good health and well-being, 5 gender equality, 8 decent work and economic growth, 10 reduced inequalities, 12 responsible consumption and production, 13 climate action, 16 peace, justice and strong institutions

Study materials

EN: Readings, videos, cases, games.

Literature

Crane, A., Matten, D, Glozer, S and Spence, L. (2019). Business Ethics: Managing Corporate Citizenship and Sustainability in the Age of Globalization (5th edition). Oxford: Oxford University Press.

Credit transfer instructions

EN: Can be applied with a previously completed business ethics course.

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

A210A0050 Comparative International Accounting: Theory and Practice

A210A0050 Comparative International Accounting: Theory and Practice

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Timo Leivo, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Compulsory bachelor's level courses in accounting and finance.

Learning outcomes

EN: At the end of the course a student is expected to be able to: -compare and analyze accounting practices and quality of accounting information in different parts of the world -assess the international harmonization of accounting standards -analyze the impact of different social, financial, legal and taxation systems on accounting -interpret the practical implications of international differences in accounting -develop the communication and social skills through working in multi-cultural groups for term paper and presentation

Content

EN: The course is focused on international differences in accounting practices and quality of reported information associated with various social, legal and taxation systems. The harmonization of accounting standards and the practical implications of differences in accounting systems.

Study materials

EN: 1. Nobes and Parker: Comparative International Accounting, 2006 or later edition. 2. Handouts in the class and all additional material required by the lecturers.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. 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	2025-2026
Validity period	since 1 Aug 2025
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

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

A210A0200 Empirical Strategy Research

A210A0200 Empirical Strategy Research

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

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	Kaisu Puumalainen, Responsible teacher Suvi Tiainen, Administrative person Päivi Maijanen-Kyläheiko, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A350A0250 Multivariate and Econometric Analysis Methods or A130A0350 Quantitative Research Methods, recommended A250A0050 Econometric Methods.

Learning outcomes

EN: After taking the course the student
- knows the basic empirical application types and theories of strategy research
- is familiar with the evolution, state-of-the art and future directions of research within central themes of empirical strategy research
- can independently select a specific theme related to strategy, technology or innovation research and conduct a critical and systematic literature review on this theme
- collect and analyze empirical data around this theme, and subsequently report, interpret and evaluate the results and their practical and theoretical implications

Content

EN: Core content: Central themes of strategy research: empirical testing of main theories, research strategies and designs and main results. The themes may include e.g. resource-based view, organizational cognition, sustainable strategies and competitiveness of the firm. The themes are related to current research, and may vary each year.
Additional content: measurement of firm performance, specific methods of empirical research, e.g. event study, qualitative comparative analysis.

Special content: important authors and publication forums of empirical strategy research.

Additional information

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

Study materials

EN: Collection of articles

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

A330A0550 Essential Sales and Negotiation Skills

A330A0550 Essential Sales and Negotiation Skills

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

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	Olli Kuivalainen, Responsible teacher Peter Spier, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Bachelor’s degree, A330A0300 Strategic Global Marketing Management or equivalent basic marketing course.

Learning outcomes

EN: After completing the course the students should be able to:
- analytically evaluate how sales and other types of business negotiations work
- distinguish, compare and organize various types of sales and negotiation situations
- critically evaluate the main sales techniques: transactional, relationship selling, solution selling
- evaluate and develop sales and negotiation-related core competencies
- convince and negotiate effectively
- appraise the importance of ‘people' skills: empathy, trust, active listening.

Content

EN: This course provides a comprehensive introduction to sales and negotiation. It will cover a range of topics:
- Structure of sales negotiation
- Individual negotiation styles
- Different types of sales and negotiation situation
- The mutual gains approach in negotiation
- The main sales techniques: transactional, relationship selling, solution selling, challenger sales
- Move from an approach based on ‘convincing' to one based on ‘persuasion'
- The scope of our approach to include: ‘other' (interests, culture...), situation...
- Communication, both verbal and non-verbal
- The use of enquiry & questioning
- The use of framing techniques and other ‘nudge' approaches
- Conflict management
- Interact with others

Additional information

EN: The number of students attending the course may have to be limited if the number of students exceeds 40. In registration, priority is given to LUT Business School, MIMM Programme students.
The main lecturer of the course unit is Visiting Professor Peter Spier from SKEMA Business School. Professor Olli Kuivalainen acts as a local contact point.

Please note that this course requires active face-to-face attendance/presence at LUT. Lectures and other in-class activities take place in Lappeenranta during one week (the format of the course is a so-called "intensive course").

Study materials

EN: Readings and assignments to be announced before / in the class

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	3 cr
Course Completion		3 cr

A310A0201 External Resource Management

A310A0201 External Resource Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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-Kaisa Kähkönen, Responsible teacher Suvi Tiainen, Administrative person Diellza Salihu, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Bachelor's studies. A310A0101 Strategic Supply Management.
For exchange students: B.Sc. studies related to operations management, supply chain management, supply management or similar are required.

Learning outcomes

EN: Upon completion of the course, students will know the main elements of supply strategies and be able to develop supply strategies in different contexts. Students will be able to analyze supplier relationships as well as the level and maturity of purchasing and supply management in organizations. Students will understand the role of supply management in value creation. Students will recognize and be able to utilize the main theoretical perspectives of supply management. Students will be able to apply knowledge obtained from previous studies to practice in the company assignment. After completing the course, students will be able to:
1. develop and apply strategies for managing purchasing and supplier relationships
2. understand the role of supplier relationships and networks in value creation
3. apply and justify theoretical perspectives of supply management
4. able to analyze and solve real-life discipline related problems.

Content

EN: The elements of supply strategy, supplier relationship management, value creation by utilizing an external supplier network. Analysis and development of the level and maturity of purchasing and supply management in organizations. Theories of supply management.

Additional information

EN: The number of participants is limited and the students of Supply Management program (MSM) have first priority to participate. This course is only for master's level students.
Blended learning with approx. 60% in-class activities and 40% online.
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The course is related to UN's Sustainable Development Goals (SDG):

12 responsible consumption and production, 13 climate action

Study materials

EN: 1. Selection of journal articles. 2. Lecture materials. 3. Assigned reading.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	6 cr
Course Completion		6 cr

A240A0070 Fuzzy Data Analysis

A240A0070 Fuzzy Data Analysis

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Pasi Luukka, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A240AA0060 Fuzzy Sets and Fuzzy Logic course

Equivalences to other studies

CS38A0070 Fuzzy data analysis

Learning outcomes

EN: In the end of the course the student is expected to be able to
- understand theoretical aspects of data analysis
- understand basic mathematics from fuzzy set theory related to data analysis
- apply fuzzy set theory based models in data analysis
- analyze and interpret results from the models
- apply fuzzy principal component analysis, fuzzy clustering and classification methods to data analysis problems

Content

EN: Fuzzy sets and relations. Uncertainty measures. Qualitative and quantitative analysis of fuzzy data. Principles of individual multi-person, multi-criteria decision making, feature selection, fuzzy principal component analysis, fuzzy clustering, fuzzy classification, fuzzy regression analysis.

Additional information

EN: Replaces the course CS38A0070 and can not be included in the same degree.
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The course is related to UN's Sustainable Development Goals (SDG): 4 quality education

Study materials

EN: Lecture materials, Course book
Bandemer, H., Näther, W.: Fuzzy Data Analysis, Kluwer Academic Publ., 1992.

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

A220A0053 Investment and Business Analysis with Excel

A220A0053 Investment and Business Analysis with Excel

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Mostafa Goudarzi, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Basic proficiency in Excel, either from previous experience or some basic Excel course. This is an advanced course and catching up with basics is a student's own responsibility
Assigned reading Beginning Excel What-If Data AnalysisTools: Getting Started with Goal Seek, Data Tables, Scenarios, and Solver, PaulCornell, 2006, Apress - available as an eBook in the library database.

For B.Sc students recommended A130A0620 Basics of MS Excel for Business Students.

Non-Windows Excel versions (e.g. Mac, Linux) are limited and would not be enough for working on this course.

Learning outcomes

EN: After the course the students:
- are able to collect and handle data in a spreadsheet environment performing tasks such as data consolidation, data cleaning, and basic data analysis

- are able to plan and perform various business and finance related analyses

- know how to create simple models for optimization and investment analyses

- are able to handle, record and write own simple macros to automate operations in Excel.

Content

EN: I. Basics of data visualization. Basic rules of data visualization, conditional formatting, waterfall chart, combo chart, treemap, 3Dmaps, flowcharts.
II. Data collection and analysis. Creating a watchlist, making investment program consolidation, performing data analysis with pivot tables and charts, creating an interactive dashboard, performing simple statistical analyses. Instruments: power query, pivot tables and charts, data analysis toolpack.

III. Portfolio optimization. Practicing with optimization problem setting, creating a stock portfolio optimization model, recording macros. Instruments: matrix multiplication functions, solver, VBA.

IV. Liquidity budgeting. Creating a liquidity budgeting model, recording macros, learning basics of VBA. Instruments: data tables, scenario manager, goal seek, VBA.

V. Investment analysis. Creating a profitability analysis model, performing break-even analysis, sensitivity analysis with a given macro, writing a Monte Carlo simulation macro. Instruments: data validation, goal seek, VBA.

Additional information

EN: The course requires practicing Excel and self-study on top of the exercises and lectures.

Only for LBS Master's level students.

Study materials

EN: Video lectures

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

A320A3001 Melting Pot of Entrepreneurial Competencies

A320A3001 Melting Pot of Entrepreneurial Competencies

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Sanne Bor, Responsible teacher Tanja Leppäaho, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: Successful completion of the course implies that the students will be able to:

1. *Identify, assess and reflect on one's past experiences, learning and current know-how for visioning entrepreneurial opportunities and setting goals for the future.*
2. *Familiarize with, analyse and understand the importance of one's own (business) networks for entrepreneurial opportunities and personal reflection.*
3. *Analyse and describe the central developments of some (un)successful entrepreneurs and enterprises in today's global and turbulent business environment.*

4. *Exhibit (advanced) critical thinking, argumentation and presentation skills in getting across different kinds of business cases.*

Content

EN: This course is the last course in the Master's Programme of International Business and Entrepreneurship (6 ECTS credits).
The aim of the course is to help students to identify, assess and reflect on how their personal experiences (past and present) ground their attitudes and assumptions about entrepreneurship today. It also aims to aspire students to consider entrepreneurship as their (potential) career path. To achieve this aim, the course supports students in identifying and reflecting on their current entrepreneurial competencies, gives possibilities to further extend these competencies through teamwork during a real-life business development assignment. The course also gives students tools for reflecting on how their potential entrepreneurial career path in the future could look like. After the course, students are expected to understand the entrepreneurial competencies they have, the competencies they still wish to develop, and get a sense of what their potential paths are – and the landscape for an entrepreneurial career with successes and failures – to becoming and being an entrepreneur in a modern and global business environment

Additional information

EN: Please note that if you have already completed the course A320A3000 Melting Pot of Entrepreneurial Competencies 3 ECTS cr in 2021 or before, you can't choose this course.

Study materials

EN: Various learning material given by the lecturers.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

A240A0020 Optimization in Business and Industry

A240A0020 Optimization in Business and Industry

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Shahid Bhat, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Experience in programming or using mathematical software required.BM20A4301 Johdatus tekniseen laskentaan or BM20A5001 Principles of Technical Computing.

Equivalences to other studies

CS38A0020 Optimization in business and industry

Learning outcomes

EN: By the end of the course student will be able to
- select/ employ mathematical models for various optimization problems

- use optimization software

- interpret information from optimization results

- understand the basic principles of different optimization algorithms for linear, mixed-integer linear, and nonlinear optimization

Content

EN: Formulation of optimization models. Linear programming and mixed-integer linear programming, non-linear optimization algorithms.
Solving optimization problems using Matlab Optimization Toolbox. Business and industry oriented practical examples, i.e. factory, warehouse, sales allocation models etc.

Additional information

EN: This course is only for master';s level students including exchange students.
Replaces the course CS38A0020 Optimization in Business and Industry.

Other additional information

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The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 9 industry, innovation and infrastructure, 12 responsible consumption and production

Study materials

EN: Taha, H.A.: Operations Research an introduction, 8th edition, Pearson/Prentice-Hall, 2007.
Hillier, F.S., Lieberman, G.J.: Introduction to Operations Research, 8th edition, McGraw-Hill, 2004.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	6 cr
Course Registration		0 cr
Course Assessment		6 cr

A320A6000 Prototype Project at J. Hyneman Center

A320A6000 Prototype Project at J. Hyneman Center

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Terhi Virkki-Hatakka, Responsible teacher Markku Ikävalko, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies

Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: 1. to know the basic concepts in prototype production, e.g. perspectives of generation and iteration
2. to know the role of customer value and user experience in prototype production
3. to understand the role of prototype production in the wholeness of an innovation process
4. to understand the role of prototype production as a part of expertise service
5. to have knowledge about different kinds of requirements of prototype production as teamwork and collaboration
6. to have knowledge about prototyping and different types of prototyping activities
7. to know the key concepts and terms used in evaluation
8. to have knowledge of different types of evaluation criteria for prototypes and prototype production methods
9. to analyze the role and importance of the prototype in the real-life context of being eventually in production.
10. to be able to plan and execute a prototype project in a given time-line
11. to be able to collaborate in teams
12. to be able to propose a solution and recommendations for next steps in prototype testing and decision making.

Content

EN: The course is based on a prototype project at J. Hyneman Center (JHC). The project is carried out mostly independently at JHC. The original initiative for the prototype building can come from students or from an outside organization.
With a high demand of self-organization and independency, the course is at advanced level.

The course applies problem-based learning to a concrete prototype development task. Students may work in appropriate size multidiscipline groups. Each group will work mostly independently and self-organizing way, and their learning objectives will be tailored on the basis of their targets in the beginning the course.

The course contains of determining the actual problem or target, the acquisition of needed knowledge and skills, determination, comparison and selection of possible different process alternatives, sketching and designing the manufacturing process, selecting needed materials and equipment, economic calculations in an appropriate level and building & testing the prototype.

The learning during the course will be presented e.g. via portfolio or reflective and comprehensive report, and presenting the results to an audience e.g. in a seminar or conference.

Additional information

EN:

Study materials

EN: Selected by project cases.

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

A210A0350 Real Options and Managerial Decision Making

A210A0350 Real Options and Managerial Decision Making

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Tomas Talasek, Responsible teacher Azzurra Morreale, Responsible teacher Suvi Tiainen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: For master's program students only

Learning outcomes

EN: The aim of the course is to give students know-how about how to use, the real options approach as a part of decision making in companies, and how to apply real options thinking in valuation and analysis. After the course the students:
- know the mathematical foundations of real options and the connections between the real options approach and financial theory
- know the research tradition of real options and are able to critically evaluate the limits of the approach
- understand and are able to critically analyze the role of uncertainty and risk in decision-making
- are able to apply the real options approach in managerial decision-making situations, and to determine whether real option analysis is suitable/needed for selected problem
- know the main model types used in real option valuation and know when each model type can and should be used
- have the ability to perform real option valuation with the fuzzy pay-off method and to construct tools for real options valuation with the method

Content

EN: Core content: real options vs. financial options, modeling the real options and the limits of modeling, the usability of real options in strategic decision-making
Additional content :the use of mathematical tools applied in the real options context
Special content: how to use the real options approach in managerial decision-making situations exemplified by means of different real cases, project of constructing a simple real option valuation tool with MS Excel or with Matlab.

Additional information

EN: Priority for MSF and MBAN students.
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The course is related to UN's Sustainable Development Goals (SDG): 9 industry, innovation and infrastructure

Study materials

EN: Lecture slides, Assigned collection of articles, supporting video materials. Materials will be available in Moodle (except for the course book). Collan, M., 2012, The Pay-Off Method: Re-Inventing Investment Analysis – With numerical application examples from different industries, CreateSpace, Charleston, SC, USA (ISBN 978-14-782-3842-3)

Literature

Collan, M., 2012, The Pay-Off Method: Re-Inventing Investment Analysis – With numerical application examples from different industries, CreateSpace, Charleston, SC, USA (ISBN 978-14-782-3842-3)

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

A330A0450 Responsible International Business

A330A0450 Responsible International Business

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Olli Kuivalainen, Responsible teacher Rudolf Sinkovics, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A330A0300 Strategic Global Marketing Management or equivalent basic marketing course or A320A2000 Global Business Environment or equivalent basic international business course.

Learning outcomes

EN: The course introduces participants and students of international business and management to the concept of the world as 'VUCA', a volatile, uncertain, complex and ambiguous, system. Business decisions that we make within organisations (the economic system) are inextricably related to challenges in the societal and environmental system and vice-versa. Resource scarcity (raw materials such as clean water, energy) limits the space within which managers operate and compete successfully. In this context it has been suggested that those firms may sustain long-term success, which engage in responsible stewardship and actively consider external challenges in their business models.
When students have completed this course, they will be able to:
- Critically understand and discuss the volatile, uncertain, complex and ambiguous, international business system within which firms operate.
- Appreciate and articulate the implications of sustainability decisions within global value chains.
- Produce articulate reports that showcase sustainability strategies and their implications.
- Analyze firm strategies and associated outcomes, which affect the firms themselves but also the system within which they operate.
- Appraise critical social and environmental issues in contemporary business contexts.
Furthermore, the behavioral simulation contributes to increased levels of learning in terms of: self-reflection, negotiation abilities, team-work and time-management under pressure as well as self-organization capabilities.

Content

EN: The course will focus on the following main topics:
- Globalization drivers and ethical issues in IB
- Firms and their relationship with the international business environment
- Global value chains and international business
- Planetary boundaries and circularity
- Carbon literacy and net-zero in business

Additional information

EN: The course contains blended learning elements and has also block-type of teaching / intensive format teaching in January/February 2026. The lectures are online, but please note that active attendance is required.
Only for Master's level students. The number of students attending the course may have to be limited if the number of students exceeds 40. In registration, priority is given to LUT Business School, MIMM and MIBE Programme students.

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

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, 14 life below water, 15 life and land, 16 peace, justice and strong institutions, 17 partnership for the goals.

Study materials

EN: Required:
Dicken, Peter (2015), Global Shift - Mapping the Changing Contours of the World Economy (7th ed.). London: Sage Publications. (ISBN: 9781446282106).
Recommended:
van Tulder, Rob and Eveline van Mil (2023), *Principles of sustainable business: Frameworks for corporate action on the SDGs*. London, England: Routledge. https://doi.org/10.4324/9781003098355

Molthan-Hill, Petra, Fiona Winfield, Richard Howarth, and Muhammad Mazhar Eds. (2023), The handbook of carbon management: A step-by-step guide to high-impact climate solutions for every manager in every function. London, England, UK: Routledge, Taylor & Francis. https://doi.org/10.4324/9781003274049

Other readings and assignments to be announced before / in the class

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

A310A0651 Risk Management in Supply Chain

A310A0651 Risk Management in Supply Chain

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Veli Matti Virolainen, Responsible teacher Suvi Tiainen, Administrative person ⚠ [information missing], Responsible teacher Aleksi Harju, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) studies. A310A0101 Strategic Supply ManagementA310A0660 Financial Supply Management.
For exchange students B.Sc. studies related to operations management, supply chain management, supply management or similar.

Learning outcomes

EN: This course introduces students to supply chain resilience and risk assessment, equipping them with practical methods and tools to evaluate and manage risks effectively. Through hands-on assignments, students will apply these techniques to real-world supply chain scenarios.
Upon completion of the course, students will be able to:

- Analyze and enhance supply chain resilience
- Conduct risk assessments in supply chains
- Apply relevant tools and methods for risk assessment and resilience
- Incorporate resilience requirements and risk management principles into decision-making processes within supply chain management

Content

EN: The course will cover the following topics:

- Supply chain resilience and its strategic importance
- Types of risks in supply management
- Risk assessment methods, tools, and applications
- Decision-making in supply chain risk management
- The role of resilience and risk management in strategic supply chain management

Additional information

EN: Students of MSM programme have first priority to participate.
Lectures of the course will take place on intensive week, week 9. Two assingments are done during the 4. period, so most of work load for students will be realized in 4. period.

Study materials

EN: Course material will be informed later.

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

A310A0603 Supplier Development and Relationship Management

A310A0603 Supplier Development and Relationship Management

Abbreviation: SDRM

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Elina Karttunen, Responsible teacher Suvi Tiainen, Administrative person Sirpa Multaharju, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. & Bus.Adm.) studies. For exchange students, B.Sc. studies related to operations management, supply chain management, supply management or similar.

Learning outcomes

EN:
The aim of the course is to examine the concepts of supplier development (SD) and supplier relationship management (SRM) from different perspectives. Depending of their previous studies, students can gain new knowledge and/or deepen their understanding of these topics through assigned readings and academic literature in the field. In addition to the academic perspectives, the students can gain knowledge about practical issues, such as practices of supplier relationship management and future trends of supplier relationship management.

After completing the course, the students are able to critically assess and analyze the literature and practical issues and trends related to supplier development and relationship management. Students should know the recent trends, tools and sustainability-related practices of supplier development and relationship management.

Content

EN: - The concepts and theories of supplier development and supplier relationship management including related sustainability perspectives
- Evolving trends, practices and tools of supplier development and relationship management

Additional information

EN: This full-digi self-learning course is organized twice in an academic year in Moodle: in period 3 and as a summer course.
No contact teaching: therefore the course is not listed in TimeEdit /timetable. The schedule for course assignments is available on the course's Moodle page. The teacher instructs students every week via Moodle messages.

NB! After being accepted to the SDRM course, *exchange students in particular must ensure that they use their LUT email* and can receive Moodle messages, as this is essential for completing the course."

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The course is related to UN's Sustainable Development Goals (SDG): 9 industry, innovation and infrastucture; 17 partnership for the goals.

Study materials

EN:
Educational videos. Assigned readings will be announced at the beginning of the course. In addition, independent searching of relevant and topical scientific journal articles in databases, and practical material / writings in internet.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period Recurrence 2: Summer	6 cr

Course Completion 6 cr

A220A0550 Advanced Decision-making

A220A0550 Advanced Decision-making

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Jan Stoklasa, Responsible teacher Suvi Tiainen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Suggested: BM20A4301 Johdatus tekniseen laskentaan or BM20A5001 Principles of Technical Computing or BM20A9001 Numerical Simulation, A210A0601 Information Systems in Corporate Management and Decision-Making

Learning outcomes

EN: The students learn the principles of selected modern methods for multiple criteria decision-making, decision analysis, and about systems for supporting decision-making. Students learn about the history of decision-support and operational research and understand that there is a constant evolution in decision support methods. Students are able to understand the benefits of modern decision-support methods in real world business situations as well as their limitations. Students can put the presented models and analysis methods into use with MATLAB or Excel, where applicable, and solve real-life decision-making problems using the methods. Students are able to design models for managerial decision support and to evaluate their fit for the problem being solved.

Content

EN: Core content: This course covers the main topics of multiple criteria decision making under certainty, uncertainty and risk. The topics discussed during the course therefore include: principles of decision making under certainty, uncertainty, risk and ignorance, multiple criteria decision-making (MCDM) and evaluation methods (TOPSIS, AHP), the use evaluations of absolute and relative type, efficiency assessment models (DEA), game theory (non-cooperative games of two players, cooperative games of two players with/without transferable gains, games against nature), validation of decision support systems and models and sensitivity analysis. MATLAB and Excel are used to build the models and solve assignments, to showcase the practical application of the presented methods. Additional content: fuzzy logic in decision-making is also covered, along with topics such as decision-support systems (DSS), expert systems and optimization. Special content: The course also introduces students to the basics of multiple expert decision-making and reaching consensus.

Additional information

EN: Note
Location: Lappeenranta, lectures will be held on campus.
If the course enrollment is more than the course maximum, then students are accepted in the following order: students from the MBAN and MSF programmes, other master's programme students, other students.

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

Study materials

EN: Lecture materials, Assigned reading and assigned course books MATLAB / Octave materials available on the mathworks www-site Mengov, G.: Decision Science: A Human-Oriented Perspective, Springer, 2015. Srinivasan, R.: Strategic Business Decisions - A Quantitative Approach, Springer, 2014. San Cristóbal, J. R.: Multi Criteria Analysis in the Renewable Energy Industry, Springer, 2012.

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

A350A3000 Advanced Topics in Business Ethics

A350A3000 Advanced Topics in Business Ethics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Laura Albareda, Responsible teacher Natalia Lyly, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Students enrolling must have completed course A350A2000 Business Ethics or other basic (bachelor's or master's-level) course on business ethics, corporate social responsibility or sustainability.

Learning outcomes

EN: The management of business ethics is professionalizing, as companies increasingly adopt and implement ethics management policies, practices and programs. As examples, business ethics management can include components such as codes of conduct, education and training, auditing and reporting, risk analysis, and diversity plans. This course introduces business ethics management, its role in organizations and its connections to other areas of managing business.
This course aims for the following learning outcomes:

1. Recognize the role and components of business ethics management in organizations

2. Develop policies, practices and programs for business ethics management

3. Enhance professional skills (e.g. team work and interaction skills)

Content

EN: Professionalization of business ethics, components of business ethics management, assessment of ethical behavior.

Additional information

EN: Course taught in period 4. Blended learning with mandatory participation at guest lectures and presentations (approx. 3 sessions).

Study materials

EN: Materials provided during the course, incl. readings, videos and cases.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	3 cr
Course Completion		3 cr

A330A0500 Brand Management

A330A0500 Brand Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Suvi Tiainen, Administrative person Olli Kuivalainen, Responsible teacher Peter Spier, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Bachelor's degree, A330A0300 Strategic Global Marketing Management, or equivalent basic marketing course

Learning outcomes

EN: The aim of the course is to familiarize the students with the management of 'brand equity', which is clearly an issue of major strategic importance. Few would deny the importance of brands as valuable assets and potential source of sustainable competitive advantage. Brands provide a shortcut for customers when making a purchasing decision, seeking to avoid risk and obtain value for money. Brands provide a relevant, exciting experience. Brands connote a certain life style, values or attitude. Brands can become objects of affection: 'Lovemarks', even. Buying a brand is an integral part of an individual's quest for identity and meaning.
After completing the course the students should be able to:
- have a deep understanding on how companies manage 'brand equity'
- critically evaluate and compare different brand management strategies
- analyze and explain reason, affect and decision-making related to brands
- assess the social meaning and cultural rooting of brands
- identify and explain current trends and issues in branding
- work in a multi-cultural team
- compile academic reports about branding
- apply knowledge gained from the course, to the events, activities and/or strategies of an actual firm or organization

Content

EN: This course provides a comprehensive introduction to strategic brand management, covering such areas as the building of brand equity, brand identity, brand extension, brand portfolios etc. in national, regional and global markets. Indicative and subject to change topics include:
1. Introductory session - branding exercise. Brand basics.
2. Brand overview - Dyson: the man, the brand, the product, the market. Understanding codes, discourses and the potential for renewal and disruption. Sponges and hedgehogs. Mums, kids and washing liquid. The importance of consumer insight: Got milk? Fathers and whiskies
3. More about brands and how we relate to them: reason, affect and decision-making. Brand personality, brand archetypes. Brand endorsement and meaning transfer.
4. Branding people and experience. Service and experiential branding: Starbucks case study + the Apple Store
5. Brands in context. The social meaning of brands. What consumer studies and anthropology teach us.
6. A diamond is forever, beer is for men: the cultural rooting of brands. How brands become icons. Case study: Reviving an iconic brand – Levi's in the 80s
7. Brands & communities: Harley Davidson and Jones Soda. Tribal marketing & social networks.
8. Brand placement, brand content, brand events
9. Conclusion: current issues in branding

Additional information

EN: In registration, priority is given to MIMM Programme students.
Main lecturer in the course is Professor Ph.D. Peter Spier, SKEMA Business School. Professor Olli Kuivalainen acts as a local contact point.

The course is related to UN's Sustainable Development Goals (SDG): 8 responsible consumption and production.

Please note that the course requires compulsory presence/attendance at LUT. The course contains block-type elements (intensive course format) where lectures and other in-class activities take place in Lappeenranta during one week.

Study materials

EN: Readings and assignments to be announced before / in the class

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	3 cr
Course Completion		3 cr

A350A0551 Project Course on Sustainable Business

A350A0551 Project Course on Sustainable Business

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Laura Albareda, Responsible teacher Jaan-Pauli Kimpimäki, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies

Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: It is recommended that the students have completed a basic course on sustainable strategy or CSR before enrolling (for example Sustainable Strategy).

Learning outcomes

EN: This project course focuses on business sustainability from a chosen case company perspective. Students will learn to assess and analyze sustainability elements of a case company, as well as to create suggestions for improvements and solutions in this regard. The learning outcomes of the course are the following:
1. assess and analyze the sustainability of the business and strategy of a chosen case company.

2. create suggestions for improving the case company's existing business and strategy toward a meaningfully sustainable long-term strategy.

3. approach and organize their group work as a real-life business/consulting project for the case company.

Content

EN: The course is designed around an independent research project, conducted for a case company. Students need to independently find and secure the case company for which the projects are made, from within Finland or internationally. The project involves applying pre-learned theory to practice, data collection and analysis, and creation of concrete solutions for different aspects of sustainable business for the case company. During the course, different frameworks and contexts regarding sustainable business are refreshed, and fresh practical perspectives on sustainability issues are brought from visiting industry lecturers. Students will contact the case companies in small groups in the beginning of the course. During the course, students will work independently, collecting required data from and negotiating the needs and wishes of the case companies. The course assignments are aimed at creating an improved (or new) sustainable strategy proposal for the case company. The course assignments include both individual and group work.

Additional information

EN: Blended learning
Yritystoimeksiannon kuvaus ja määräaika

Students analyze the sustainability aspects of their case company's strategy and make improvement suggestions based on their analyses. The students suggest new perspectives and solutions to how a company can create value by aligning with financial, environmental, and social impacts and targets. Each student will commit 160 hours of work and each project will involve four or more students. The participating company is expected to offer the students a possibility to interview its representative(s) and, when suitable, provide supporting material and data for the analysis. The company will have access to the final outcome (executive summary report) for the project. Groups will invite a representative of the company to the final seminar, and can also share the recorded presentation of their proposition to the company. The projects do not require any financial commitments from the participating companies.

The companies are selected in January-February 2025. The projects run during the spring semester 2025 as part of the course Project Course on Sustainable Business, with both Finnish and international students.

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

8 decent work and economic growth9 industry, innovation and infrastructure
12 responsible consumption and production
13 climate action
17 partnership for the goals

Study materials

EN: Assigned via Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

A330A0600 Digital Marketing Certificate

A330A0600 Digital Marketing Certificate

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Heini Vanninen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: The course deepens students' understanding of the selected specialization topic through a set of MOOC based certificate courses.
At the end of this course students will be able to:

1. Become a certified user of selected digital marketing technologies, tools and tactics.
2. Demonstrate independent activity in executing the required MOOC courses.
3. Apply knowledge into practice.

Content

EN: The contents are related to contemporary specialization areas of digital marketing.

Additional information

EN: Independent online learning.

Study materials

EN: Online courses assigned by the lecturer.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr

A240A0100 Behavioral Economics and Management

A240A0100 Behavioral Economics and Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

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	Luigi Mittone, Responsible teacher Päivi Maijanen-Kyläheiko, Responsible teacher Suvi Tiainen, Administrative person Azzurra Morreale, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: The students are expected to orient themselves towards theoretical as well practical elaborations in this field of research, they should acquire enough knowledge to be able to understand in which real-life situations this approach can be preferred to “standard” methodologies.

Content

EN: Behavioral economics is a relatively new branch of economics that aims to improve the descriptive and the predictive power of the economic analysis by integrating agents’ limited cognitive abilities and limited willpower that, together with informational incompleteness, cause agents to behave sub-optimally.
This course offers an overview of the theories and the empirical results in Behavioral Economics, allowing students to orient themselves towards further elaborations in this field of research. More specifically, the course is aimed to provide students with the opportunity to: 1) acquire a general overview of several important topics and empirical evidence in Behavioral Economics; 2) learn the essential tools for designing and carrying out a Behavioral Economics experiment; 3) acquire the essential skills for applying the Behavioral Economics insights to real-world applications, 4) acquire the basic statistic knowledge to interpret behavioral data.

Main Teaching Modules: Psychology and Economics – the Role of Cognitive Biases and Heuristics; Experimental Methodology and Data Collection – How to Run an Experiment in Economics and Management Science; Risk and Uncertainty in Economics and in Management Science; The social dimensions of B.E. – Elements of Game Theory.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 9 industry, innovation and infrastructure, 12 responsible consumption and production, 16 peace, justice, and strong institutions

Study materials

EN: Lectures materials and a list of required and optional materials (journal articles, books chapters, etc.) will be provided.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	6 cr
Course Completion		6 cr

A220A0651 Valuation of Financial Securities: Theory and Practice

A220A0651 Valuation of Financial Securities: Theory and Practice

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

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	Sheraz Ahmed, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: This course is primarily intended for 2nd year M.Sc. students in Strategic Finance and Analytics who have either completed or enrolled into following compulsory courses of MSF programme.

Compulsory prerequisites

A220A0200 International Financial Management

A220A0600 Banking and Insurance Finance

A210A0601 Information Systems in Corporate Management and Decision-making

A220A0053 Investment and Business Analysis with Excel

A220A0752 Analytics for Business

Learning outcomes

EN: At the end of this course a student is expected to have a concise overall understanding of valuation of financial securities and the sources of value creation. After successful completion of this course, the student will be able to:

- demonstrate advanced level skills in describing corporate finance theories
- outline the determinants of financing needs and optimal capital structure
- evaluate the empirical aspects of corporate finance and asset valuation
- estimate valuation of corporate debt and equity under uncertainty
- design and carry out an investment analysis project from start to the end, justify the choice of methods, and discuss the consequences of these choices.
- present and defend the obtained results of the project in a systematic professional way in a written report and in a seminar.

Content

EN: Student in this course learn the step-by-step methods of valuation and create an investment analysis report based on their results. The presentations of the produced reports and subsequent findings is an integral part of the course.
The topics include:

- Basics of Valuation
- Corporate strategy and sources of value
- Interpreting and using financial statements
- Forecasting of financial statements
- Discounted cash flow models
- Estimating cost of capital/discount rate
- Comparable or relative valuation models
- Business analytics models for finance

Additional information

EN: A maximum of **60** students can be accepted in this course.

Students studying in MSF degree programme in 2nd year who have already completed 1st year compulsory courses will be guaranteed a seat. Remaining seats are prioritized as: 1) masters' level finance exchange students from other universities, 2) LBS B.Sc. students specializing in strategic finance who have obtained masters' degree study rights of MSF prior to the course, 3) all other 2nd year masters' level students at LBS.

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The course is related to UN's Sustainable Development Goals (SDG): 4 quality education

The use of artificial intelligence (AI) applications to support learning is permitted in this course according to the university's general policy outlined at eLUT. The instructor will give specific instructions regarding the use and reporting of AI during the course.

Study materials

EN:

1. Lecture notes provided by the teacher
2. Academic articles and documents provided at moodle
3. Any textbook on 'Valuation' or 'Corporate Finance'
4. Selected chapters of following textbooks

Literature

Financial Statement Analysis and Security Valuation, Stephen H. Penman

Valuation: Measuring and managing the value of companies., McKinsey, &. C. I., Koller, T., Goedhart, M., & Wessels, D., John Wiley & Sons (2015)

Financial analysis & decision making: tools and techniques to solve financial problems and make effective business decisions, David E Vance. McGraw-Hill.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

CS30A0940 Intelligent product-service systems

CS30A0940 Intelligent product-service systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Lea Hannola, Responsible teacher Ilkka Donoghue, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: B.Sc. on Industrial Engineering and Management, or equivalent knowledge.

Equivalences to other studies

CS35A0153 Product Lifecycle Management

Learning outcomes

EN: Student can
1. understand trends of product-service systems and digital transformation affecting manufacturing business

2. define and explain the concepts related to product data management and sustainable product life cycle management (PLM)
3. recognize the company's product and service processes and understands their interaction with the company's overall operations
4. compare business information management systems' characteristics, technical features and managerial functions and see their role in product development and business management

Content

EN:
Product-Service Systems (PSS) and Product Lifecycle Management (PLM) trends and digital transformation. Different views on a product/service: structures – processes – lifecycles – sustainability - data/information, challenges with lifecycle management, requirements management and systems engineering. IoT and digital platform based data services for sustainability, features and functionalities of PSS/PLM systems. PLM projects and demos of systems utilization. Future of PSS in various industries.

Additional information

EN: This course is aimed for the students of Master's Degree level.
The course is eligable in doctoral studies. (Jatko-opinto kelpoinen)

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

Study materials

EN: Journal articles and lecture material. Sääksvuori-Immonen: Product Lifecycle Management, Springer 2008.

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

CS30A1570 Complex Systems

CS30A1570 Complex Systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Leonid Chechurin, Responsible teacher Viktor Dodonov, Responsible teacher Elizaveta Girshova, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic programming skills. Familiarity with the basics of system modelling is welcome

Recommended prerequisites

CS30A0810 Must-Have Math for Decision Makers

CS30A1630 System modelling

Learning outcomes

EN: After completing the course, students will be able to:

- describe complexity, know basic phenomena of complex systems
- understand principles of complex systems
- use simulation to model complex systems
- investigate the evolution of complex models
- use NetLogo software for agent-based modelling

Content

EN: We learn the language that scientists use to understand complexity in systems. Students design their own chaos, fractals, various types of popular optimization algorithms like ant or genetic algorithms, simulate behavior of complex communities, participate in interactive prisoner dilemma game and more. We witness the birth of complexity in every topic: how extremely simple rules of interaction between elements can result in intelligent behavior of the whole system.
Topics:

- Theory of complexity
- System dynamics and chaos
- Fractals
- Information theory
- Genetic algorithms
- Cellular automata
- Models of biological self-organization
- Models of Cooperation in Social Systems

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 7 affortable and clean energy, 8 decent work and economic growth, 9 industry, innovation and infrastucture

Study materials

EN: Course materials are given in Moodle together with lectures, quizzes, assignments, additional materials. The course uses teaching materials of Santa Fe Institute (USA) licensed for LUT use.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period, 3. period	6 cr

Course Completion 6 cr

CS30A1620 Artificial Inventiveness

CS30A1620 Artificial Inventiveness

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Leonid Chechurin, Responsible teacher Armi Rissanen, Administrative person Zahra Honarmand Shahzileh, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences to other studies

CS30A1641 Inventive Product Design and Advanced TRIZ

or

CS30A7390SS Inventive Product Design and Advanced TRIZ

or

CS30A7380SS Systematic Creativity - TRIZ Basics

or

CS30A7381SS Systematic Creativity - TRIZ Basics Online

or

CS30A7391SS Inventive Product Design and Advanced TRIZ Online

Learning outcomes

EN: Upon successful completion of the course the learner is expected to be able to:

- Identify inventive problems in the complex process of product development
- Apply several tools for systematic idea generation (Function modelling, Ideal final result, Function-oriented search, Contradictions analysis)
- Act step-by-step when creative and out-of-box ideas are needed

Content

EN: It is an online course for all interested in creativity, in systematic tools of ideation. The modules contain basic TRIZ (Theory for Inventive Problem Solving) tools for idea generation.
Have you ever thought why it is hard to find a new idea sometimes? How to analyze the situation where you need an out of box solution? How to deliver systematically the list of concepts to improve a product or a service?

This self-paced course includes the following modules:

1. Introduction
2. Function Definition
3. Ideal Final Result

4. Function-oriented Search
5. Contradictions

This course is a brief introduction to creativity and idea generation with elements of theory, everyday life examples and tests for self-check. If you want to dive deeper into TRIZ and tools for idea generation, we would be happy to invite you to instructor-paced Inventive Product Design and Advanced TRIZ course.

Study materials

EN: Course videos are available here .

Remember to submit your certificate in Moodle!

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

CS30A1641 Inventive Product Design and Advanced TRIZ

CS30A1641 Inventive Product Design and Advanced TRIZ

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Leonid Chechurin, Responsible teacher Katriin Vannik, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: The aim of the course is to introduce the students to the wide range of existing design methods with a focus on design creativity and innovation. The participants will gain both theoretical competences and practical skills, from the descriptive models for analyzing design processes and behaviors, to the prescriptive tools that provide a structured and multi-disciplinary approach to design.
Upon successful completion of the course the learner is expected to be able to:

- Distinguish conceptual design phase and instruments of it
- Analyze patent landscape
- Use ideation algorithms
- Design a new product and concept of the service on demand
- Evaluate design concepts from managerial and production perspectives

Content

EN: It is a course for all interested in creativity, in systematic tools of ideation. The modules contain basics of TRIZ (Theory for Inventive Problem Solving) and other tools for idea generation and other analytical tools that have proven their efficiency in the industry. Half of the course is devoted to the work on challenges given from real companies.
Main course's modules (x means variable part):

- Introduction

- Basics of patenting
- Function definition
- Ideal final result
- Function-oriented search and biomimetics
- Contradictions
- Function modelling and trimming
- Cause-effect chain analysis (x)
- Trends of engineering system evolution (x)
- Axiomatic design (x)
- Design for manufacturing and assembly (x)
- Conclusion

There are about 20 case studies and 100+ examples of smart new product design, technology troubleshooting and inventive solutions, many of which are coming from success and failure stories of technological giants.

Study materials

EN: Course is heavily supported by study materials in video and textual form. They are all in Moodle, the access is provided during the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period, 3. period	6 cr
Course Completion		6 cr

CS30A1671 Service Innovation and Management

CS30A1671 Service Innovation and Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Ville Ojanen, Responsible teacher Armi Rissanen, Administrative person Kalle Elfvengren, Responsible teacher Yan Xin, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Recommended: B.Sc. on Industrial Engineering and Management, or equivalent knowledge

Learning outcomes

EN: Student can
1. recognize and categorize the variety of services and service firms in modern industrial environment as well as understand their influence in management of industrial innovations
2. identify the characteristics of services and evaluate the similarities, differences and links between services and physical products
3. define the dimensions of service innovations

4. explain the processes of new service development
5. identify the main managerial challenges in service innovation management
6. select and apply the suitable frameworks, tools and methods, to overcome some typical real-world challenges in service innovation management

Content

EN: Typologies of service firms. Characteristics of services. Product-service systems and Servitization. Knowledge-intensive business services. New service development process. Dimensions of service innovations. Productization of services. Supporting methods for service innovation management. Service quality and its improvement. Managerial challenges in service innovation management. Utilization of frameworks, methods and tools in service innovation management. Roles of different types of firms in service systems and networks. Value creation through services. Customer-centric service development. Service business innovation global megatrends. Service marketing strategies.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 8 decent work and economic growth, 9 industry, innovation and infrastructure

Study materials

EN: Lecture notes. Other material, books and articles announced in the beginning of the course. Recommended reading: Wirtz, J. & Lovelock, C. (2022), Services Marketing: People, Technology, Strategy, 9th ed. World Scientific.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

CS31A0720 Basics of ERP systems

CS31A0720 Basics of ERP systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Lasse Metso, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After completing the course students will be able to:

- evaluate the benefits of ERP system
- develop and modify master data to ERP system
- support business processes by use of ERP system

Content

EN: Theory of ERP systems and security of ERP systems.
SAP business processes:

Logistics

- Purchasing
- Inventory Management
- Warehouse Management
- Production Contro
- Sales and Distribution
- Plant maintenance
- Project Management

Accounting

- Financial Accounting
- Controlling

Human Capital Management

Additional information

EN:
***

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

8 decent work and economic growth, 9 industry, innovation and infrastucture

Study materials

EN: Materials used in this course are mainly based on SAP UCC material which are given to students and scientific articles (defined during course).

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

CS30A1365 Sustainability-oriented innovation

CS30A1365 Sustainability-oriented innovation

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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

Prerequisites

EN: Students should have accomplished: Innovaatio- ja teknologiajohtamisen peruskurssi (Basics in innovation and technology management) or equivalent.

Recommended prerequisites

CS30A0952 Innovation and Technology Management: a Basic Course

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 an 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.
***
The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth, 9 industry, innovation and infrastructure, sustainable cities and communities, 12 responsible consumption and production, 13 climate action, 17 partnership for the goals

Study materials

EN: Recent academic literature and online lectures.

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

CS30A0810 Must-Have Math for Decision Makers

CS30A0810 Must-Have Math for Decision Makers

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Leonid Chechurin, Responsible teacher Viktor Dodonov, Responsible teacher Anna Kruzenshtern, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After completing the course, students will be able to:

- perform basic operations over mathematical objects and operators: matrix, polynomial, derivative, integral, equation/inequation, differential equations, mean/variance, regression, etc.
- know basic optimization strategies
- code/operate the above mentioned in MATLAB and/or Python

Content

EN: Basics of linear algebra, probability theory, differential equations and optimization, programming in MATLAB-Simulink and Python

Study materials

EN: Course materials are given in Moodle together with lectures, quizzes, assignments, additional materials.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-4. period	3 cr
Course Completion		3 cr

CS34A0780 Start-ups and venture formation

CS34A0780 Start-ups and venture formation

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Noora Heino, Responsible teacher

Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Tweet text

EN: The course focuses on start-ups, spin-offs and the planning of new ventures. On-line course.

Equivalences to other studies

CS34A0735 New Venture Creation

Learning outcomes

EN: After the course the student is familiar with business start-up theories and processes, is able to critically analyze different business ventures and is skilled in testing business ideas and models. In addition, the student is able to analyze business cases and prepare a business plan as well as pitch the plan successfully.

Content

EN: Entrepreneurship theory and process, business ideas and opportunities, business models, entrepreneurial teams, start-ups and spin-offs, start-up process and development stages, start-up strategies and sequencing activities, start-up financing, testing of business ideas, business plans, cases.

Additional information

EN: On-line course.
Max. 40 participants. Priority is given to the students of ENTER programme.

Entrepreneurship Minor students:

In case that the course will not be organized due to too low number of participants, students who are completing an entrepreneurship minor may opt for one of the following courses:

- CS30A1665 Strategic entrepreneurship in the age of uncertainty
- CS30A1342 Technology and Innovation Management, project course

Study materials

EN: Barringer, B.R. & Ireland, R.D. (2006 or later edition). Entrepreneurship: successfully launching new ventures. Pearson Prentice Hall.
Other materials distributed during the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

CS34A0060 Academic entrepreneurship

CS34A0060 Academic entrepreneurship

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Tuuli Ikäheimonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: The aim of the course is to enhance students' understanding of entrepreneurship, including its opportunities and requirements. It introduces students to the entrepreneurial mindset, key traits of entrepreneurs, and the resources needed to succeed in entrepreneurship. Throughout the course, participants will explore how to identify entrepreneurial opportunities and reflect on their own (academic) skills, knowledge, and expertise from an entrepreneurial perspective. The course will also touch upon the role of entrepreneurial teams, highlighting how collaboration and diverse skill sets contribute to successful entrepreneurial ventures. Finally, the course will provide insights into effectively communicating one's skills, expertise, and business ideas.

Content

EN:

- The central concepts of entrepreneurship
- The entrepreneurial mindset, motivation and resources
- Opportunity recognition
- Basic idea of the venturing process
- Entrepreneurial teams
- Commercializing academic skills and research activities and/or communicating entrepreneurial ventures

Additional information

EN: The course is suitable for those students interested in entrepreneurship and developing their entrepreneurial competences, and enhancing their ability to communicate their skills and competences either as an entrepreneur or an employee.
*****

The course relates to United Nations Sustainable development Goal (SDG): 8 Decent work and economic growth.

Study materials

EN: Bridge, S., O'Neill, K. & Cromie, S. (2003) Understanding enterprise, entrepreneurship and small business. Palgrave MacMillan.
Other literature to be announced in the course.

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

CS30A1630 System modelling

CS30A1630 System modelling

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Armi Rissanen, Administrative person Leonid Chechurin, Responsible teacher Viktor Dodonov, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Knowledge of engineering mathematics at the bachelor's level will be sufficient

Recommended prerequisites

CS30A0810 Must-Have Math for Decision Makers

Learning outcomes

EN: After completing the course, students will be able to:

- understand what dynamic systems and mathematical models are
- understand the difference between deterministic, stochastic, chaotic
- analyze system stability and check it numerically
- apply basic system control and evaluate its quality
- choose basic models for simulation of complex systems
- predict system’s behavior based on model simulation
- use Simulink software for system modelling

Content

EN: Economic/financial/demographic and other systems are supposed to be used as the study objects. First, we learn how to model the dynamical behaviour of scalar systems, linear and nonlinear, by the differential equations. Then we extend the analysis by multivariable dynamic systems. We learn how to describe system behaviour, how to predict and how to optimise it.
All the theory is given the numerical examples and simulations.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 7 affortable and clean energy, 8 decent work and economic growth, 9 industry, innovation and infrastucture

Study materials

EN: Course materials are given in Moodle together with lectures, quizzes, assignments, additional materials.

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

YTS010400 System Theory and System Interdependence

YTS010400 System Theory and System Interdependence

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

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 Antti Silvast, 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 key social theory approaches

Additional information

EN: Only for students of social sciences and communication sciences.

Study materials

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

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	5 cr
Course Completion		5 cr

YTS011500 Natural Resources Policy and Governance

YTS011500 Natural Resources Policy and Governance

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

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 Salomaa, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Prerequisites

EN: Students need to have a demonstrated competence in social sciences to attend.

Learning outcomes

EN: After completing this course, the students will be able to:
· Understand major institutions of natural resource governance in different contexts and scales

· Understand different theories on natural resources governance (including adaptive governance and transformative governance)

· Describe relevant research methods

· Interpret dynamics and agency in context of natural resources governance and use critical thinking

· Apply key concepts and relevant theories

Content

EN: Content:
· Governing natural resources in local, national and global contexts

· Major governance institutions and organizations

· Key theories on natural resources and environmental governance

· Social, economic and ecological questions related to natural resource policies and governance

· Key research methods on natural resources governance

· Worklife knowledge and skills

Use of AI applications: AI is used in specific tasks

Additional information

EN: Only for students of MSc programme in Sociotechnical Systems and Sustainability Transitions.
The course is related to UN's Sustainable Development Goals (SDG): 6, 7, 8, 9, 10, 11, 12 ,13, 14, 15, 16, 17.

Study materials

EN: Vatn, Arild (2016) Environmental governance. Institutions, policies and actions. Edward Elgar.
Nunan, Fiona (ed.) 2020. Governing renewable natural resources. Theories and frameworks. Routledge.

Other materials will be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	5 cr
Course Completion		5 cr

K200CE69 Finnish 1

K200CE69 Finnish 1

Abbreviation: K200CE69

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - identify and use the course vocabulary and phrases for common everyday situations - tell about oneself and understand basic questions - read and write simple sentences related to the course topics.

Additional information

EN:

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

K200CE70 Finnish 2

K200CE70 Finnish 2

Abbreviation: K200CE70

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - communicate in most common everyday situations - understand slowly and clearly spoken Finnish when the topic and the vocabulary are familiar - understand and write a simple message or text - use the basic vocabulary and some grammatical structures of Finnish.

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

K200CH62 Finnish 3

K200CH62 Finnish 3

Abbreviation: K200CH62

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tarja Saarnisto, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

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

K200CH63 Finnish 4

K200CH63 Finnish 4

Abbreviation: K200CH63

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr

Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tarja Saarnisto, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

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

K200CL50 Finnish for Work 1

K200CL50 Finnish for Work 1

Abbreviation: K200CL50

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

K200CG35 Finnish for Work 2

K200CG35 Finnish for Work 2

Curriculum period	2025-2026

Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

K200CU41 Suomi with Love 1

K200CU41 Suomi with Love 1

Abbreviation: K200CU41

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - identify and use the course vocabulary and phrases for common everyday situations - tell about oneself and understand basic questions - read and write simple sentences related to the course topics. Proficiency level: A1

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

K200CS72 Independent study in Finnish

K200CS72 Independent study in Finnish

Abbreviation: K200CS72

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English, Finnish
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level B1 The students will be able to - read a text in his/her field in order to understand its main idea - use the most important Finnish concepts in his/her field both in speech and in simple texts - knows enough vocabulary in his/her field to be able to follow a lesson or lecture in Finnish and understand its main points - make use of tools to explain new concepts - can plan language learning independently and assess his/her own progress.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

K200CQ88 Finnish Conversation 2

K200CQ88 Finnish Conversation 2

Abbreviation: K200CQ88

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%

Responsible person	Tarja Saarnisto, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - tell about themselves, their interests, and express opinions on various topics - act in more versatile authentic spoken situations in Finnish - follow conversations, start them, and take part in maintaining them - understand and use various vocabulary and grammatical structures in speech. Proficiency level A2

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

K200CP87 Finnish Conversation 1

K200CP87 Finnish Conversation 1

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tarja Saarnisto, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

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

KE00BZ84 English for Professional Development (Business)

KE00BZ84 English for Professional Development (Business)

Abbreviation: KE00BZ84

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tessa Laba, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to communicate clearly and effectively in different generic and field-specific work place situations both orally and in writing; find, evaluate and use information effectively and function collaboratively in international working environments.

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00BZ85 English for Professional Development (Technology)

KE00BZ85 English for Professional Development (Technology)

Abbreviation: KE00BZ85

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible persons	Hwei-Ming Boey, Responsible teacher Olesya Kullberg, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to communicate clearly and effectively in different generic and field-specific work place situations both orally and in writing; find, evaluate and use information effectively and function collaboratively in international working environments

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00BZ83 English for Professional Development (ESTIEM)

KE00BZ83 English for Professional Development (ESTIEM)

Abbreviation: KE00BZ83

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Ritva Kosonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to communicate clearly and effectively in different generic and field-specific work place situations both orally and in writing; find, evaluate and use information effectively and function collaboratively in international working environments.

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00CG81 Business Writing

KE00CG81 Business Writing

Abbreviation: KE00CG81

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tessa Laba, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 The student is able to: - interpret business transaction documents - use field-specific business terminology and style of writing - prepare clear and accurate business messages in correct English - prepare explicit and effective texts for use within and outside the organization, and to meet the communicative needs.

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

KE00BZ81 Academic Writing

KE00BZ81 Academic Writing

Abbreviation: KE00BZ81

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Anneli Rinnevalli, Responsible teacher

Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

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

KE00CG33 Writing for Digital Media

KE00CG33 Writing for Digital Media

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Hamid Guedra, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00CQ38 Introduction to Copywriting

KE00CQ38 Introduction to Copywriting

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

Credits	2 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Vesa Koskela, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

KE00CG79 Professional Reading

KE00CG79 Professional Reading

Abbreviation: KE00CG79

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Matti Mäkelä, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to - comprehend, analyze and summarize authentic professional texts in English - learn and master strategies for expanding professional vocabulary - use strategies for effective reading.

Additional information

EN:

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

KE00CG82 Online Presentations

KE00CG82 Online Presentations

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Riitta Gröhn, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

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

KE00BX35 English Pronunciation

KE00BX35 English Pronunciation

Abbreviation: KE00BX35

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Samu Lattu, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Students understand various English dialects and know about their special features. Students are able to pronounce English clearly

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		1 cr
¤LAB/LUT: Course Completion		1 cr

KE00CC64 English Prep Course

KE00CC64 English Prep Course

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible persons	Anneli Rinnevalli, Responsible teacher Sari Turppo, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Additional information

EN: Note. The course is not accepted in LUT university's degrees' compulsory language studies. It can however be included in free elective studies.

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

KE00DG83 English and AI: Terminology, Ethics and Writing

KE00DG83 English and AI: Terminology, Ethics and Writing

Abbreviation: KE00DG83

Curriculum period	2025-2026

Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Hamid Guedra, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Learning outcomes

EN: You are able to:

- define and use key terms of AI in English
- identify AI risks and key points of AI ethics in English
- use AI tools responsibly for professional writing in English

Completion method and assessment items	Recurrence	Credits
Method 1		1 cr
¤LAB/LUT: Course Completion		1 cr

KE00DB63 Copywriter´s Portfolio

KE00DB63 Copywriter´s Portfolio

Abbreviation: KE00DB63

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Vesa Koskela, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to: · Write practical copy based on a professional brief · Apply copywriting practices learned previously · Produce a coherent and professional looking copywriter’s portfolio

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

KE00CX55 Responsible Communication

KE00CX55 Responsible Communication

Abbreviation: KE00CX55

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Kyyhkynen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to · identify the role of communication in promoting social responsibility and sustainable development · critically analyze communication messages for ethical implications · apply responsible communication strategies for creating effective product descriptions.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		1 cr
¤LAB/LUT: Course Completion		1 cr

KM00BX75 Each one teach one

KM00BX75 Each one teach one

Abbreviation: KM00BX75

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tuija Marila, Responsible teacher
Study level	Basic studies

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

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: any between A1-C2 Students learn a language of their choice together with a native speaker.

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

KD00CH39 German 1

KD00CH39 Saksa 1

Abbreviation: KD00CH39

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand slow and clear speech related to course topics - are able to communicate orally and in writing in simple everyday situations, such as introductions, telling about oneself and reacting e.g. in dining situations - are able to use the most frequent basic structures CEFR level A1

Additional information

EN:

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

KD00CH40 German 2

KD00CH40 Saksa 2

Abbreviation: KD00CH40

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand slow and clear speech related to course topics - are able to communicate orally and in writing in simple everyday situations, such as telling about the family, free time and health - are able to use the most frequent basic structures. CEFR level A1

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

KD00CH41 German 3

KD00CH41 Saksa 3

Abbreviation: KD00CH41

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand clear speech related to course topics - are able to communicate orally and in writing in simple everyday situations, such as telling about the home, work and past events - are able to use the most frequent basic structures CEFR level A1

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

KD00CH43 German for Work 2

KD00CH43 Työelämän saksaa 2

Abbreviation: KD00CH43

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tiina Pernanen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

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

KD00CT54 German for Work 3

KD00CT54 Työelämän saksaa 3

Abbreviation: KD00CT54

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5

University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Other studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to communicate in oral interaction situations at the workplace related to e.g. company visits. The student is able to compose work-related emails. The student knows the key features of German working life.

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

KD00CZ29 Spoken German Skills

KD00CZ29 Saksan suullinen kielitaito

Abbreviation: KD00CZ29

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level A2 The students will - be able to tell about concrete topics - be able to react fairly spontaneously in a conversation and request clarification - be able to express their opinion - improve their pronunciation.

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

KF00CH30 French 1

KF00CH30 Ranska 1

Abbreviation: KF00CH30

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the basic structures and vocabulary necessary for work and study life introductory situations - can present oneself and tell about oneself orally and in writing. - knows the basic rules of pronunciation - knows the basic differences between formal and informal communication - is able to ask questions and express preferences. - knows the basic structures: verbs' present tense, articles, prepositions of place, prepositions à ja de, personal pronouns, structure expressing ownership, prohibition, questions, numbers 0-69. Proficiency level: A1

Additional information

EN:

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

KF00CH31 French 2

KF00CH31 Ranska 2

Abbreviation: KF00CH31

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the basic structures and vocabulary necessary in work and study life situations, and to tell about his/her use of time and daily routines. - Communicate in travel situations, - tell about working / study day routines - tell time, announce plans - communicate by phone and email. - knows the basic structures: articles, question words, demonstrative adjectives and pronouns, prepositions à, de, en, present tense, reflexive verbs, near future, numbers 70-1000. Proficiency level: A1

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

KF00CH32 French 3

KF00CH32 Ranska 3

Abbreviation: KF00CH32

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the basic structures and vocabulary needed in work and study life situations - can tell about eating habits and order in a restaurant - is able to tell about past events, describe the appearance of people and things and compare things, - knows the difference between the formal and informal communication - knows the structures: articles, adjectives, comparison of adjectives, prepositions, personal pronouns, present, passé composé, partitive, quantitative expressions, numerals 1000 -, ordinal numbers Proficiency level: A1

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

KF00CG43 French for Work 1

KF00CG43 Työelämän ranskaa 1

Abbreviation: KF00CG43

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use the structures and the vocabulary needed in working interaction situations - tell about the jobs and about the working environment - is able to present the basic activities of an enterprise and describe the activities of an organization - can write formal messages - can write a CV - knows how to tell about the future and past events - knows the structures: the pronouns, the present, the imperfect tense and the future form. Proficiency level: A2

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

KF00CG44 French for Work 2

KF00CG44 Työelämän ranskaa 2

Abbreviation: KF00CG44

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the structures and vocabulary necessary in the most important communication situations of working life, mainly written. - is able to present optionally e.g. company / organization and products, give an elevator speech, tell about entrepreneurship, write a memo. - is able to use subjunctive and conditional Proficiency level: A2

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

KF00CL06 Le monde francophone

KF00CL06 Le monde francophone

Abbreviation: KF00CL06

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Ritva Kosonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course, the student - knows the countries the belong to the Francofonia or the French-speaking world and has familiarized with some of them - can tell about the tourism, the economics and the culture of different French speaking countries - knows the forms and the use of the subjunctive mood - can tell about the past events by using the imperfect and the perfect tenses.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

KP00CK94 Spanish 1

KP00CK94 Espanja 1

Abbreviation: KP00CK94

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student is able to - use the structures and the vocabulary needed while presenting oneself in working and studying situations - can present himself and tell about himself in spoken and written way - knows the basic rules of pronunciation - knows the basic differences of the formal and the informal communication - is able to ask questions and tell opinions. - knows the basic structures: the Present Tense, the articles, the prepositions, the personal pronouns, the structures that indicates the possession, the negation, the interrogative sentence, the numbers 0-100 Proficiency level: A1

Additional information

EN:

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

KP00CH26 Spanish 2

KP00CH26 Espanja 2

Abbreviation: KP00CH26

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use the structures and the vocabulary needed in working, studying and leisure everyday situations - tell about his/her daily routines (about the family, describing persons, the hobbies, going to the restaurant and shopping, writing an e-mail message) - knows the basic structures: articles, questions words, demonstrative adjectives and pronouns, prepositions, the Present Tense, The Perfect Tense, The near Future, the numbers 100-1000 Proficiency level: A1

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

KP00CH27 Spanish 3

KP00CH27 Espanja 3

Abbreviation: KP00CH27

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use tell about the living, to describe the appearance of persons and things, to compare things - can tell about the past events - knows the structures: adjectives, the comparison, the direct and indirect object pronouns, the reflexive verbs, the gerund, the numbers 1000 -, the ordinary numbers Proficiency level: A1

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

KP00CP90 Spanish 6

KP00CP90 Espanja 6

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

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

KP00BX61 Spanish for Working Life 1

KP00BX61 Työelämän espanjaa 1

Abbreviation: KP00BX61

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use the structures and the vocabulary needed in working interaction situations - tell about the jobs and about the working environment and present the basic activities of an enterprise - can write formal messages - can write a CV - knows how to tell about the future and past events - knows the structures: the pronouns, the present tense, the imperfect tenses, the future, the polite requests (the imperative) Proficiency level: A2

Additional information

EN:

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

KP00BX62 Spanish for Working Life 2

KP00BX62 Työelämän espanjaa 2

Abbreviation: KP00BX62

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After compliting the course, student - is able to communicate mainly written in Spanish in basic business situations and understand the business culture of the Spanish speaking countries. - is able to tell according to choise about, business culture, business communication, meetings, banking, applying for a job in the Spanish speaking world. - is able to use conditional, subjunctive and future. Proficiency level: A2

Additional information

EN:

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

KC00DB86 Chinese 1

KC00DB86 Chinese 1

Abbreviation: KC00DB86

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	Chinese
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Ritva Kosonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to use - Chinese pinyin pronunciation - simple sentences

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

KC00DB87 Chinese 2

KC00DB87 Chinese 2

Abbreviation: KC00DB87

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Chinese
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Ritva Kosonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able - to use basic grammar - have daily conversations

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

KC00DB88 Chinese 3

KC00DB88 Chinese 3

Abbreviation: KC00DB88

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	Chinese
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Ritva Kosonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to use Chinese in practical situations, e.g. in airport, train station, hospital and restaurant.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KR00CL24 Swedish for Beginners

KR00CL24 Swedish for Beginners

Abbreviation: KR00CL24

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sirja Fränti, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - identify and use everyday expressions and basic phrases - communicate in simple and routine situations - read and write simple sentences related to the course topics

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

KM00CO04 Finnish Culture and Society

KM00CO04 Finnish Culture and Society

Abbreviation: KM00CO04

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jaana Häkli, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - work and live in Finland or with the Finns without major cultural conflicts. - use the basic information on Finnish history, society, design, welfare state, identity and nature etc. to understand values, customs and habits in Finland. - get deeper cultural experiences in Finland through functional and experiential activities and visits related to Finnish culture.

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

KE00CF69 Intercultural Competence and Communication

KE00CF69 Intercultural Competence and Communication

Abbreviation: KE00CF69

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Derek Mitchell, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to: - understand own cultural background and its effect on behaviour and communication. - develop intercultural competence and intercultural communication skills to be able to act effectively in global organizations and cross-cultural environments. - recognize cross-cultural differences and work with them. - understand culture adaptation and adjustment for exchange purposes. - understand the basic concepts of global citizenship and diversity.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

A380A0131 Business Relationships in International Value Networks

A380A0131 Business Relationships in International Value Networks

Abbreviation: A300CE15

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Axel Zehendner, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) General studies

Learning outcomes

EN: The aim of the course is to familiarize students with different business relationships in international value networks, management of relationships and networks, and characteristics of supplier relationships and collaborative networks.
Upon completion the course students are able to

- understand the main concepts and theoretical backgrounds of collaboration and networks

- analyze the benefits and challenges of relationships and networks

- define supplier relationships

- participate in the development of supplier supplier relationships.

Content

EN: - The concepts and theories of collaboration and networking
- The benefits and challenges of collaboration

- Management of collaboration and networks, and supplier relationship management

Additional information

EN: Course is available for following students:

- LUT Business School students
- exchange students in business studies
- LAB business degree students
- Engineering students with a minor in business studies

The course is organized two times in an academic year: period 2 and period 4.

Moodle-based online course.

No contact teaching: so the course does not exist in TimeEdit /timetable) The teacher contacts the students every week via Moodle messages.

NB! After being accepted to the BRIVN course especially exchange students must make sure that they use LUT email and can receive Moodle messages, which is essential for completing the course.

Please be informed that if you miss the deadline for enrolling a group for the case assignment in Moodle, you cannot continue the course. The enrolling period is one week from the beginning of the course.

***

The course is related to UN's Sustainable Development Goals (SDG): 17 partnership for the goals.

Study materials

EN: Selection of journal articles and assigned readings, teaching videos and presentations.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period, 4. period	6 cr
¤LAB/LUT: Course Completion		6 cr
Method 2	Recurrence 1: 2. period, 4. period	6 cr
¤LAB/LUT: Course Completion		6 cr

A130A0551 Organizational Behaviour

A130A0551 Organizational Behaviour

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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

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 focuses on human behavior in organizations, addressing it as a phenomenon at the individual, team, and organizational levels, all of which are interconnected. At the individual level, central themes include personality, psychological capital, values, perceptions, decision-making, attitudes, motivations, and moods/emotions. At the group or team level, central themes revolve around team or group management, group dynamics, power dynamics, politics, conflicts, and negotiation strategies for team behavior. At the organizational level, central themes involve organizational structure, culture, and change management. Since groups and organizations are comprised of individuals, it's crucial to understand individual behaviors, which influence the behaviors of other individuals (groups and organizations) and vice versa. Group and organizational factors also influence individual 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 and Campbell. (2010). Organizational Behaviour. Edition, New Jersey; Pearson/Prentice Hall.
2. Materials announced by the lecturer.

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

A130A0620 Basics in MS Excel for Business Students

A130A0620 Basics in MS Excel for Business Students

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Sanna Heinänen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: No preliminary studies required. Basic knowledge of MS Excel recommended.

Learning outcomes

EN: By the end of the course, students are able to use and develop basic functions for data analysis relating to business studies and needs.

Content

EN: The course is based on independent study and can be carried out any time during the academic year. During the course, students are learning the basics of MS Excel for business studies. The course includes self-learning videos and documents as well as web-based exercises. The topics include formatting, drawing graphs, basic mathematic formulas, lookup formulas and working with pivot tables and dashboard. The course does not require preliminary studies. The basic knowledge of MS Excel recommended.

Study materials

EN: Course materials

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr

A380A0400 Professional Selling

A380A0400 Professional Selling

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Jarkko Niemi, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: Students will learn
- to critically evaluate strategies related to international marketing and sales management

- to understand the process of personal selling in industrial marketing

- to evaluate the impact of business decisions and administrative practices

- to analyze managerial challenges in international marketing environment

- to apply relevant business skills

Content

EN: This course provides an introduction to personal selling and modern sales management within the international business-to-business (B2B) environment. By the end of the course, students will have honed their personal selling skills, gained an understanding of sales management dynamics in a B2B context, and applied sales strategies in a competitive simulation. The course is structured into two main parts: the first part focuses on personal selling and professionalism in sales, culminating in sales negotiation role plays. The second part focuses on modern sales management, featuring a computer-based simulation game. Students' performance will be evaluated through a combination of assignments (30 %), participation in role-plays (20 %), and a final exam (50 %). The skills and knowledge acquired on this course are directly applicable to careers in sales, marketing, and business management, but also to many other work-life contexts.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 3 good health and well-being, 8 decent work and economic growth, 9 industry, innovation and infrastucture

Study materials

EN: Assigned readings, lectures, and sales management simulation game.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course completion		6 cr

A130A0680 Statistics for Economics

A130A0680 Statistics for Economics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Iryna Maliatsina, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: After the course, the students will have a general understanding of statistics and fundamentals of statistical inference, will be able to apply the basic statistical tests to analyse quantitative data, and will be able to use statistical software when describing data and applying the basic statistical analysis methods.

Content

EN: The basic concepts and issues in statistical inference. Sampling. Graphical and numerical description of data. Use of probability distributions. Parameter estimation and statistical testing. The basic tests to analyze quantitative data, and properly selecting the appropriate tests. Use of statistical software package.

Additional information

EN: Course is only available for students who are studying in Bachelor’s Programme in Sustainable International Business.

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The course is related to UN's Sustainable Development Goals (SDG): 4 quality education

Study materials

EN: 1) Lecture and exercise materials
2) e-book: Ross, S. M. Introductory statistics. Academic Press, 2017

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course completion		6 cr

A380A0500 Introduction to Corporate Social Responsibility and Sustainability

A380A0500 Introduction to Corporate Social Responsibility and Sustainability

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Pasi Heikkurinen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: This course aims to familiarize the students with the basics of corporate social responsibility (CSR) and sustainability, including common critiques of these concepts as well as their potential to achieve positive change. During the course, students will actively learn about and reflect on various sustainability issues and topics affecting businesses operating in a global environment, and possible ways for companies to address these issues through CSR and sustainability strategies, practices and interactions with stakeholders. Guest lectures and class exercises give the students an opportunity to apply their knowledge to actual business practice. Finally, students can improve their professional skills (e.g. communication and interaction skills) during the course through class discussions and group assignments.
Upon completion of the course, students should be able to:

1) Understand and critically examine key concepts and frameworks related to CSR and sustainability.

2) Recognize and assess various environmental, social, economic and ethical issues caused by, and affecting, companies operating in a global context.

3) Distinguish and analyse various types of CSR and sustainability strategies, practices and other ways of addressing sustainability issues.

4) Apply theoretical frameworks and research findings related to CSR and sustainability to real-life phenomena and business practice.

5) Produce CSR and sustainability-related texts and materials.

Content

EN: CSR and sustainability frameworks and concepts, environmental, social, economic, and ethical issues, CSR and sustainability strategy, CSR and sustainability practice, activism, reputation, corporate crises, communications, governance, digitalization, globalization, supply chain sustainability, sustainable investing, and cross-sector interactions.

Additional information

EN: Contact teaching
**

Other additional information: The course is related to all UN's Sustainable Development Goals (SDGs).

Study materials

EN: Rasche, A., Morsing, M., & Moon, J. (Eds.). (2017). Corporate Social Responsibility: Strategy, Communication, Governance. Cambridge University Press: Cambridge.
Lecture slides and materials.

Additional readings, videos and course materials announced in the syllabus and/or distributed during lectures.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period	6 cr
Course Registration		0 cr
Course Assessment		6 cr

Method 2	Recurrence 1: 3. period	0 cr
Course Registration		0 cr

A380A0310 Services Marketing and Customer Experience Management

A380A0310 Services Marketing and Customer Experience Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Heini Vanninen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A130A0010 Markkinoinnin perusteet or equivalent basic marketing course.

Learning outcomes

EN: The aim of the course is to provide the students with the knowledge of most central issues of services marketing and customer experience management. After completion of the course the students are able to:
- Identify the key concepts and issues related to services marketing and how the nature of services affects marketing activities
- Demonstrate how services can be designed according to the needs of customers
- Plan service blueprints and understand services marketing from a holistic viewpoint, including the background work and processes that are needed to create and deliver an experience to the customer
- Analyze and audit existing services marketing processes by using the principles of service design

Content

EN: Foundations for services marketing (e.g. nature of services, services marketing mix, service design). Understanding customers and customer journey. Aligning service design and standards, service quality. Delivering and performing service, managing service promises.

Additional information

EN: Lectures in classroom.

Study materials

EN: Zeithaml, V.A., Bitner, M.J., Gremler, D.D. (2018) Services Marketing: Integrating Customer Focus Across the Firm with Connect Access.(7th ed.). New York: NY. McGraw-Hill Education.Textbook: ISBN: 978-1260051988Other readings and assignments announced before / in the class

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

A380A6060 Applied International Business

A380A6060 Applied International Business

Abbreviation: AIB

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Sina Mortazavibabaheidari, Responsible teacher Daniel Stabler, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Recommended prerequisites

A380A7001 Introduction to International Business

Learning outcomes

EN: After taking the course the student should be able to:
· understand and apply relevant theories in the context of international business practice

· discuss how the practice of international business can influence the grand challenges our world is facing;

· understand how business scholars can influence the practice of international business;

· evaluate international business challenges that companies face and offer practical recommendations;

· retrieve and analyze international business data to facilitate managerial decision-making

Content

EN: This course covers practical challenges faced by international business enterprises including sustainability, cross-cultural and social issues, internationalization, innovation and entrepreneurship.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG):8 decent work and economic growth,11 sustainable cities and communities, 12 responsible consumption and production,17 partnership for the goals

Study materials

EN: Study materials including journal articles from magazines such as Harvard Business Review and MIT Sloan Management Review as well as practical business cases are made available on the course Moodle page.

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

A380A6000 Cross-Cultural Encounters

A380A6000 Cross-Cultural Encounters

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Tanja Karppinen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: By the end of the course, students will know why it is important to understand and appreciate cultural differences both in business and especially private life. Students will be able to explain the basic concepts of intercultural communication by the main course themes: cultures and communication, verbal and nonverbal communication, national stereotypes, intercultural sensitivity, cross-cultural interaction, culture shock, adaptation, expatriate assignments. Students will be able to describe themselves as an intercultural communicator, recognize symptoms of culture shock in their own life and especially know how to make intercultural adaptation process easier.

Content

EN: The purpose of the course is to develop students' abilities to understand and appreciate cultural differences both in business and especially private life.
- cultures and communication
- verbal and nonverbal communication
- national stereotypes
- intercultural sensitivity
- cross-cultural interaction
- culture shock
- adaptation
- intercultural effectiveness
- expatriate assignments

Additional information

EN: Contact teaching, learning and interaction in class.

Study materials

EN: Reading material for the course provided by the lecturers.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period	3 cr
¤LAB/LUT: Course Completion		3 cr

A380A0000 Cross-Cultural Issues in International Business

A380A0000 Cross-Cultural Issues in International Business

Abbreviation: A300CE12

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Gregory OShea, Responsible teacher Anna Sidorenko, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) General studies

Learning outcomes

EN: The goal of the course is to give an understanding of how culture affects international business and advance students' global mindset by giving conceptual tools to increase their intercultural competence. After completing the course the students will be able to:

1. understand, define and discuss culture in general and in the context international business

2. explain cultural orientations towards time, space and context.

3. analyze and compare national cultures according to dimensions defined by studies of Hofstede, Trompenaars, and the GLOBE project.

4. reflect upon the relationship between culture, organizations and management.

5. evaluate the effects of the culture on various elements of international business, including marketing, negotiations and international teams.

Content

EN: The Concept of culture; dimensions of culture in business (Hall, Hofstede, Trompenaars, and the GLOBE project). The limits of globalization from a cultural perspective. The role of culture in communication, negotiations, and management. Cross-cultural issues in international teams. Standardization and adaptation in international marketing. Country cases of cultural differences .

Additional information

EN: Opintojakso liittyy YK:n kestävän kehityksen tavoitteisiin (SDG): 5 sukupuolten välinen tasa-arvo, 10 eriarvoisuuden vähentäminen

Study materials

EN: 1. Browaeys ; Price: Understanding Cross-Cultural Management (3rd ed), Pearson, 2015 2. Lecture slides 3. Additional material distributed in class and via Moodle

Literature

https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/1oevkkm/alma991875263906254
https://lut.primo.exlibrisgroup.com/permalink/358FIN_LUT/1oevkkm/alma991982971606254

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

A380A0300 Introduction to Digital Marketing

A380A0300 Introduction to Digital Marketing

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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	Titta Pitman, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

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
Method 1	Recurrence 1: 4. period	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 4. period	3 cr
Course Completion		3 cr

BM40A0202 Foundations of Computer Science

BM40A0202 Foundations of Computer Science

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5

University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Computational Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Zhisong Liu, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences (free text field)

EN: BM40A0201 Tietojenkäsittelytieteen perusteet 6 op.

Learning outcomes

EN: By the end of this course, students will have a strong grasp of fundamental computing principles, including logic circuits, data representation, and algorithmic problem-solving. They will understand key components of computer architecture, such as the CPU, memory hierarchy (including RAM and cache), and the basic machine cycle (fetch, decode, execute). Students will explore the design and function of the ALU, registers, buses, and control units, along with an introduction to assembly language and its role in low-level programming. Additionally, they will learn about theoretical models of computation, such as the Turing machine, to develop a deeper understanding of computational limits and efficiency. The student can outline applications of computer science methods within different fields and become acquainted with the field's educational, professional, and ethical questions.

Content

EN: Logic and computer: logic and discrete methods, logical circuits, computer architecture and limitations, machine language and system programs. Applications of computer science: programming paradigms, computational methods and intelligence, future aspects of computer science and technology. Computer science in education, research and as a profession, ethics.

Study materials

EN: Lecture material, which is based mainly on following source books:
Boberg J.: Johdatus tietojenkäsittelytieteeseen, Turun yliopisto, 2012.

Brookshear G., Brylow D.: Computer Science - An overview, 12th Edition, Addison-Wesley, 2015.

Reed, D.: Balanced Introduction to Computer Science, 3rd Edition, Pearson 2011.

Råde L., Westergren, B.: Mathematics handbook for science and engineering, 3rd ed., Studentlitteratur, 1995.

Tietotekniikan peruskirja, toim. Paananen J., Docendo, 2005.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period, 3. period-4. period	6 cr
Course Assessment		6 cr
Course Registration		0 cr

BM20A8801 Discrete Mathematics

BM20A8801 Discrete Mathematics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5

University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Computational Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Tapio Helin, Responsible teacher Chuntao Chen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Some basic mathematics & statistics course.

Equivalences to other studies

BM20A6600 Discrete Models and Methods

Learning outcomes

EN: Upon completion of the course the student is expected to know and understand the basic concepts of discrete mathematics, be able to formulate models representing simple discrete problems and solve them.

Content

EN: Main concepts in mathematical reasoning, relations, combinatorics and graph theory.

Study materials

EN: Lecture materials in Moodle. Source books include but are not limited to:
Dossey, Otto, Spence, Vanden Eynden: Discrete mathematics, Pearson 5th edition, 2006.

Richard Johnsonbaugh, Discrete mathematics, Prentice hall, 6th edition, 2005.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	3 cr
Course Assessment		3 cr
Course Registration		0 cr

BM20A7102 Statistics II

BM20A7102 Tilastomatematiikka II

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	Finnish, English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Computational Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Jarkko Suuronen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Required: Basic knowledge of Julia, Matlab, Python, or R programming. Statistics I or equivalent knowledge.

Compulsory prerequisites

BM20A8601 Statistics I

or

BM20A1401 Statistics I

or

BM20A1401A Tilastomatematiikka I

or

A130A0650 Basics of Statistical Research

or

A130A0650A Tilastollisen tutkimuksen perusteet

or

BM20A9301 Statistics

Learning outcomes

EN: The students expand their knowledge of Bayesian inference and time series analysis. They can formulate more advanced statistical models, and apply them in science and technology.

Content

EN: Bayesian inference: likelihood, prior and posterior distributions, marginal likelihood. Bayesian model selection. Time series and spectrum analysis.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG): 4 quality education

Study materials

EN: Anthony J. Hayter, "Probability and Statistics for Engineers and Scientists"

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	4 cr
Course Registration		0 cr
Course Assessment		4 cr
Method 2	Recurrence 1: 4. period	4 cr
Course Assessment, in English		4 cr
Course Registration, in English		0 cr

BL40A2011 Introduction to Cyber-Physical Systems

BL40A2011 Introduction to Cyber-Physical Systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr

Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Pedro Juliano Nardelli, Responsible teacher Minna Loikkanen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Scientific computing (python), basics of probability theory (random variables), and basics of Boolean algebra (logic gates)

Learning outcomes

EN: After the course, the student will be able to:
(1) understand what cyber-physical systems (CPSs) are;

(2) define uncertainty, information, network, decision-making and action as concepts;

(3) analyze CPSs as constituted by three necessary layers with three cross-layer operations;

(4) indicate enabling technologies of CPSs;

(5) design and assess the performance of simple CPSs, as well as critically discuss their social impact.

Content

EN: 1) Introduction to CPSs;
2) Core concepts: system, uncertainty, information, network, decision-making, and action;

3) The three-layers of CPSs;

4) Enabling information and communication technologies;

5) Examples of CPSs and their social impact.

Note: The use of generative tools (the so-called artificial intelligence or simply AI) are discouraged as the proposed tasks are designed for human learning; nevertheless the so-called AI applications can still be used according to general LUT policies.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 3 good health and well-being; 7 affordable and clean energy; 9 industry, innovation and infrastructure; 11 sustainable cities and communities; 12 responsible consumption and production; 13 climate action.

Study materials

EN: Textbook, simulations in python (using deepnote platform) produced by the teachers and other suggested materials.

Literature

Nardelli, Pedro HJ. Cyber-physical Systems: Theory, Methodology, and Applications. John Wiley & Sons, 2022. Available at LUT Primo.

https://www.wiley.com/en-us/Cyber+physical+Systems%3A+Theory%2C+Methodology%2C+and+Applications-p-9781119785187

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	4 cr
Course Completion		4 cr

BL40A1812 Introduction to Embedded Systems

BL40A1812 Introduction to Embedded Systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Pietari Puranen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basics of C-programming

Equivalences (free text field)

EN: Replaces the course BL40A1811 Johdanto sulautettuihin järjestelmiin, 6 ECTS.

Learning outcomes

EN: The course is an introduction to embedded systems. Upon completion of the course the student will be able to: 1. identify different microprocessor types and peripheral components in embedded systems, 2. describe the operation principles of an embedded system and its peripheral components, 3. program and test applications to an embedded system by using C language.

Content

EN: Architecture of a microprocessor, instruction set and operation, microcontrollers, memories, peripherals, embedded system design, programming and development of applications, embedded system design examples.

Use of AI applications

Large language models can be used for deepening conceptual knowledge of course topics (for example when preparing for the exam) and as an aid for coding in the group assignment. However, each group must also be able to explain all code generated by artificial intelligence.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 7 Affortable and clean energy, and 9 Industry Innovation and Infrastructure.

Study materials

EN: Lecture material based on F. Vahid, Tony Givargis, *Embedded System Design: A Unified Hardware/Software Introduction*
ELEGOO The Most Complete Starter Kit (including Arduino UNO R3) and Arduino Mega 2560 R3 (borrowed to students who attend in exercises and project work at Lappeenranta campus, 1 set/project group)

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

BL30A0001 Electric Circuits

BL30A0001 Electric Circuits

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Mehar Ullah, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course the student will be able to: 1. solve simple DC and AC systems with different calculation methods, 2. calculate with phasors, perform transformation from time domain to phasor domain and vice versa, 3. determine and explain the concept of impedance, 4. determine and explain the concepts of active power, reactive power, apparent power, 5. determine resonance frequency. 6. explain the concept of three-phase system.

Content

EN: Solution methods for DC and AC circuits: Ohm's law, Kirhhoff's voltage and current law, mesh current and node-voltage methods, phasor calculation, resonant circuits, sinusoidal quantities, symmetrical three-phase system, power calculation, star-delta and delta-star transformations.

Additional information

EN: In person lectures will only be in Lappeenranta campus. The lectures will be streamed for students in Lahti campus.
In the course will be held both English and Finnish exercise groups. Exercise groups in Lappeenranta and in Lahti.

Replaces the course BL30A0000 Sähköiset piirit, 4 ECTS.

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

7 affordable and clean energy

Study materials

EN: Course material in Moodle learning environment including lecture slides and calculation exercise materials and literature: book Electric circuits by Nilsson, J.W.

Literature

The learning material is based on the latest research, books and is distributed to students in Moodle in the form of slides, videos. In this course mostly we will be using book Electric circuits by Nilsson, J.W. In the ex-

tra material tab in Moodle there will be some extra videos that can be used to clear the concepts of some topics.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	4 cr
Course Registration		0 cr
Course Assessment: Written examination		4 cr
Method 2	Recurrence 1: 3. period-4. period	4 cr
Course Registration		0 cr
Continuous Assessment + Test		4 cr
Method 3	Recurrence 1: 3. period-4. period	4 cr
Course Registration		0 cr
Course Assessment: Written examination		4 cr
Method 4	Recurrence 1: 3. period-4. period	4 cr
Course Registration		0 cr
Continuous Assessment + Test		4 cr

BL30A0350 Electromagnetism and Circuit Analysis

BL30A0350 Electromagnetism and Circuit Analysis

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Cassia Santos Nunes Almeida, Responsible teacher Paula Immonen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Recommended Prerequisites: BL10A0102 - Basics of Electrical Engineering (2 cr) and LES10A020 - Engineering Physics (3 cr).

Learning outcomes

EN: After completing the course, the student will be able to:

1. explain in your own words the key mechanisms of generation of electromagnetic radiation and the behavior of electromagnetic waves in a medium
2. explain Ampère's, Faraday's and Lenz's laws and the Lorentz force using examples and tell why these equations are needed in electrical engineering
3. explain the functions of antennas
4. explain what is meant by transmission line theory and how a transmission line is modeled using distributed parameters
5. explain how the current in a DC circuit containing inductance behaves in changing situations and what is meant by mutual inductance
6. explain why an electromotive force is induced in a conductor moving in a magnetic field and why a current-carrying conductor in a magnetic field is affected by a force

7. form analytical equations/calculate the magnetic flux, magnetic field strength and magnetic flux density of a magnetic circuit using basic equations
8. apply the theories presented in the course to solving simple electromagnetic problems and be able to evaluate the reasonableness of the results obtained
9. solve electrical circuits using systematic methods

10. define the basic methods used to describe transmission networks

11. explain the phenomena of change in electrical circuits and calculate changes in electrical circuits.

12. solve an electrical circuit voltage or current change in e.g. when a step-voltage is applied to the circuit.

Content

EN: Electromagnetic waves, basic phenomena of electromagnetism (magnetic force, magnetic field, electromagnetic induction), laws and applications, antennas, transmission lines and magnetic circuits. Systematic calculation methods for electrical circuits, such as the identification method and the Heaviside method. Laplace transformation and Laplace inverse transformation. Phenomena of change in electrical RLC circuits (voltage or current changes in the circuit). Methods to describe transmission networks.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 5 gender equality, 7 affordable and clean energy, 8 decent work and economic growth, 9 industry, innovation and infrastructure

Literature

Ulaby, Fawwaz T. Fundamentals of Applied Electromagnetics, Prentice Hall, 2001. Print.

Ida, Nathan. Engineering Electromagnetics, Springer International Publishing, 2015. Web.

Nilsson, James William, and Susan A Riedel. Electric Circuits. Global edition. Harlow, England: Pearson, 2015. Print.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	6 cr
Course Completion		6 cr

BL40A2601 Wind Power and Solar Energy Technology and Business

BL40A2601 Wind Power and Solar Energy Technology and Business

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Katja Hynynen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences to other studies

BL40A2600 Wind power and solar energy technology and business

Learning outcomes

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

1. model the process from wind energy into company turnover at the principle level,
2. identify and describe the key technologies related to wind power, the core business principles, environmental issues, energy policy and their development trends,
3. describe the mutual effects of wind power and electric power systems,
4. identify and describe the technologies related to solar power.,
5. describe the basic principle of photovoltaic cells,
6. estimate the performance and profitability of a PV plant.

Content

EN: Process modelling from kinetic energy of wind into company turnover and from solar radiation to turnover. Basic components of a wind power plant (turbine, gearbox, generator, power electronics, power electronics, tower), environmental effects of wind power, wind park planning, grid effects of wind power, economic feasibility of wind power under different circumstances, wind conditions in Finland. Solar energy technologies, operating principle of solar panels, PV solar power plant structure.

Company cooperation

There is visiting lecturer from a company in the course.

Use of AI applications

AI applications can be used in the course according to LUT's general AI-based tools policies.

Additional information

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

7 clean and affordable energy

8 decent work and economic growth

9 industry, innovation and infrastructure

12 responsible consumption and production

13 climate action

Study materials

EN: The learning material is based on the latest trends on wind power and solar energy development, and is distributed to students in Moodle learning environment.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	5 cr
Course Completion		5 cr

BL50A0021 Basic Electronics 1

BL50A0021 Elektroniikan perusteet 1

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Mikko Kuisma, Responsible teacher Minna Loikkanen, Administrative person Mohammad Khan, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences (free text field)

EN: Replaces the course Elektroniikan perusteet B 3 ECTS.

Learning outcomes

EN: Upon completing the course, the student will be able to:

- Identify key passive and active electronic components and describe their applications.
- Differentiate between analog and digital electronics.
- Define the concepts of amplification and filtering.
- Explain the operation and basic physical structure of an ideal semiconductor diode.
- Describe the function and applications of transistors and discuss their significance, along with integrated circuits.
- Describe the operating principles of digital logic gates and identify common logic functions.
- Recognize the key stages and materials involved in manufacturing electrical apparatus.
- Apply Ohm's law, Kirchhoff's voltage and current laws, and the concept of electrical power to simple electrical circuits.

Content

EN: Analog and digital signals, resistors, capacitors and inductors, filtering, amplification, semiconductors, diodes and transistors, digital logic gates, introduction to electronics manufacturing technology.

Additional information

EN:

- Hybrid course organized both in Lappeenranta and Lahti (locally/remotely)
- Use of AI tools: According to the university regulations
- The course is related to the UN's Sustainable Development Goals (SDG): 7 affordable and clean energy.
- This course is given both in English (3. period) and in Finnish (2. period).

Study materials

EN: The learning material is based on the latest research and is available to students through Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 3. period-4. period	3 cr
Course Completion (Junior University)		3 cr
Method 3	Recurrence 1: 3. period	3 cr
Course Completion, in English		3 cr
Method 4	Recurrence 1: 2. period	3 cr
Course Completion		3 cr

BL50A0210 Introduction to EMC

BL50A0210 Introduction to EMC

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Tommi Kärkkäinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences to other studies

BL50A0201 Introduction to EMC

Learning outcomes

EN: Upon completion of the course the student will be able to:
1. recognise coupling mechanisms of electromagnetic interference (EMI) and describe the main principles to minimise EMI,
2. list the main effects of EMI and non-idealities of electrical components to the operation of an electrical apparatus,
3. describe the generation of electrostatic discharge (ESD) and the most important precautions in handling sensitive electronic devices and components.

Content

EN: Basic concepts of the electromagnetic compatibility (EMC). Conductive, capacitive, inductive and RF coupling of EMI. Non-idealities of components, electrostatic discharge (ESD), EMC legislation.
Use of AI applications

The use of AI tools to support learning is allowed and encouraged. AI must not replace the student's own efforts to learn. The general guidelines on the use of AI by LUT must be adhered to.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG):
4 quality education,

7 affordable and clean energy,

12 responsible consumption and production.

Study materials

EN: Moodle material and web resources.
Moodle material is based on H.W. Ott: Noise Reduction Techniques in Electronic Circuits and other literature of the field.

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

BH40A0102 Basics of Renewable Energy Engineering

BH40A0102 Basics of Renewable Energy Engineering

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%
Responsible persons	Aki Grönman, Responsible teacher Minna Loikkanen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course the students will be able to: 1. describe the operation principle of various power plant types using renewable energy sources, 2. compare the benefits and disadvantages of power plants using renewable energy sources in relation to each other and conventional power plants, 3. understand the factors affecting power plant efficiencies, and 4. select suitable power plants for a given purpose. The course supports development of the following work life expertise and skills: Mathematics and natural sciences, practical application of theories, working independently, problem solving, information retrieval, time management and prioritizing tasks, analytical thinking skills.

Content

EN: Wind power, wind turbine types, water power, hydrogen economy and fuel cells, wave power, tidal power, biomass and biogas utilization, solar power, geothermal energy, principles and efficiency calculations of renewable energy power plants. The course is related to P2X theme.

Additional information

EN: Blended learning. The course is related to SDG 7: affordable and clean energy.

Study materials

EN: Lecture material in Moodle. Further material will be announced during lectures.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	3 cr
¤LAB: Course Completion		3 cr

BH50A0220 Energy Systems

BH50A0220 Energy Systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 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 Samuli Honkapuro, Responsible teacher Falah Alobaid, Responsible teacher Gustavo de Almeida, Responsible teacher Goncalo Mendes, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Understanding of basic units.

Learning outcomes

EN: Upon completion of the course the student will be able to 1. recognize the world's energy resources and the most central factors affecting their utilization, 2. describe different types of energy production processes 3. recognize the equipment and terminology related to energy technology, 4. describe typical energy distribution, 5. recognize benefits and drawbacks of energy systems, 6. define economic constraints to energy processes, and 7. explain the fundamentals of the electricity markets, including price formation principles and role of the key actors, 8) identify societal impacts and constraints of energy futures.
Completion of the course supports the development of the following generic competences for working life: Information retrieval, practical application of theories, working independently, written communication and time management and prioritizing tasks.

Content

EN: Global energy resources and energy demand. Energy conversion processes and process equipment. Energy transfer and distribution systems. Environmental and social impacts of energy technology. Economics of energy systems. Fundamentals of electricity market. Energy futures.
Company cooperation: Not applicable.

Use of AI applications:

AI applications can be used for understanding concepts and searching for information, taking into account the constraints of the AI in source criticism. Students must provide the answers in assignments by own produced text. Students are not allowed to present AI-generated text as their own.

Additional information

EN: Blended learning
SDGs: 7 affordable and clean energy, 11 sustainable cities and communities.

Study materials

EN: Celik, Serdar, Sustainable Energy Engineering Fundamentals and Applications, 2023; Boyle, Godfrey, Renewable Energy: Power for a Sustainable Future, 2012; Lecture notes.

Literature

Celik, Serdar, Sustainable Energy Engineering Fundamentals and Applications, 2023.

Boyle, Godfrey, Renewable Energy: Power for a Sustainable Future, 2012.

Lecture notes, distributed to students in Moodle.

Supporting material for the Lectures, distributed to students in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	5 cr
¤LAB: Course Completion		5 cr

BH40A1401 Fluid Mechanics I

BH40A1401 Fluid Mechanics I

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 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 Ahti Jaatinen-Värri, 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; Lahti. The course will be lectured every other week in Lappeenranta and Lahti. See time table and Moodle for details

Learning outcomes

EN: Understands the basic concepts of fluid dynamics and is able to apply them
Understands the basics of hydrostatics and is able to apply them
Understands the basic flow phenomena, equations describing them is able to apply them to solve problems
Understands the working principles of different flow meters and is able to choose a correct flow meter for each application
Is able to apply skills accumulated during the course for pipe flow and is able to solve pipe flow problems.
Completion of the course supports the development of the following generic competences for working life: mathematics and natural sciences, practical application of theories, working independently, problem solving, and time management and prioritizing tasks.

Content

EN: 1) Introduction: general overview of fluid mechanics in different fields of engineergin, definition of fluid and Newtonian fluids, shear stress in fluid flow surface tension.
2) Hydrostatics: hydrostatic pressure, standard atmosphere, buoyancy and stability of floating bodies.

3) Integral equations: continuity equation (conservation of mass), momentum equation, angular momentum equation, energy equation and Bernoulli equation.

4) Pipe flow: pressure loss in pipes, pipes in series and parallel, solving pipe flow problems, friction in pipe flow.

5) Flow measurements: overview of flow temperature and pressure measurements, flow velocity measurements, volume/mass flow measurement techniques.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 6 clean water and sanitation, 7 affordable and clean energy

Study materials

EN: Course text book: White, F. M., Fluid mechanics. 5th ed.
Additional material in Moodle.

Alternative text books:Munson, B. R., Young, D. F., Okiishi, T.H.: Fundamentals of Fluid Mechanics. Bohl, W.: Teknillinen virtausoppi (Technische Strömungslehre): Durst: Fluid Mechanics: An introduction to the Theory of Fluid Flows (e-book)Krause: Fluid Mechanics : With Problems and Solutions, and an Aerodynamic Laboratory (e-book)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period	3 cr
¤LAB/LUT: Course Registration		0 cr
¤LAB/LUT: Course Assessment		3 cr
Method 2	Recurrence 1: 3. period	3 cr
¤LAB/LUT: Course Registration		0 cr
¤LAB/LUT: Course Assessment		3 cr

BH10A1900 Fundamentals of Energy Technology

BH10A1900 Fundamentals of Energy Technology

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%
Responsible persons	Minna Loikkanen, Administrative person Ahti Jaatinen-Värri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course a student 1. Understands the laws of thermodynamics and apply thermal properties, 2. understands the fundamentals of fluid mechanics and is able to solve typical problems, 3. Has understanding of the basics of heat transfer and is able to solve typical problems, 4. understands the different power generation technologies and is be able to calculate material and energy balances, and 5.
Independently study and follow progress of energy technology.
Completion of the course supports the development of the following generic competences for working life: know-how on own field, mathematics and natural sciences, practical application of theories, working independently,

Content

EN: Thermodynamics: basic concepts, thermodynamic properties, conservation equations, open system energy analysis, 1st and 2nd law of thermodynamics, thermodynamic cycles, Carnot efficiency, exergy.
Heat transfer: fundamentals, conduction, convection, heat exchangers, introduction to radiation.

Fluid Dynamics: hydrostatics, conservation of mass, linear momentum equation, Bernoulli equation, pipe flow.

Power plant engineering: Ideal and real Rankine cycles, gas turbine power cycle.

Bioenergy: Bioenergy in the world, biomass combustion, challenges in the biomass use, bioenergy in EU, future use of biomass.

Additional information

EN: The course is aimed for students who want to independently brush up their basic knowledge of subjects needed in Master';s studies.

Study materials

EN: Course materials in Moodle.

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

BH50A0240 Introduction to Power Plant Engineering

BH50A0240 Introduction to Power Plant Engineering

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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 Jussi Saari, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic knowledge on thermodynamics: state of matter, state diagrams, mass and energy balances, concepts of enthalpy and entropy.

Learning outcomes

EN: The student can:
1. explain the basic processes of thermal power plants, their depiction in T,s charts, and what factors affect the efficiencies.

2. apply mass and energy balances in the calculation of various plants and their components.

3. calculate and depict the compression, expansion and heat transfer processes of power plant components.

3. calculate the costs of power and heat generation.

Content

EN: Ideal comparison processes of power plant cycles.
Thermal power plants and power plant processes.

Calculation of power plant processes, and costs.

Steam power plants (condensing and cogeneration), gas turbines, combined cycles.

Additional information

EN: Contact teaching, on Lappeenranta campus. Teaching is not recorded or streamed.
SDGs: 7 affordable and clean energy; 13 climate action

NOTE: This 4 ECTS course in meant only for minor studies, such as Energy Technology or Energy Economics.

Study materials

EN: Lecture, exercise and example materials uploaded to Moodle.
Water h,s diagram.

Literature

Energy conversion (2017). Goswami, D. Yogi, ed.; Kreith, Frank, ed.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	4 cr
Course Registration		0 cr
Course Assessment		4 cr

BH60A5901 Climate Solutions

BH60A5901 Climate Solutions

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%
Responsible persons	Michael Child, Responsible teacher Annukka Ilves, Administrative person Sanni Väisänen, Responsible teacher
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.

Additional information

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

Blended learning. Mandatory contact sessions once/month. Mandatory weekly group meetings.

***

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
Method 1	Recurrence 1: 3. period-4. period	5 cr
Course Completion		5 cr

BH60A7200 Circular.now

BH60A7200 Circular.now

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English, Finnish
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

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 affortable 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!

Submitted tasks will be evaluated at the end of each period.

Company collaboration: The course utilizes video material recorded in collaboration with companies, showcasing real circular economy solutions across various industries.

Artificial intelligence: all kind of AI tools, including excess use of translation tools, is forbidden and will lead to failing the course.

Study materials

EN: Circular.Now MOOC material in DigiCampus.

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

BH60A0002 Basic Course in Environmental Technology A

BH60A0002 Ympäristötekniikan perusteet A

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English, Finnish
Grading scale	General scale, 0-5

University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%
Responsible persons	Mika Horttanainen, Responsible teacher Annukka Ilves, Administrative person Ursula Salakka, Responsible teacher Mari Hupponen, Responsible teacher Amirsohrab Falsafi, Responsible teacher Oskari Sievinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course the student is expected to be able to
1. list the most important sustainability challenges posed by production and communities,
2. name the most typical ways of controlling sustainability challenges,
3. use environmental engineering terminology,
4. write a seminar report, act as an opponent, and give a poster presentation at the seminar,
5. apply system analytical and life cycle thinking, and
6. explain how other technology fields are connected to environmental engineering.

Content

EN: Sustainability challenges at different spatial scales, related e.g. to production, consumption, solid waste, water use, air quality, energy transition, food systems, household consumption and the built environment. Technical solutions and steering mechanisms for the management of the sustainability challenges. The course also introduces life cycle thinking.

Use of AI applications

AI applications are not used in this course.

Additional information

EN: Blended learning
***
The course is related to UN's Sustainable Development Goals (SDG): 2 zero hunger, 6 clean water and sanitation, 7 affordable and clean energy, 9 industry, innovation and infrastructure, 11 sustainable cities and communities, 13 climate action

Study materials

EN: Moodle, lecture materials, additional reading related to lecture topics

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

BH60A6801 Sustainable.now

BH60A6801 Sustainable.now

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3-5 cr
Languages	English, Finnish
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 Miika Marttila, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After successfully completing the course, students:
1) Understand the intersectional, partly contradictory, goals and interdimensionality of the climate challenge and the challenges of sustainable development.

2) Are familiar with the multidisciplinary links between climate change and different goals of sustainable development, and will identify different tools for solving problems.

3) Outline the importance of positivity and solution orientation both through the global responsibility of individuals and through the transformation of existing structures.

Content

EN: Sustainable.now is a basic course for anyone interested in sustainable development and climate change. The principles of sustainable development will be linked to the 1.5 degree climate target.
- Ecological sustainability

- Social sustainability

- Economic sustainability

- Cultural sustainability

The course provides a solid knowledge package on the concept of sustainable development and its ecological, social, economic and cultural dimensions, as well as the connections and tensions between them. The ethical perspective that runs through the course provides a basis for considering sustainable development also as a political and normative concept. The course also emphasizes the importance of agency and the different roles of the individual. Students will be given the opportunity to look at the sustainability of their own lifestyle in terms of individual choices, but on the other hand, sustainability and climate challenges will also be presented as a structural and systemic problem.

Additional information

EN: The course is a part of Climate University – a multidisciplinary digital learning platform in sustainability challenges. The flexible study paths to the working life is a collaboration project of eleven Finnish universities.
The student can choose either 3 or 5 credits option upon the need.

The course is related to 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 affortable and clean energy

8 decent work and economic growth

9 industry, innovation and infrastucture

10 recuded inequalities

11 sustainable cities and communities

12 responsible consumption and production

13 climate action

14 life below water

15 life and land

16 peace, justice and strong institutions

17 partnership for the goals

Study materials

EN: Material and Literature specified in MOODLE course overview.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period, 4. period	6 cr
Course Completion, in English		3 cr
Course Completion, in Finnish		3 cr
Method 2	Recurrence 1: 2. period, 4. period	10 cr
Course Completion, in English		5 cr
Course Completion, in Finnish		5 cr
Method 3	Recurrence 1: 2. period, 4. period	3 cr
Course Completion, in English		3 cr
Method 4	Recurrence 1: 2. period, 4. period	5 cr
Course Completion, in English		5 cr
Method 5	Recurrence 1: 2. period, 4. period	5 cr
Course Completion, in Finnish		5 cr
Method 6	Recurrence 1: 2. period, 4. period	3 cr
Course Completion, in Finnish		3 cr
Method 7		3 cr
Course Completion, in English		3 cr
Method 8		3 cr
Course Completion, in Finnish		3 cr
Method 9		5 cr
Course Completion, in English		5 cr
Method 10		5 cr
Course Completion, in Finnish		5 cr

BH60A6000 Basic Course in Life Cycle Assessment

BH60A6000 Basic Course in Life Cycle Assessment

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 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 Sanni Väisänen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After successfully completing the course, students will be able to:

- Describe the potential application areas of Life Cycle Assessment (LCA).
- Complete a simple LCA study using specific methodological steps.
- Understand the guidelines of ISO standards.
- Use the specialized LCA software, LCA For Expert (GaBi), at a basic level.
- Explain the importance of assumptions in interpreting LCA results, using examples.

Content

EN: Application areas of LCA, use of ISO standards: goal and scope setting, inventory analysis, impact analysis, result interpretation. One guided exercise for software. LCA documentation. The course is related to sustainability.

Additional information

EN: ***The course is related to UN's Sustainable Development Goals (SDG):
6 Clean Water and Sanitation, 7 Affordable and Clean Energy, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 12 Responsible Consumption and Production, 13 Climate Action

Study materials

EN: ISO 14040, ISO 14044, other material informed in the first lecture.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period Recurrence 2: Summer	4 cr
Course Completion		4 cr

LES10A260 Technical Computing Software

LES10A260 Technical Computing Software

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT School of Energy Systems 100%
Responsible persons	Aleksi Mankonen, Responsible teacher Annukka Ilves, Administrative person Minna Loikkanen, Administrative person Juho Ratava, Responsible teacher Cassia Santos Nunes Almeida, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Recommended: Programming skills or a course in the basics of some programming language.

Recommended prerequisites

LES10A210 Engineering Mathematics II

CT60A0250 Fundamentals of Programming for international programs

Learning outcomes

EN: After the course, the student is an elementary-level user of some computational development environment and is familiar with finding its documentation and implementing numerical methods using the development environment. The student has been introduced to software engineering and can define and solve simple computational problems using the development environment or a spreadsheet program. The students can use and produce technical information and assess information produced by themselves and others. The student may be introduced to use of AI tools in problem-solving and writing assistance.

Content

EN: The course introduces the student to basics of Matlab: Interface of the integrated development environment (IDE), conditional structures, array structures, plotting curves and surfaces, loop structures. In addition, Simulink and a spreadsheet program is used for problem-solving. Basic applications in numerical analysis, such as root finding, optimization and solving simple differential equations, with examples for engineering. Documenting the development process and writing formulas using LaTeX.

Company cooperation

The course project may be done for a company.

Use of AI tools

AI tools can be used to assist in problem-solving and writing. As an optional topic, you may train your own AI to solve a simple problem.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 5 gender equality and 10 reduced inequalities

Study materials

EN: The course material is disseminated on Moodle. Optionally, the Matlab Academy courses "Matlab Onramp" and "Matlab Fundamentals" may be used to supplant the material.

Literature

Kreyszig, Erwin: Advanced Engineering Mathematics
Valentine, D.T.; Hahn, B.D.: Essential MATLAB for Engineers and Scientists

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	4 cr
Course Completion		4 cr

LES10A410 Engineering Project Work

LES10A410 Engineering Project Work

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5-10 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT School of Energy Systems 100%
Responsible persons	Michael Child, Responsible teacher Alex Rosu, Responsible teacher Annukka Ilves, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Compulsory prerequisites

BK10A6101 Technical Documentation and 3D Modeling

BK10A6300 Engineering Design

Learning outcomes

EN: After successfully completing the mandatory part of the course , students are able to:

- apply knowledge gained from earlier course work to practice
- improving time management, critical thinking and problem-solving skills
- collaborate effectively and systematically in a multicultural environment
- develop creative ideas and solutions to real-world problems
- planning and implementing a product development project as part of development team based on a written project plan.
- design and implement a product or service
- incorporate end-user or customer needs into product/service design
- give and receive feedback on the effectiveness of project activities
- making a connection between innovation, design, and production with the sustainable development goals (SDGs)

Additionally, depending on amount of optional credits:

- use tools and other resources to develop a prototype
- testing a prototype to come up with further development suggestions and to optimize the design of final product
- presenting a built prototype to a real audience of peers and invited corporate sponsors during the spring's JHC seminar at Lappeenranta campus or other event
- prepare supplementary plan for further development of the prototype while also reporting the main results related to the prototype development/testing

Content

EN: The course enhances experience in challenge based learning through a learning-by-doing approach. Students will be engaged in solving a specific real-world problem or answering a complex question related to one of the core areas of expertise (Electrical engineering, Energy technology, Mechanical engineering, Environmental Technology etc.). In the end, students will demonstrate new knowledge and skills by developing a useful product or service in cooperation with possible corporate sponsors and presenting it to a real audience.
Students will receive extended instruction on the nature of challenge based learning, and then apply this knowledge to the project work. First steps will involve defining the question, problem or challenge that will serve as the basis of the project work. This will be followed by the design of a prototype product or service (and based on achievable additional credits, the construction phase of the prototype will also be involved). Throughout the project work, students will give, receive and use feedback to further improve their process and prototypes. Possible corporate sponsors may also provide feedback throughout the project. After refinement, the designed product/service and possible prototype will be explained, displayed, and presented to peers and possible corporate sponsors.

Additional information

EN: Blended learning
***

Students can participate in their group's project work on both campuses (Lappeenranta/Lahti)

***

It is possible to achieve a total of 10 credits in the course:

- mandatory 5 ECTS are gained during periods 1-2
- additional/optional 5 ECTS can be gained during periods 3-4

***

The course is related to the UN's Sustainable Development Goals (SDG), depending on the project chosen:

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

14) life below water

15) life and land

16) peace, justice and strong institutions

17) partnership for the goals

Study materials

EN:

- Material available in Moodle
- J. Michael Bennett, Project Management For Engineers, World Scientific Publishing Co Pte Ltd, 2014, ISBN 978981322485
- Pahl G. ; Beitz W., 1996. Engineering Design: A Systematic Approach, London, Springer. 543 s.
- Ulrich K.T. ; Eppinger S.D. 2000. Product Design and Development. New York, Irwin McGraw-Hill. 358 s.
- Virkkala V., 1994. Luova ongelmanratkaisu. Helsinki. 292 s.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-4. period	5-10 cr
Course Completion		5-10 cr

BK10A6300 Engineering Design

BK10A6300 Engineering Design

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Mechanical Engineering 100%
Responsible persons	Annukka Ilves, Administrative person Changyang Li, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: BK10A5800 Engineering Mechanics 1 (or equivalent);
BK10A6000 Engineering Mechanics 2 (or equivalent);

BK10A6101 Technical Documentation and 3D Modeling (or equivalent).

Equivalences to other studies

BK65A0203 Engineering Design

Learning outcomes

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

- work in a constructive and systematic way as part of a product development;
- apply creative ideation in the product development process;
- compare and apply the methodologies of product planning;
- select the suitable and necessary machine elements for the product;
- explain the interactions of basic machine elements.

Content

EN: The content of the course includes:

- Fundamentals of a systematic product planning and systematic machine design process, including idea generation, conceptual design, embodiment design, details design, manufacturing, etc;
- Knowledge of different machine elements, including gears, bearing, key, shaft, coupling, fasteners, etc.
- Knowledge about reverse engineering, design for manufacturing and assembly, etc...

Additional information

EN: Blended learning
The course is not suitable for the 1st year LUT students. The 1st year LUT students will be removed by teacher in the first week. If there is question about your qualification of attending the course, please send email to the teacher.

Artificial intelligent tool is allowed to be used in this course to collect information, it is forbidden for writing purpose.

The course is related to UN's Sustainable Development Goals (SDG): 9 industry, innovation and infrastructure

Study materials

EN: The study materials include:

- Lecture materials;
- Michael B. Spektor, 2018, Machine Design Elements and Assemblies.

Literature

Michael B. Spektor, 2018, Machine Design Elements and Assemblies.

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

CT60A4304 Basics of database systems

CT60A4304 Basics of database systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Jiri Musto, Responsible teacher Iflaah Salman, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: Introduction to Programming or equivalent.

Recommended prerequisites

CT60A0203 Fundamentals of Programming

or

CT60A0250 Fundamentals of Programming for international programs

Equivalences to other studies

CT60A4350 Basics of Database Systems (Lahti)

Learning outcomes

EN: At the end of the course the student will be able to:
1.Design and model relational databases

2.Understand how the evolution of relational algebra led to SQL databases

3.Model real world problems with ER and transform the ER model to relational databases

4.Understand and solve issues related to relational database design, such as optimization and normalization

5.Implement relational databases in practice and embed them in applications

Content

EN: Database systems. Database design. Object-centric modeling and ER-modeling. Specifying relational models. SQL and object languages.
Perspectives into database design: How database is designed, how data is modeled, and what are data storage structures and access methods.

Transforming ER models to relational models, and then to relational databases. Basics to database programming: queries and other operations, database management, such as triggers. Implementing databases in practice and how to use SQL databases from other programs.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG):
9 industry, innovation and infrastructure

Study materials

EN: Beynon-Davies, P.: Database Systems, Palgrave Macmillan, Third Edition, 2004. Foster, Elvis, C.: Database Systems A Pragmatic Approach, Apress, 2014. Lecture notes and other material assigned at the course. Coronel, C., & Morris, S. (2019). Database Systems: Design, Implementation and Management (13th ed.). Cengage Learning.

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

CT60A7650 Database Systems Management

CT60A7650 Database Systems Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Jiri Musto, Responsible teacher Iflaah Salman, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: Basics of database systemsObject-oriented programming

Compulsory prerequisites

CT60A4304 Basics of database systems

Equivalences to other studies

CT60A7660 Database Systems Management (Lahti)

Learning outcomes

EN: At the end of the course students will be able to

1. Create a relational model and a relational database
2. Understand relational algebra and relational calculus
3. Design a database application, data distribution, and architectures for data storage, retrieval, and administration of a database management system
4. Apply scalability, performance, security, and authorization
5. Demonstrate the knowledge of concepts and principles underlying the functioning of database management systems and maintenance.

Content

EN: Relational model and relational database design. Database applications, data distribution and architectures. Data storage and retrieval, data scalability, performance, security, authorization. Modeling and programing for semi-structured data, secondary storage management.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG):
9 industry, innovation and infrastructure

Study materials

EN: Ramez Elmasri, Shamkant B. Navathe (2015), Fundamentals of Database Systems, 7th Edition, Published by Pearson. ISBN-13: 978-0-13-397077-7A. Hector Garcia-Molina, Jeffrey D. Ullman and Jennifer Widom: Database Systems : The Complete Book, Pearson Prentice Hall 2nd Edition, 2009
Coronel, C., & Morris, S. (2019). Database Systems: Design, Implementation and Management (13th ed.). Cengage Learning.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	3 cr
Course Completion		3 cr

CT60A5532 Software Project Management

CT60A5532 Software Project Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Micheal Tuape, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT60A4002 Ohjelmistotuotanto (Software Engineering).

Equivalences to other studies

LM10A1000 Project Management

or

CT60A5550 Software Project Management (Lahti)

Learning outcomes

EN: At the end of the course students will be able to

1. Demonstrate knowledge of key Project Management concepts and terminology
2. Develop a project plan for the development of a commonly used software
3. Demonstrate knowledge of tools and techniques for monitoring quality control of IT projects
4. Understand the importance of defining and anticipating potential risks
5. Describe how to communicate project progress to all stakeholders
6. Explain the roles and duties and responsibilities of software project managers
7. Explain how to manage and staff software project teams
8. Describe how to manage stakeholder expectations
9. Identify issues that could lead to software project success or failure

Content

EN: The Software Project Management course introduces the fundamentals of project management, beginning with project definition through the post-project review. There will be an emphasis placed on applying project management concepts and techniques to software development projects. The following topics will be covered in the course:

1. Introduction to Software Project Management
2. Project Methodologies and Processes
3. Measurable Organizational Value and the Business Case
4. Project Managers, Teams, and Stakeholders
5. Project Scope, Structure, and Scheduling
6. Project Infrastructure, Resources, and Costs
7. Managing Project Quality

8. Managing Project Risks
9. Project Execution, Completion, and Control

Additional information

EN: 3 ECTS cr course implementation for the students in Lahti campus, 6 ECTS cr course implementation for the students in Lappeenranta campus. Note mode of study is blended learning, not full-digi (changed 16.8.2022).

Study materials

EN: To be announced in Moodle

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

CT70A9111 Software Development Skills: Front-End

CT70A9111 Software Development Skills: Front-End

Abbreviation: CT00CM00

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT30A2803 User Interfaces and Usability
CT60A0203 Introduction to Programming (or equivalent)

Compulsory prerequisites

CT30A2804 User Interfaces and Usability

CT60A0203 Fundamentals of Programming

Learning outcomes

EN: 1. Develop practical skills for software development
2. Learn the best practices and approaches of software development

3. Develop the skilled expected in industry to work as a software developer.

Content

EN: This course aims give students a chance to create unique projects with a hands-on approach.

The course guides students to find their interest in software engineering skills and to help each student find their desired path in software developing in the future. There are also several other Software Development Skill courses available on different topics.

The goal in this course is to make a responsive webpage using html, CSS and a little JavaScript. These are the basic tools to make today's web-frontend. Students may use Bootstrap or animations in addition. The project focuses only on the layout, styles and the overall structure of the page.

Course is 100% online self-study.

Additional information

EN: ***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Available online (Moodle)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	1 cr
¤LAB/LUT: Course Completion		1 cr

CT70A9120 Software Development Skills: Mobile

CT70A9120 Software Development Skills: Mobile

Abbreviation: CT00CM02

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT30A2803 User Interfaces and Usability
CT60A0203 Introduction to Programming (or equivalent)

Compulsory prerequisites

CT30A2804 User Interfaces and Usability

CT60A0203 Fundamentals of Programming

Learning outcomes

EN: 1. Develop practical skills for software development
2. Learn the best practices and approaches of software development

3. Develop the skilled expected in industry to work as a software developer.

Content

EN: This course aims give students a chance to create unique projects with a hands-on approach.
The course guides students to find their interest in software engineering skills and to help each student find their desired path in software developing in the future. There are also several other Software Development Skill courses available on different topics.

The goal in this course is to make an Android app with Android Studio. The app should have basic functionality with buttons and views. This course aims to teach the basics of mobile development.

Course is 100% online self-study.

Additional information

EN:
***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Available online (Moodle)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
¤LAB/LUT: Course Completion		3 cr

CT70A9140 Software Development Skills: Full-Stack

CT70A9140 Software Development Skills: Full-Stack

Abbreviation: CT00CM01

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT30A2803 User Interfaces and Usability
CT60A0203 Introduction to Programming

CT60A2411 Object-Oriented Programming

CT60A4304 Basics of Database Systems
(or equivalent)

Compulsory prerequisites

CT30A2804 User Interfaces and Usability

CT60A0203 Fundamentals of Programming

CT60A2412 Object-Oriented Programming

CT60A4304 Basics of database systems

Learning outcomes

EN: 1. Develop practical skills for software development
2. Learn the best practices and approaches of software development

3. Develop the skilled expected in industry to work as a software developer.

Content

EN: This course aims give students a chance to create unique projects with a hands-on approach.

The course guides students to find their interest in software engineering skills and to help each student find their desired path in software developing in the future. There are also several other Software Development Skill courses available on different topics.

The course gives the student basic understanding of full-stack development. The goal is to create a basic front- and back-end and bundle them together as a complete system.

The focus is to understand the bigger picture and how to bundle different software components together to create a working program. You will learn how to use MEAN-stack as a full stack tool bundle to create an app from scratch.

Course is 100% online self-study.

Additional information

EN: ***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Available online (Moodle)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
¤LAB/LUT: Course Completion		3 cr

CT10A7052 Software Engineering work practise

CT10A7052 Software Engineering work practise

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Ari Happonen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: It is highly recommended, that the participating student has already collected around 90 ECTS or more study points, before participating into this course.

Learning outcomes

EN: Students will learn about current trends and realities related to the software engineering jobs, work activities young recruits typically become in contact in first few years and how digitalization and digital transformation of worklife might change academic and private organization near future careers and expectations put on students skills, when selected onf first study area related jobs.
Course assignments are designed to give a glimpse into the current work-life skill set expectations, connected to the yearly changing context, based on lectures given by industry and university visiting lecturers. The course e.g. connects work life RDI activities on software level and how that affects our everyday life and how students should prepare to future work-life.

After completing the course student will be able to:
1. utilize the course knowledge into real life cases
2. explain more clear sense on future work-life skill set expectations including lifelong learning
3. evaluate own believes of work-life expectations into presented ones
4. apply orally given experts know-how into another use case context
5. evaluate different software engineering career paths compared to own skill set, knowledge base and motivation areas

Content

EN: The course is based on a series of visiting lectures given by the researchers / professors from LUT and lectures given by yearly changing industry and public sector experts and company representatives. The lectures introduce students to research, industry work practices / expectations towards students knowledge base on work practices e.g. when applying and working in junior positions. Most lectures are connected to course tasks related to the lecture context (e.g. research / skill building task on industry area of the visiting lecturer or reflecting a topic specific research article, small ICT jobs related problem solving task etc.). All tasks are evaluated, and tasks can also include follow up discussions in the lectures. Some lectures may include e.g. live demonstrations of tools used in industry, like data-analysis, software testing/development and UI modeling tools. Within the lectures, students shall learn details from software engineering positions related daily work practices, receive software engineering career path building guideline points and have access to ask direct questions from the visiting lecturers. Visiting lectures may explain the insight on how to achieve a specific career goals (e.g. project/product manager positions) or practical view from school to funder of your own startup and working as ICT field CEO.

Additional information

EN: Note! Course replaces CT10A7051 Area Expert's Views on Future Work-life Expectations and can not be included in the same degree.
The tasks evaluated in the course are connected to the lectures given by the teacher in charge and the visiting lecture(s). Students should take this into account as previous years tasks are considered case by case, will the be accepted in follow up teaching years.

The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 5 gender equality, 8 decent work and economic growth, 9 industry, innovation and infrastructure, 10 reduced inequalities, 17 partnership for the goals

Study materials

EN: Self study on Jalali S., Wohlin C., Systematic Literature Studies: Database Searches vs. Backward Snowballing.
Other material shall be given and presented in the course lectures. In addition, some needed support material for course tasks can be given within the release of the tasks.

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

CT70A9150 Introduction to DevOps

CT70A9150 Introduction to DevOps

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: Basics of Linux (or equivalent knowledge),CT60A0203 Introduction to Programming

Recommended prerequisites

CT30A3232 Basics of Linux

CT60A0203 Fundamentals of Programming

Learning outcomes

EN: At the end of the course the student will be able to:
1. Design and implement repositories for software engineering projects

2. Understand how the evolution of development practices led to DVCS and DevOps

3. Understand and solve issues related to versioning and deployment

4. Set up continuous deployment pipeline

5. Implement testing and other deployment processes as a part of a DevOps process

Content

EN: Distributed version control systems (DVCS). Modern repository hosting platforms, such as GitHub and GitLab. Repository best practices, management, and administration. Solving repository errors. Continuous deployment processes and executing tests. Basics of container platforms, such as Docker. Deploying basic applications from source control systems.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Tutorial videos, online readings, and other material assigned at the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period, 1. period-2. period, 4. period-Summer, Summer	3 cr
Course Completion		3 cr

VT10A1400 Environmental Communication

VT10A1400 Environmental Communication

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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 Iina Hellsten, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Learning outcomes

EN: After completing the course, the students:
Can describe the main theoretical strands of environmental communication

Have acquired skills to communicate about environmental issues

Content

EN: The course focuses on the main strands of environmental communication covering environmental risks such as ozone hole depletion, biodiversity loss, and climate change as well as the main measures to counter environmental risks. The course consists of hybrid teaching with recorded lectures, on-campus lectures and online exercises.

Additional information

EN: ***
The course is related to the UN Sustainable Development Goals (SDG): Not relevant

Study materials

EN: Course literature is to be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	5 cr

	Recurrence 2: 3. period	
Course Completion		5 cr

VT10A1500 Political Communication, Social Movements and Activism

VT10A1500 Political Communication, Social Movements and Activism

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
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 Kaisa Pekkala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Learning outcomes

EN: After completing the course, the student will:
· Understand the role of political communication, social movements, and activism in society.

·Understand the key concepts and research directions in political communication and social movement research.

·Be able to identify and examine current phenomena in the field

Content

EN: The course focuses on how societal influence is exercised through communication. It examines political communication and its key concepts and theories. Students will also explore social movements and activism as forms of influence. The course will look at current phenomena in political communication and the role of social movements and activism in contemporary society.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period Recurrence 2: 4. period	5 cr
Course Completion		5 cr

VA10A1000 Basics of Management and Organisations

VA10A1000 Johtamisen ja organisaatioiden perusteet

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Education other than LUT University 100%
Coordinating organisation	University of Vaasa 100%

Responsible persons	Suvi Tiainen, Administrative person ⚠ [information missing], Responsible teacher ⚠ [information missing], Responsible teacher ⚠ [information missing], Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Tweet text

EN: LITO course

Learning outcomes

EN: Upon successful completion of the course, the student will be able to:
· name the key concepts and theories in the areas of organisation, management and leadership

· name the key concepts and evaluate the functions of human resource management

· understand the major tools of strategic management

· understand business in the network of global interactions

· apply theory in practical leadership and management situations.

Content

EN:

- Management and leadership
- The development of leadership thinking and leadership theory
- The key concepts of management leading culture, innovation and change

- Organisations and organisational behaviour
- Organisational structure
- Organisational culture
- Organisational life
- Human resource management
- Human resource management
- Leading individuals, teams and groups
- Motivation and coaching
- Strategic thinking and strategic tools
- The development of strategic thinking and strategy
- Strategic tools
- Strategic management in a global environment

Additional information

EN: Note
Only for technology and social science students. The latest information about the course is updated and published on the course platform at www.lito.fi.

Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided to the students who have registered for the course via email.

Late enrollments are not accepted.

The LITO courses are organised in co-operation with multiple universities. To enable registering credits when the course is completed, it is necessary to transfer data about the student from their home university

to the university that is responsible for organizing the course. The data to be transferred consists of: name, gender, nationality, e-mail address, personal identification number and the home university. Data that is classified as secret is not transferred. Without data transfer it is not possible to have the course credits registered.

The course will run from 2 February 2026 to 6 April 2026 (Weeks 6-15) + exam resits.

Study materials

EN: Robbins, Stephen P. – Judge, Timothy A. – Campbell, Timothy T. (2017) Organizational Behavior. **OR** Robbins, Stephen P. – Judge, Timothy A. (2021) *Essentials of Organizational Behavior*. Global edition. Pearson.

The course instructors may ask students to read additional literature (e.g. articles). Details of additional readings are given at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	5 cr
Course Completion		5 cr

VA10A1100 Basics of Marketing and Sales

VA10A1100 Markkinoinnin ja myynnin perusteet

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Education other than LUT University 100%
Coordinating organisation	University of Oulu 100%
Responsible persons	Suvi Tiainen, Administrative person
	⚠ [information missing], Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Tweet text

EN: LITO course

Prerequisites

EN: The course includes a compulsory preliminary assignment that has to be completed successfully by a pre-defined date.

Learning outcomes

EN: Upon completion of the course, students will be able to:
· describe the role of marketing in an organisation and identify the significance of customer orientation in both the development of the organisation and personal actions

· apply the key concepts of marketing (e.g. customer-perceived value, the value creation process, the brand, the marketing mix and segmentation) in decision-making and evaluate decisions

· describe the diverse emphases of business-to-business marketing and consumer marketing, and the key characteristics of both logics

· identify and utilise key marketing communication channels in the fickle business environment

· understand sales processes in their entirety, the different parts of them in both consumer and business-to-business sales.

In addition to core marketing skills, the course develops working life skills, such as

· problem-solving and project management skills

· critical thinking / information assessment skills

· the analysis and application of information

· the utilisation digital platforms

· written and oral expression.

Content

EN: · Key marketing concepts, definitions and phenomena now and before
· Understanding these concepts in diverse contexts: The differences between consumer logic and business-to-business logic

· Customer-centred thinking and value creation

· Customer-oriented strategy in a changing business environment

· Key concepts and phenomena in consumer marketing

· Business-to-business marketing and organisational buying behaviour

· Marketing communication channels and content

· Sales processes in consumer and business-to-business contexts, as well as personal sales and interaction skills at different phases of sales processes

Additional information

EN: Only for students of technology and social sciences. The latest information about the course is updated and published on the course platform at www.lito.fi.
Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided via email to the students who have registered for the course.

The course will run from early March to early May 2026 (Weeks 10–19. There will be a pre-assignment in Week 9.

The LITO courses are organised in co-operation with multiple universities. To enable registering credits when the course is completed, it is necessary to transfer data about the student from their home university to the university that is responsible for organizing the course. The data to be transferred consists of: name, gender, nationality, e-mail address, personal identification number and the home university. Data that is classified as secret is not transferred. Without data transfer it is not possible to have the course credits registered.

Study materials

EN: The teachers will specify the literature at the beginning of the course.
The course material, literature and assignments are in English. However, students may submit their assignments either in Finnish or English.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	5 cr
Course Completion		5 cr

VA10A1400 Economics and the Business Environment

VA10A1400 Liiketoimintaympäristön taloustiede

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Education other than LUT University 100%
Coordinating organisation	University of Jyväskylä 100%
Responsible persons	Suvi Tiainen, Administrative person
	⚠ [information missing], Responsible teacher
	⚠ [information missing], Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Tweet text

EN: LITO-course

Prerequisites

EN: Preliminary assignment.

Learning outcomes

EN: Upon successful completion of the course, students will be able to:
· define basic economic concepts

· understand economic thinking and apply economic theory in the analysis of a business environment and market economies.

The course also develops problem-solving and analysing skills, and critical thinking, as well as developing the skills required to apply theoretical knowledge.

Content

EN: The course provides students with basic skills in analysing the business environment and provides an overview of its evolution from an economic perspective. Proactive identification of both opportunities in the business environment and threats to the business environment is increasingly important for successful businesses in the global economy.
During the course, the students will familiarise themselves with:

- the decision-making processes in companies and among consumers, and how the markets function (microeconomics)
- economic growth, business cycles, labour markets, inflation, monetary policy and economic policy (macroeconomics)
- the role of the public sector and the focal public policy instruments in market economies (public economics)
- international trade, financial markets, European integration and multinational companies (international economy).

Additional information

EN: Only for students of technology. The latest information about the course is updated and published on the course platform at www.lito.fi.
Late enrolments are not accepted.

Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided to the students who have registered for the course via email.

The course site opens in Week 9. The online course runs from 23 February to 5 April 2026 (Weeks 9–14). The exam can be taken between 13 April and 19 April 2026 (Week 16). Exam resits will be in Weeks 18 and 21.

Study materials

EN: The electronic coursebook is openly accessible in both English and in Finnish online:
The CORE Team: The Economy. Available at: http://www.core-econ.org.
CORE-työryhmä, Talous. Saatavilla sähköisesti: https://www.core-econ.org/project/core-talous/

The instructors may assign additional literature during the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 4. period	5 cr
Course Completion		5 cr

VA10A1600 Introduction to Corporate Social Responsibility

VA10A1600 Introduction to Corporate Social Responsibility

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Education other than LUT University 100%
Coordinating organisation	Hanken School of Economics 100%
Responsible persons	⚠ [information missing], 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: LITO course

Learning outcomes

EN: Upon completion of the course, the students will be able to:
· define and apply key concepts and perspectives regarding CSR

· identify relevant issues and analyse the challenges related to corporate responsibility in selected industries

· describe the role of CSR in business and in relation to wider international political and economic issues

· describe the different aspects through which organizational practices can be CSR-oriented

· apply key concepts of CSR in their daily work.

In addition, the students will be able to analyse CSR literature, organise their work independently and work in a virtual environment.

Content

EN: · Central concepts in CSR
o CSR and sustainable development

o Definitions of CSR

o Why CSR matters – the business case

o Stakeholder salience

· Working with stakeholders

o Political CSR

o Cross-sector partnerships and CSR

o Multi-stakeholder initiatives and CSR

o CSR and human rights

· CSR in company operations

o Human resource management (HRM) and CSR

o CSR and supply chain

o CSR and sustainable consumption

o CSR – minimum wage and living wage

· Examples of CSR

o CSR and communication

o CSR and corruption

o CSR and leadership

o CSR and responsible investment

CSR and social entrepreneurship

Additional information

EN: Only for students of technology social sciences. The latest information about the course is updated and published on the course platform at www.lito.fi.
Please note that late enrollments are not accepted.

Preliminary schedule:

19.1. – 6.3.2025 (weeks 4–11)

Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided to the students who have registered for the course via email.

The LITO courses are organized in co-operation with multiple universities. To enable registering credits when the course is completed, it is necessary to transfer data about the student from their home university to the university that is responsible for organizing the course. The data to be transferred consists of: name,

gender, nationality, e-mail address, personal identification number and the home university. Data that is classified as secret is not transferred. Without data transfer it is not possible to have the course credits registered.

Study materials

EN: The link to primary reading materials will be provided on the learning platform.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period-4. period	5 cr
Course Completion		5 cr

VA10A1700 Understanding and Managing a Business as a Dynamic Whole - Business Simulation Game

VA10A1700 Liiketoimintaosaamisen kokonaisdynamiikka ja sen ohjaaminen - yrityssimulaatio

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Education other than LUT University 100%
Coordinating organisation	University of Turku 100%
Responsible persons	Suvi Tiainen, Administrative person
	⚠ [information missing], Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Tweet text

EN: LITO course

Prerequisites

EN: The course serves as a capstone, bridging together the other modules in the LITO entity. The course provides an overall picture of business dynamics and explains how the different fields of business studies are related to it. Various tools and services outside the LITO learning platform may be used in the analyses during the course.
It is recommended that before taking this course, the student has taken at least the following LITO courses: 'Introduction to Accounting and Financial Management' and 'Basics of Management and Organisations'. Alternatively, the student must possess sufficient previous knowledge in these fields in order to be able to analyse a business as a whole.

Recommended prerequisites

VA10A1000 Basics of Management and Organisations

VA10A1200 Introduction to Accounting and Financial Management

Learning outcomes

EN: After completing the course, students will be able to:
· describe how different areas in business studies are connected in the entity of enterprise functions and in making a profit

· apply various methods of collaboration in a virtual team and to become aware of the key regularities in the collaborative business environment

· apply different business analysis tools in planning and managing a business and understand the essential role of strategy in the process.

A central part of the course is the optimisation of a business as a whole with respect to both various business functions and goals; students will understand why it is not practical to optimise single functions separately and why the management needs to have a holistic perspective of the company that simultaneously takes into account social, ecological and financial responsibility.

Content

EN: · The foundation for this course is a decentralised and collaborative business simulation exercise in which students work in teams and collaborate with other teams. Besides engaging in real-time decision-making during the simulation days, the students will complete assignments that relate to various business sciences and analyse the actions taken in the simulation outside the simulation days.
· Participation takes place in small virtual groups, the members of which come from different universities.

· The thematic core for the simulation is the entity formed by the different functions of a company and the responsible agency of the company in a network of enterprises. The relevant themes include several areas of cross-company functions (purchasing, project management, distribution and customer relationships) and the reporting related to these topics. The course emphasises the entity of business operations from the perspective of responsible management.

· During the course, students are introduced to the dynamics of business networks where the students' company is part of a network of competitors, suppliers and customers.

· The theoretical material and the exercises distributed on the course are related to the thematic core for the simulation and for other LITO learning themes.

Additional information

EN: The first course period runs from late September to late November 2026 (Weeks 40–47). There is a pre-assignment in Week 40.
The second course period runs from late January to mid March 2026 (Weeks 4–11). There is a pre-assignment in Week 4.

The third course period runs from mid March to mid May 2026 (Weeks 12–19). There is a pre-assignment in Week 12.

Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided via email.

The LITO courses are organised in co-operation with multiple universities. To enable registering credits when the course is completed, it is necessary to transfer data about the student from their home university to the university that is responsible for organizing the course. The data to be transferred consists of: name, gender, nationality, e-mail address, personal identification number and the home university. Data that is classified as secret is not transferred. Without data transfer it is not possible to have the course credits registered.

Study materials

EN: The literature includes: simulation game instructions, a description of the simulation environment, learning videos, a course hand-out and a selection of other articles (to be announced).

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period Recurrence 2: 4. period, 3. period Recurrence 3: 4. period	5 cr
Course Completion		5 cr