LEARNING, EDUCATION AND TECHNOLOGY
MASTER'S PROGRAMME IN EDUCATION
MASTER OF ARTS (EDUCATION) (2Y)

CURRICULUM
2017-2019

LEARNING AND EDUCATIONAL TECHNOLOGY RESEARCH UNIT (LET)
FACULTY OF EDUCATION

LET

UNIVERSITY OF OULU

GENERAL DESCRIPTION

Learning, Education and Technology (LET) is a full-time two-year international Master's Programme (120 ECTS credits). After completing the programme, students are awarded a Master of Arts (Education) degree, which enables them to continue their academic studies at the doctoral level. The language of instruction is English. The LET programme educates experts in applying information and communication technologies in various learning contexts. The core of the education consists of three theoretical viewpoints: self-regulated learning, collaborative learning, and technology-enhanced learning. Each of these aspects is discussed both in theory and in practice.

The LET programme aims to develop knowledge and competencies needed in modern education, namely skills for designing, conducting, assessing and analysing versatile learning situations both in face-to-face and technology-enhanced learning contexts. Working-life connections are highlighted throughout the LET programme. The studies are implemented in collaboration with national and international research and teaching partners. The students reflect on their ~~own~~ learning and expertise in a digital portfolio throughout their studies.

LET GRADUATES PROFILE

Theoretical and practical knowledge of learning, particularly collaboration and teamwork, is essential in working life and education. In addition, the flexible and versatile use of digital technologies and social media are seeing as a key competence in all domains. The LET programme provides a combination of strong theoretical understanding about the learning sciences align with practical experiences of powerful and engaging technology-enhanced learning processes. The LET Master's Degree Programme offers an excellent path for developing interaction and language skills in multicultural collaboration with other students and the LET personnel.

Graduates from the LET programme are competent to work in duties where knowledge of learning processes and use of digital technologies is needed. They are working, for example, in professions such as educator, researcher, educational consultant, human resources developer, project leader, coordinator, expert in virtual learning, designer of technology-enhanced learning, and administrator in both the private and public sectors. The students' educational background, working experience and interests steer the career paths of LETstudents. This degree does not provide a formal teaching qualification.

LEARNING OUTCOMES

LET graduates are able to:

- Make use of the essential learning theories in the contexts of individual and collaborative learning, technology-enhanced learning and lifelong learning
- Take into use various tools, softwares and services which support learning activities work collaboratively and share their own knowledge in multiple networks and communities
- Pedagogically use and evaluate different technologies in interaction, learning, and content production
- Design and implement technology-enhanced learning in local and global contexts
- Explain the process of self-regulated learning and develop their self-regulated and co-regulated learning skills
- Support strategic learning and motivation of different aged learners
- Use research literature and research methods from the field of the learning sciences, as well as conduct scientific research and produce new scientific knowledge in the field of learning sciences and technology-enhanced learning
- Recognize the role of educational technology in the structures of higher education institutions, working life and society, and are able to take it into consideration in their own working life
- Identify the importance of entrepreneurial competences in various learning contexts

PERSONAL STUDY PLAN

At the beginning of the first autumn term, each student will produce a personal study plan (PSP). The PSP is a written document that includes information of the student's learning and career goals, structure and implementation of the studies, and completion of the various elements of the study programme. The attainment of the goals stated in the PSP will be assessed in individual discussions about the PSP with the programme coordinator in the first autumn. During the two years studies each student will have regular (three times) individual PSP discussions with the tutor teacher.

LET DEGREE STRUCTURE AND TIMING OF THE STUDIES

The LET Master's Programme studies consist of general studies such as language, communication and orientation studies, minor subject studies, major subject studies and optional studies.

Code	Subject area	ECTS	1. Autumn	1. Spring	2. Autumn	2. Spring
	Minor subject 25 ects					
418023P	Foundations of learning (FOL)	5 ects	5			
418024P	Self-regulated learning (SRL)	5 ects	5			
418025P	Learning environments and technologies (LETECH)	5 ects	5			
418026P	Problem-solving case 1 (PBL1)	10 ects	10			
	Major subject 80 ects					
405518Y	Orientation + language studies (ORIENT)	5 ects	5			
413312S	Collaborative learning (CL)	5 ects		5		
413318S	Socially shared regulation of learning (SSRL)	5 ects		5		
413319S	Computer supported collaborative learning (CSCL)	5 ects			5	
413320S	Current trends in LET research (CTR)	5 ects		5		
413321S	Problem-solving case 2 (PBL2)	10 ects			10	
413031S	Qualitative research (QUALI)	5 ects		5		
413030S	Quantitative research (QUANT)	5 ects		5		
408043S	Master´s thesis	30 ects			7,5	22,5
408044S	Seminar	5 ects			2,5	2,5
408045S	Maturity test					
	Optional studies 15 ects					
	Free-choice courses (total 10 cr)			5	5	
413322S	Entrepreneurship in education (ENTRE)	5 ects				5
			30	30	30	30
	Total ECTS for the degree					***120***

Minor changes are possible. For more information about the programme, contact educational coordinator Niina Impiö (let.coordinator(at)oulu.fi).

LET PROGRAMME OUTLINE

<table>
<tr><th colspan="4">LET 1st year</th><th colspan="4">LET 2nd year</th></tr>
<tr><th colspan="2">Module 1</th><th colspan="2">Module 2</th><th colspan="2">Module 3</th><th colspan="2">Module 4</th></tr>
<tr><th>Period 1</th><th>Period 2</th><th>Period 3</th><th>Period 4</th><th>Period 1</th><th>Period 2</th><th>Period 3</th><th>Period 4</th></tr>
<tr><td>Orientation + language studies, 5cr</td><td>SRL 1, 5cr</td><td>Collaborative learning, 5cr</td><td>Current trends in LET research, 5cr</td><td>CSCL, 5cr</td><td>Master's thesis, 5cr</td><td colspan="2">Master's thesis, 25cr</td></tr>
<tr><td>Foundations of learning, 5cr</td><td></td><td>Quantitative research, 5cr</td><td>Qualitative research, 5cr</td><td>Master's thesis, 5cr</td><td>Optional, 5cr</td><td colspan="2">Entrepreneurship in education, 5cr</td></tr>
<tr><td colspan="2">Learning environments and technologies, 5cr</td><td>SRL2, 5cr</td><td>Optional, 5cr</td><td colspan="2">Problem-solving case 2, 10cr</td><td colspan="2"></td></tr>
<tr><td colspan="2">Problem-solving case 1, 10cr</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">30 cr</td><td colspan="2">30 cr</td><td colspan="2">30 cr</td><td colspan="2">30 cr</td></tr>
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TEACHING PERIODS 2017–2018

During the academic year 2017-2018 the following teaching periods are followed at the University of Oulu.

- Orientation week for first year students 1.9.–8.9.2017
- period 1: 4.9. –27.10.2017
- period 2: 30.10. –22.12.2017
- period 3: 8.1. –9.3.2018
- period 4: 12.3. –11.5.2018

Weeks 43 and 10 are without organized contact teaching, however, students are expected to work independently on their assignments during "the library week".

TEACHING TIMES

These and only these are the official faculty teaching times. *Be in time!*

08:15.–09:45.
10:15.–11:45.
12:30.–14:00.
14:30.–16:00.

COURSE REGISTRATION

All students are responsible/obliged to register at all courses via Weboodi.

GENERAL STUDIES

Students must complete 5 credits of general studies. The general studies form an orientation to the university studies in Finland and particularly to the LET programme. The general studies are divided into language studies (2 credits) and communication and orientation studies (3 credits).

Students must complete 2 credits of language studies:

- *Foreign students* must complete the Survival Finnish Course (code 405518Y). If they have already completed the Survival Finnish course or an equivalent Finnish course, or already have basic skills in Finnish, they can choose a more advanced level Finnish course (min. 2 credits) or a course in another language (min. 2 credits) from among the courses offered by the Languages and Communication Unit at the University.
- *Finnish citizens* must complete the Swedish language course (offered by the Language Centre at the university, code 901001Y). If they have already completed an equivalent course as a part of their Bachelor's degree, they must choose a min. 2 credits of other language studies from among the courses offered by the Languages and Communication Unit at the University. (If the student's previous studies have not included studies in Swedish, s/he can be exempted from these studies by application to the faculty.)

ORIENTATION AND LANGUAGE STUDIES	
Code	405518Y
ECTS credits	5
Language of instruction	English
Timing	1st year, 1st period
Learning outcomes	**Orientation studies (3cr)** After completion of this part of course the student is able to • Describe the structure of the LET programme • Use the facilities, student information systems and information Channels that are essential in LET studies • Identify and use the basic skills for academic studying • Study in intercultural teams and identify the basic ideas of Collaborative learning • Produce a Personal Study Plan (PSP) **Language studies (2cr)** After completion of this part of course the student is able to • Understand and use some common everyday expressions and phrases in Finnish locate informal content in simple texts and messages

	• Identify the basic characteristics of Finnish language and Finnish communication styles.
Contents	• Introduction to the LET programme: content and methods • Academic studying skills and strategies • Personal study plan • Basics of Finnish language
Mode of delivery	Face-to-face and online teaching, 40h: Lectures 30h, practice 10h Individual and collaborative studies, 95h
Learning activities and teaching methods	Learning activities include both individual and collaborative studying supported by technology.
Target group	1st year students on the LET Master's Programme
Prerequisites and co-requisites	-
Recommended optional programme components	-
Recommended or required reading	Study materials will be confirmed at the beginning of the course.
Assessment methods and criteria	Course is assessed as pass/fail. Criteria for passing the course: The student participates actively in both face-to-face meetings, and individual and collaborative studying. All course assignments are comprehensive in terms of the contents of the course, and they represent good familiarity with course materials. Criteria for failing the course: The student participates passively in or is absent from face-to-face meetings and individual and collaborative studies. S/he has not done all course assignments or the assignments are superficial in terms of content and use of course materials.
Grading	Pass/fail
Person responsible	Niina Impiö (orientation) and Jaana Isohätälä (language studies)
Work placements	
Other information	

MINOR SUBJECT STUDIES (25 ECTS)

Minor subject studies (25 ects) set up the foundations for the studies in Learning, Education and Technology. The studies are also open for other bachelor and master level students interested in developing their expertise in the contents of learning and educational technology. In this programme, the students pursue their studies as a part of a multicultural group to learn the basics of learning sciences and technology-enhanced learning. One of the aims is to know how to apply this theoretical knowledge in different educational settings in a strong connection to working life. Collaboration, self-regulation and technology-enhanced learning are key elements of the minor studies both in theory and in practise.

After completion of the introductory studies in Learning, Education and Technology (25 ects), the student is able to

- Define and explain the key concepts and theories related to the learning sciences, especially self-regulated learning, collaborative learning, and technology-enhanced learning
- Apply their theoretical knowledge of learning to different educational contexts
- Use emerging technologies as teaching and learning tools, and justify their use based on current scientific knowledge about learning
- Work efficiently in teams

Contents

- Collaborative learning and problem-solving
- Self-regulated learning
- Technology-enhanced learning
- Learning environments and technologies
- Using theoretical knowledge of learning for real educational cases

FOUNDATIONS OF LEARNING	
Code	418023P
ECTS credits	5
Language of instruction	English
Timing	1st year, 1st period
Learning outcomes	After completion of this course, the student is able to • Describe the basic concepts of learning sciences, • Name the main theories in learning and instruction, • Explain educational use of technology over time, and • Work in various multicultural groups
Contents	• Basic concepts and theories of learning and instruction • Introduction to how people learn individually and in groups • History and current trends of technology-enhanced learning

Mode of delivery	Face-to-face and online teaching, 40h: lectures 15, practice 25 Individual and collaborative studies, 95h
Learning activities and teaching methods	Learning activities include both individual and collaborative studying supported by technology. There will also be lectures and short expert presentations by the teachers and researchers in the field of the learning sciences.
Target group	1st year students on the LET Master's Programme
Prerequisites and co-requisites	
Recommended optional programme components	
Recommended or required reading	• How People Learn: Brain, Mind, Experience, and School: Expanded dition. (2000). Washington, DC: The National Academies Press. • The Cambridge Handbook of the Learning Sciences. (2006). New York: Cambridge University Press. • and/or other contemporary readings in the field of learning and educational technology, to be announced at the beginning of the course.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching, and collaborative and independent work. It also requires successful completion of all the learning assignments and exercises. Learning outcomes are assessed through group and individual assignments. 5: All course assignments are comprehensive in terms of the contents of the course, and they represent very deep and wide familiarity with course materials. The student is able to express that s/he has understood and is able to combine key concepts and theories of the learning sciences. The learning assignments are reflective in nature. The student participates very actively in group work, and contributes to the group assignments. 4: All course assignments are comprehensive in terms of the contents of the course, and they represent good familiarity with course materials. The student is able to express that s/he has understood and is able to combine key concepts and theories of the learning sciences. S/he participates actively in group work, and contributes to the group assignments. 3: All course assignments are comprehensive in terms of the main contents of the course, and they represent familiarity with course materials. The student is able to express that s/he has understood the key concepts and theories of learning sciences. S/he participates very actively in group work, and contributes to the group assignments. 2: The student has done most course assignments, but they do not

	cover all contents of the course and the use of course materials is mostly superficial. The student is able to express her/his understanding about some of the key concepts and theories in the learning sciences. S/he participates in most of the group meetings, but his contribution to the group activities is not clearly indicated. 1: The student hasn't done all course assignments or the assignments are superficial in terms of the main course contents and the use of course materials. S/he is able to express his understanding of a few concepts and theories in the field of learning sciences, but on a very superficial level. The student's participation in group work is passive, and his/her contribution to the group activities is not clearly indicated.
Grading	1–5
Person responsible	Essi Vuopala
Work placements	Group tasks are case examples from actual working life.
Other information	

LEARNING ENVIRONMENTS AND TECHNOLOGIES	
Code	418025P
ECTS credits	5
Language of instruction	English
Timing	1st year, 1st and 2nd period
Learning outcomes	After completion of this course, the student is able to • Apply theoretical ideas of the learning sciences to the context of emerging technologies • Use emerging technologies as teaching and learning tools, • Set-up a Personal Learning Environment (PLE) or Personal Teaching Environment (PTE) • Apply the PLE/PTE in educational context, and • Work in technology-rich teaching and learning environments as administrator, teacher or student
Contents	• Basic concepts and ideas of how to use technology for problem-solving, reflection, sharing and collaboration. • Basic concepts and ideas of using technological tools and environments for technology-enhanced learning, such as a) learning management systems, cloud computing, and social media, b) production and distribution of digital media, and c) classroom infrastructure and wireless Internet devices. • Future and trends in technology-enhanced learning • Design and setup of personal learning environment or

	personal teaching environment and digital portfolio.
Mode of delivery	Mode of delivery is blended learning which consists of • Flipped classroom (online), 8h • Technology workshops (computer class, face-to-face), 32h • Online, individual and collaborative learning (blended), 95h
Learning activities and teaching methods	Learning activities include hands-on workshops with classroom infrastructure, wireless internet learning devices and software. There will be also flipped classroom phases where topics and/or technologies are presented before the actual workshop. In this course students design their own personal learning andor teaching environment which is a collection of tools for supporting their learning activities. In addition to that, students design and set up their individual digital portfolios where they reflect on their course tasks and their learning.
Target group	1st year students on the LET Master's Programme and students in minor subject studies in learning and educational technology.
Prerequisites and co-requisites	
Recommended optional programme components	407061A Open workshop (5 credits)
Recommended or required reading	Fischer, F., Wild, F., Sutherland, R., & Zirn, L. (2014). *Grand Challenges in Technology Enhanced Learning: Outcomes of the 3rd Alpine Rendez-Vous*. Springer International Publishing. Laru, J., Naykki, P., & Jarvela, S. (2015). Four stages of research on the educational use of ubiquitous computing. *Learning Technologies, IEEE Transactions on*, *8*(1), 69–82. Pea, R. D., & Maldonado, H. (2006). WILD for learning: Interacting through new computing devices anytime, anywhere. *The Cambridge Handbook of the Learning Sciences*, 852–886.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching, and collaborative and independent work. It also requires successful completion of all the learning assignments and exercises, and writing posts for their personal digital portfolios. Learning outcomes are assessed through group and individual assignments. 5: All course assignments are comprehensive in terms of the contents of the course, and they represent very deep and wide familiarity with course materials, environments and technologies. The student is able to express that s/he has understood and is able to combine technological tools and theories of the learning sciences. Learning assignments are reflective in nature. The student participates very actively in group work, and contributes to the group assignments. Individual products represent very deep

	knowledge and are an exceptional contribution to the field of the learning environments and technologies. 4: All course assignments are comprehensive in terms of the contents of the course, and they represent good familiarity with course materials, environments and technologies. The student is able to express that he has understood and is able to combine technological tools and theories of learning sciences. A student participates very actively in a group work, and contributes to the group assignments. Individual products represent deep knowledge and are very contribution to the field of the learning environments and technologies. 3: All course assignments are comprehensive in terms of the main contents of the course, and they represent familiarity with course materials, environments and technologies. The student is able to express that he has understood the key concepts and theories of learning sciences in the context of learning environments and technologies. The student participates actively in group work, and contributes to the group assignments. Individual products represent good knowledge and are a good contribution to the field of the learning environments and technologies. 2: The student has done most course assignments, but they do not cover all the contents of the course and the use of course materials, environments and technologies is mostly superficial. The student is able to express his understanding of some of the key concepts and theories in learning sciences in the context of learning environments and technologies. S/he participates in most of the group meetings, but his contribution to the group activities is not clearly indicated. Individual products represent mostly superficial understanding and are not a clear contribution to the field of the learning environments and technologies. 1: The student has not done all the course assignments or the assignments are superficial in terms of the main course contents and the use of course materials, environments and technologies. The student is able to express her/his or her understanding of a few concepts and theories of the learning sciences in the context of learning environments and technologies, but on a very superficial level. Her/his participation in group work is passive, and her/his contribution to the group activities is not clearly indicated. S/he participates in most of the group meetings, but his contribution to the group activities is not clearly indicated. Individual products represent superficial expertise and do not contribute to the field of the learning environments and technologies.
Grading	1–5
Person responsible	Jari Laru

Work placements	1) Course participants will use online professional development communities and networks as a support function for their learning activities. 2) Technology choices in these course reflect the socio-technical context in the average workplace of an educational expert.
Other information	

PROBLEM SOLVING CASE 1	
Code	418026P
ECTS credits	10
Language of instruction	English
Timing	1st year periods 3 and 4
Learning outcomes	After completion of this course, the student is able to • Use theoretical knowledge of what? in authentic educational challenges • Design technology-enhanced learning (courses, projects, products etc.) • Work efficiently in a team to solve a problem and/or create a learning design
Contents	• Basics of project work • Designing technology-enhanced teaching and learning • Pedagogical and technological decisions in authentic educational settings • Collaborative problem solving
Mode of delivery	Face-to-face and online teaching 50h: lectures 10h, practice 40h Individual, collaborative and on-line studying, 220h
Learning activities and teaching methods	In this course the students work on an authentic? educational project or case for a local company, school or other organization. The students design, implement and report on the project in a project team under the teacher's guidance. They learn about project work in theory and practice.
Target group	1st year students on the LET Master's Programme and students in minor subject studies in learning and educational technology
Prerequisites and co-requisites	(418025P) Tools and Environments for Learning (413312S) Collaborative Learning (418024P) Self-regulated Learning
Recommended or required reading	
Recommended or required reading	Key literature related to each project will be defined in the beginning of the course.
Assessment methods and criteria	Criteria for passing the course: The student is able to work responsibly as a part of the group for completing successfully the project at hand. The student can use

	theoretical knowledge of learning and digital technologies to advance the group work. Student is able to demonstrateand reflect his/her individual learning during the teamwork through the reflective assignments given by the teacher. In addition, s/he can express his/her developing expertise in the field of the learning and educational technology. Criteria for failing the course: The student is not able to work in a group or use his/her skills and knowledge for collaboration and problem-solving. The reflective assignments do not demonstrate learning or expertise in the field of the learning and educational technology.
Grading	Pass/fail
Person responsible	Essi Vuopala
Work placements	The course is implemented in collaboration with local or global organizations in the field of education.
Other information	Part 1 (Orientation and Planning) 5 ects Part 2 (Implementation and Evaluation) 5 ects

SELF-REGULATED LEARNING	
Code	418024P
ECTS credits	5
Language of instruction	English
Timing	1st year, 2nd period
Learning outcomes	After completion of this course, the student is able to • Define the concept of self-regulated learning • Identify the phases of self-regulated learning in different theoretical models • Recognize the role of motivation and emotions in learning • Define the concept of metacognition and explain its role in learning • Apply the basic principles of self-regulated learning to their own studying
Contents	• The concept of self-regulated learning • Theoretical models of self-regulated learning • The role of motivation, emotions, cognition and metacognition in learning
Mode of delivery	Face-to-face and online teaching 30h: lectures 10h, practice 20h Individual and online studying, 105h
Learning activities and teaching methods	Learning activities consist of lectures and structured individual studying. The students develop their own self-regulatory skills during the course.

Target group	1st year students on the LET Master's Programme and students in minor subject studies in learning and educational technology
Prerequisites and co-requisites	
Recommended optional programme components	
Recommended or required reading	Zimmerman, B. J., & Schunk, D. H. (Eds.). (2001). *Self-regulated Learning and Academic Achievement: Theoretical perspectives*. Routledge. Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal, 45*(1), 166–183. DOI: 10.3102/0002831207312909. and/or other contemporary readings in the field of self-regulated learning, to be announced in the beginning of the course.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching and independent work. It also requires successful completion of all the learning assignments and exercises. Learning outcomes are assessed through participation and the quality of the individual assignments. 5: All course assignments are comprehensive in terms of the contents of the course, and they represent very deep and wide familiarity with course materials. The student is able to express that s/he has understood and is able to combine key concepts and theories of self-regulated learning. Learning assignments are reflective in nature. 4: All course assignments are comprehensive in terms of the contents of the course, and they represent a good familiarity with course materials. The student is able to express that s/he has understood and is able to combine key concepts and theories of self-regulated learning. 3: All course assignments are comprehensive in terms of the main contents of the course, and they represent familiarity with course materials. The student is able to express that s/he has understood the key concepts and theories of self-regulated learning. 2: The student has done most course assignments, but they do not cover all the contents of the course and the use of course materials is mostly superficial. The student is able to express his/her understanding of some of the key concepts and theories in self-regulated learning. 1: The student has done some of the course assignments but the

	assignments are superficial in terms of the main course contents and the use of course materials. The student is able to express his understanding of a few concepts and theories in the field of self-regulated learning, but on a very superficial level.
Grading	1–5
Person responsible	Jonna Malmberg
Work placements	-
Other information	-

MAJOR SUBJECT (80 ECTS)

All the students in the LET Master's Degree Programme must complete 80 credits of major subject studies. The Advanced Studies in Education consist of the following compulsory courses.

COLLABORATIVE LEARNING	
Code	413312S
ECTS credits	5
Language of instruction	English
Timing	1st year, 3rd period
Learning outcomes	After completion of this course, the student is able to • Name different theoretical approaches to collaborative learning • Identify the interaction processes in collaborative learning situations • Describe how a teacher can enhance collaborative learning • Apply theoretical knowledge of collaborative learning to real collaborative situations
Contents	• Socio-cognitive and socio-cultural perspectives on collaborative learning • Interaction in collaborative learning situations • Scaffolding collaborative learning
Mode of delivery	• Face-to-face and online teaching, 40h: lecture 15h, practice 30h • Online, individual and collaborative learning, 95h
Learning activities and teaching methods	Learning activities consist mainly of collaborative activities supported by technology. Flipped classroom method is applied throughout the course.
Target group	1st year students on the LET Master's Programme
Prerequisites and co-requisites	-
Recommended optional programme components	(418023P) Foundations of Learning
Recommended or required reading	Dillenbourg, P. (1999). What do you mean by 'collaborative learning? In P. Dillenbourg (Ed.), Collaborative Learning: Cognitive and computational approaches. Oxford UK, Elsevier, 1–19. Enyedy, N. & Stevens, R. (2014). Analyzing collaboration. The Cambridge Handbook of the Learning Sciences. Cambridge University Press, 191–212.

	The International Handbook of Collaborative Learning (2013). Oxford: Routledge. Roschelle, J. (1992). Learning by collaborating: Convergent conceptual change. The Journal of the Learning Sciences, 2(3), 235–276. Vuopala, E., Hyvönen, P. & Järvelä, S. (2016). Interactional features in successful collaborative learning in virtual learning spaces. Active Learning in Higher Education 1/2016. LINKKI? and/or other contemporary readings in the field of learning and educational technology, to be announced in the beginning of the course.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching and collaborative work. It also requires successful completion of all the learning assignments and exercises, and writing posts for the personal digital portfolio. 5: The student has participated very actively in face-to-face meetings and in collaborative work. S/he is able to express a deep and wide understanding of all the course contents both in group assignments and in the digital portfolio. All assignments are reflective in nature, and they represent deep familiarity with all course materials. 4: The student has participated very actively in face-to-face meetings and in collaborative work. S/he is able to express a deep understanding of all course contents both in group assignments and in the digital portfolio. All assignments are reflective in nature, and they represent familiarity with all course materials. 3: The student has participated actively in face-to-face meetings and in collaborative work. S/he is able to express an understanding of the core course contents both in group assignments and in the digital portfolio. All assignments represent familiarity with the main course materials. 2: The student has participated in most of the face-to-face meetings and in collaborative work. S/he is able to express an understanding of some of course contents both in the group assignments and in the digital portfolio. The assignments represent familiarity with the main course materials, but on a superficial level. 1: The student has been passive in face-to-face meetings and in collaborative work. S/he is able to express the understanding of some of the course contents, but only on a superficial level. The assignments represent familiarity with some of the course materials.
Grading	1–5

Person responsible	Essi Vuopala
Work placements	Teachers and other experts representing various educational levels are visiting the course and introducing how the idea of collaborative learning is applied.
Other information	

SOCIALLY SHARED REGULATION OF LEARNING	
Code	413318S
ECTS credits	5
Language of instruction	English
Timing	1 st year, 3rd period
Learning outcomes	After completion of this course, the student is able to • Identify and define the social forms of regulated learning • Explain how social forms of regulation occur in interaction • Use both theoretical knowledge and different technological tools for supporting social forms of regulated learning
Contents	• Socially shared regulation of learning • Co-regulation of learning • Technology to support regulation in collaboration
Mode of delivery	Face-to-face: 30h: lectures 10h, practice 20h Individual, collaborative and on-line: 115h
Learning activities and teaching methods	Lectures and other learning activities that consist mainly of collaborative activities supported with technology. Students reflect on their learning and expertise in a digital portfolio.
Target group	Fisrt year LET master students
Prerequisites and co-requisites	(418024P) Self-Regulated Learning
Recommended optional programme components	
Recommended or required reading	Zimmerman, B. J. & Schunk, D. H. (2011). Motivational sources and outcomes of self-regulated learning and performance. In B. Zimmerman & D. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 49–64). New York, NY: Routledge Järvelä, S., Kirschner, P. A., Panadero, E., Malmberg, J., Phielix, C., Jaspers, J., & Järvenoja, H. (2015). Enhancing socially shared regulation in collaborative learning groups: designing for CSCL regulation tools. *Educational Technology Research and Development*, *63*(1), 125-142.37–41.

	and/or other contemporary readings in the field of learning and educational technology, to be announced in the beginning of the course.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching, successful completion of all individual learning tasks, and reflection of one's own learning in the digital portfolio. 5: The student has participated actively in all face-to-face meetings and done all required individual tasks according to the course requirements. All tasks represent very good familiarity with course contents, course materials, and additional materials. The student is able to express deep understanding of core course contents in the digital portfolio. 4: The student has participated actively in all face-to-face meetings and done all required individual tasks according to the course requirements. All tasks represent good familiarity with course contents and course materials. The student is able to express understanding of core course contents in the digital portfolio. 3: The student has participated actively in most of the face-to-face meetings and done all required individual tasks. Tasks represent mostly a good familiarity with course contents and core course materials. Student is able to express understanding of core course contents in the digital portfolio. 2: The student has participated in several face-to-face meetings and done individual tasks, but there are few tasks missing. Tasks are done mostly based on one's own experiences and opinions, not on course literature and other course materials. Reflection of one's learning in the digital portfolio is mostly superficial and irregular. 1: The student has participated in some face-to-face meetings and done individual tasks, but there are tasks missing. Tasks are done based on one's own experiences and opinions, not on the course literature and other course materials. Reflection of one's own learning in the digital portfolio is superficial and irregular. Criteria for not passing the course: A student has been passive or absent from face-to-face meetings, and there are assignments missing or they represent superficial understanding of the course content. A student is not able to express understanding of course content either in digital portfolio or in individual tasks.
Grading	1–5
Person responsible	Jonna Malmberg
Work placements	

Other information	

COMPUTER-SUPPORTED COLLABORATIVE LEARNING	
Code	413319S
ECTS credits	5
Language of instruction	English
Timing	2nd year, 1st period
Learning outcomes	After completion of this course, the student is able to • Define the concept of Computer-Supported Collaborative Learning • Apply theoretical ideas of collaborative learning in the context of computer-supported learning environments • Recognize the role of orchestration and scripting in CSCL • Use emerging technologies as CSCL tools • Use contemporary analytical approaches for analysing learning activities within CSCL learning contexts
Contents	• The concept of computer-supported collaborative learning • Theoretical models of CSCL • Disruptive and emergent technologies for supporting CSCL • Design and set up of CSCL environment • Learning analytics for analysing collaborative learning activities
Mode of delivery	Face-to-face and online teaching 30h, lectures 10h, practice 20h Individual and online studying, 105h
Learning activities and teaching methods	Learning activities consist of both flipped classroom lectures with meetings where lectures are being discussed and hands-on CSCL workshops where emergent and disruptive technologies are applied to design CSCL activities.
Target group	2nd year students on the LET Master's Programme
Prerequisites and co-requisites	-
Recommended optional programme components	(418023P) Foundations of learning (418025P) Learning environments and technologies
Recommended or required reading	Jeong, H., & Hmelo-Silver, C. E. (2016). Seven Affordances of Computer-Supported Collaborative Learning: How to Support Collaborative Learning? How Can Technologies Help?. *Educational Psychologist*, 1–19. Järvelä, S., & Hadwin, A. F. (2013). New frontiers: Regulating learning in CSCL. *Educational Psychologist*, *48*(1), 25–39.

	Ludvigsen, S., Lund, A., Rasmussen, I., & Säljö, R. (2011). Learning across sites. *New Tools, Infrastructures and Practices. Abingdon: Routledge (New perspectives on learning and instruction). Online verfügbar unter http://www. gbv. de/dms/zbw/619420359. pdf*.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching, and collaborative and independent work. It also requires successful completion of all the learning assignments and exercises, and writing posts for the personal digital portfolio. Learning outcomes are assessed through group and individual assignments. 5: All course assignments are comprehensive in terms of the contents of the course, and they represent very deep and wide familiarity with course materials, environments and technologies. The student is able to express that s/he has understood and is able to combine technological tools and theories of collaborative learning. Learning assignments are reflective in nature. The student participates very actively in group work, and contributes to the group assignments. Individual products represent very deep knowledge and are exceptional contribution to the field of the CSCL. 4: All course assignments are comprehensive in terms of the contents of the course, and they represent good familiarity with course materials, environments and technologies. The student is able to express that s/he has understood and is able to combine technological tools and theories of collaborative learning. S/he participates very actively in group work and contributes to the group assignments. Individual products represent deep knowledge and are very contribution to the field of the CSCL. 3: All course assignments are comprehensive in terms of the main contents of the course, and they represent familiarity with course materials, environments and technologies. The student is able to express that s/he has understood the key concepts and theories in the context of CSCL. The student participates actively in group work, and contributes to the group assignments. Individual products represent appropriate knowledge and are a good contribution to the CSCL. 2: The student has completed most of the course assignments, but they do not cover all the contents of the course and the use of course materials, environments and technologies is mostly superficial. The student is able to express his understanding of some of the key concepts and theories in CSCL. S/he participates in most of the group meetings, but his/her contribution to the group activities is not clearly indicated. Individual products represent mostly superficial understanding and are not a clear contribution to the field of the CSCL.

	1: The student has not done all the course assignments, or the assignments are superficial in terms of the main course contents and the use of course materials, environments and technologies. The student is able to express his understanding of a few concepts and theories of the CSCL, but on a very superficial level. His/her participation in group work is passive, and his/her contribution to the group activities is not clearly indicated. The student participates in most of the group meetings, but his/her contribution to the group activities is not clearly indicated. Individual products represent superficial expertise and do not contribute to the field of the CSCL.
Grading	1–5
Person responsible	Essi Vuopala and Pirkko Hyvönen
Work placements	1) Course participants will use virtual professional development communities and networks for supporting their learning activities. 2) Technology choices in the CSCL course reflect the socio-technical context in the average workplace of an educational expert.
Other information	

CURRENT TRENDS IN LET RESEARCH	
Code	413320S
ECTS credits	5
Language of instruction	English
Timing	1st year, 4th period
Learning outcomes	After completion of this course, the student is able to • Identify and elaborate some key trends in the field of learning sciences • Justify own research interest and locate it in the field of the current research • Compose and critically analyse scientific text
Contents	• Current trends in the field of learning sciences • Ongoing research projects in the LET
Mode of delivery	Face-to-face: 20h: 10h lectures, 10h practice Individual: 115h
Learning activities and teaching methods	Seminars, where different researchers present their research in the field of learning and educational technology. Individual assignment will be written based on the seminars and current and relevant scientific articles.
Target group	First year LET master students, other Master's or PhD level students in the Faculty of Education.

Prerequisites and co-requisites	Basic studies in learning, education and technology or other educational sciences.
Recommended optional programme components	
Recommended or required reading	Current scientific articles in the field of the learning sciences and educational technology, will be announced in the beginning of the course.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching and successful completion of the individual learning assignment. 5: The student has participated actively in all face-to-face meetings and done the required individual task according to the course requirements. The task represents very good familiarity with course contents and relevant additional materials. 4: The student has participated actively in all face-to-face meetings and done the required individual task according to the course requirements. The task represents good familiarity with course contents and relevant additional materials. 3: The student has participated actively in most of the face-to-face meetings and done the required individual task according to the course requirements. The task represents familiarity with course contents and relevant additional materials. 2: The student has participated in several face-to-face meetings and done the individual task. The task represent only some familiarity with course contents and additional reading materials. 1: The student has participated in some face-to-face meetings and done the individual task. The task is related to the course contents and some additional reading material has been used.
Grading	1–5
Person responsible	Essi Vuopala
Work placements	The course is tightly connected to the current work of researchers in the LET research unit. During the course students get practical information, ideas and real examples of research work in the field of the learning sciences.
Other information	The specific contents and lecturers of this course will vary between academic years.

PROBLEM SOLVING CASE 2	
Code	413321S
ECTS credits	5
Language of instruction	English
Timing	2nd year, 1st and 2nd period
Learning outcomes	After completion of this course, the student is able to • Use theoretical knowledge of the learning sciences when scripting technology-enhanced learning • Design educational product(s) by using Design-Based Research (DBR) • Work efficiently in a multidisciplinary team to create learning tools and environments or other educational products
Contents	• Multidisciplinary project work • Design-Based Research • Pedagogical and technological design • Design of educational product
Mode of delivery	Mode of delivery is blended learning which consists of • Flipped Classroom Introductory materials (online), 8h • (Technology) workshops (computer class, face-to-face), 32h • Online, individual and collaborative learning (blended), 95h
Target group	LET 2nd year students
Prerequisites and co-requisites	418026P Problem Solving Case 1
Recommended optional programme components	407061A Open Workshop (5 credits)
Recommended or required reading	Contemporary readings in the field of learning and educational technology, to be announced in the beginning of the course. Key literature related to each project will be defined in the beginning of the course.
Assessment methods and criteria	5: All course assignments are comprehensive in terms of the contents of the course, and they represent very deep and wide familiarity with course materials, environments and technologies. The student is able to express that s/he has understood and is able to combine technological tools and theories of the learning sciences. Learning assignments are reflective in nature. The student participates very actively in group work, and contributes to the group assignments. Individual products represent very deep knowledge and are an exceptional contribution to the field of the learning

	environments and technologies. 4: All course assignments are comprehensive in terms of the contents of the course, and they represent good familiarity with course materials, environments and technologies. The student is able to express that s/he has understood and is able to combine technological tools and theories of learning sciences. The student participates very actively in a group work, and contributes to the group assignments. Individual products represent deep knowledge and are a very contribution to the field of the learning environments and technologies. 3: All course assignments are comprehensive in terms of the main contents of the course, and they represent familiarity with course materials, environments and technologies. The student is able to express that s/he has understood the key concepts and theories of learning sciences in the context of learning environments and technologies. The student participates actively in group work, and contributes to the group assignments. Individual products represent good knowledge and are a good contribution to the field of the learning environments and technologies. 2: The student has done most of the course assignments, but they do not cover all the contents of the course and the use of course materials, environments and technologies is mostly superficial. The student is able to express his understanding about some of the key concepts and theories in learning sciences in the context of learning environments and technologies. S/he participates in most of the group meetings, but his or her contribution to the group activities is not clearly indicated. Individual products represent mostly superficial understanding and are not a clear contribution to the field of the learning environments and technologies. 1: The student has not done all the course assignments or the assignments are superficial in terms of the main course contents and the use of course materials, environments and technologies. The student is able to express his understanding of a few concepts and theories of the learning sciences in the context of learning environments and technologies, but on a very superficial level. The student's participation in group work is passive, and his or her contribution to the group activities is not clearly indicated. S/he participates in most of the group meetings, but his/her contribution to the group activities is not clearly indicated. Individual products represent superficial expertise and do not contribute to the field of the learning environments and technologies.
Grading	1–5
Person responsible	Niina Impiö

Work placements	In this course students design and develop an educational product in a product development team. Course design simulates working life requirements and conditions.
Other information	This course can be arranged together with multidisciplinary product development laboratories / projects which simulate real-life work contexts.

QUALITATIVE RESEARCH	
Code	413031S
ECTS credits	5
Language of instruction	English
Timing	1st year, 4th period
Learning outcomes	After completion of this course, the student is able to • Process and analyse qualitative data • Describe and report on results based on qualitative research data • Use mixed method approach • Evaluate the ethicality and reliability of qualitative research
Contents	• Basic and central concepts of qualitative research • Process-oriented research methods • Mixed-method approach • Writing a research publication
Mode of delivery	Face-to-face and online teaching, 40h: 18 lectures. 22 practice Online, individual and collaborative learning, 95h
Learning activities and teaching methods	• Learning activities consist of active participation in face-to-face meetings where researchers in the field of learning science and educational technology introduce various topics related to qualitative research. • Each presentation includes an online task for the students. • In addition to researchers' presentations there will be seminars where the students are able to apply their research knowledge in practice. • In addition, the students reflect on their learning and expertise in a digital portfolio.
Target group	1st year students on the LET Master's Programme
Prerequisites and co-requisites	
Recommended optional programme components	

Recommended or required reading	American Psychological Association: Publication Manual of the American Psychological Association. (2009). 6th edition Given, L. M. (Ed.)(2008) The Sage Encyclopedia of Qualitative Research. Volumes 1 & 2. http://www.stiba-malang.com/uploadbank/pustaka/RM/QUALITATIVE%20METHOD%20SAGE%20ENCY.pdf and/or other contemporary readings in the field of learning and educational technology, to be announced in the beginning of the course.
Assessment methods and criteria	Completion of the course requires active participation in face-to-face teaching and successful completion of all individual learning tasks: 5: The student has participated actively in all face-to-face meetings and done all required individual tasks according to the course requirements. All tasks represent very good familiarity with course contents, course materials, and additional materials. The student is able to express deep understanding of core course contents in the digital portfolio. 4: The student has participated actively in all face-to-face meetings and done all required individual tasks according to the course requirements. All tasks represent good familiarity with course contents and course materials. The student is able to express understanding of core course contents in the digital portfolio. 3: The student has participated actively in most of the face-to-face meetings and done all required individual tasks. Tasks mostly represent good familiarity with course contents and core course materials. The student is able to express understanding of core course contents in the digital portfolio. 2: The student has participated in several face-to-face meetings and done individual tasks, but there are a few tasks missing. Tasks are done mostly based on one's own experiences and opinions, not on course literature and other course materials. Reflection of learning in the digital portfolio is mostly superficial. 1: The student has been passive in face-to-face meetings, and there are assignments missing or they represent superficial understanding of the course content. The student is able to express the understanding of some course content either in the digital portfolio or in individual tasks, but the level of reflection is superficial and irrelevant, and it does not represent familiarity with the course materials.
Grading	1–5
Person responsible	Piia Näykki
Work placements	Individual tasks are related to data from real research projects.
Other information	

QUANTITATIVE METHODOLOGY	
Code	413030S
ECTS credits	5
Language of instruction	English
Timing	Spring term, 1st year studies in the LET Master's Programme (Lectures)
Learning outcomes	After completion of this course, the students are able to • Process and analyse quantitative data • Report on results based on quantitative research data • Assess the reliability and validity of a quantitative study • Apply the knowledge thus gained to his or her Master's thesis
Contents	• Basics of quantitative research • Significance of theory in quantitative research • Operationalization and related problems • Statistical deduction and statistical description, as well as making deductions from data to theory • Questions of reliability and validity in quantitative research
Mode of delivery	face-to-face
Learning activities and teaching methods	Face-to-face 40 h, practical sessions and familiarizing oneself with the preliminary materials 70 h, collaborative and independent study 49 h.
Target group	1st year students in the LET Master's Programme
Recommended optional programme components	Related to Thesis Studies (RESEARCH)
Recommended or required reading	To be announced at the beginning of the course
Assessment methods and criteria	Active participation in face-to-face, collaborative and independent work. Successful completion of all the learning assignments and exercises.
Grading	1–5
Person responsible	Jouni Peltonen

MASTER'S THESIS	
Code	408043S Master's Thesis 30 credits 408044S Thesis Seminar 5 credits 408045S Abstract / Maturity Test 0 credits
ECTS credits	35
Language of instruction	English
Timing	2nd year
Learning outcomes	After completion of this course, the students are able to • Reflect on their previous experience and skills when doing research • Take active part in research collaboration • Deepen their understanding of the learning sciences (self-regulated learning and collaborative learning as a theoretical basis for research) • Review relevant research literature, evaluating it scientifically and ethically • Plan and implement data collection • Analyse research data • Design the research process and produce a research publication • Successfully carry out the thesis defence • Act as an opponent
Contents	• LET research themes (SRL and collaborative learning) • Literature review • Research process; research design and research plan • Methodologies • Collaboration in a research team Collaboration in a research team
Mode of delivery	Seminars: Face-to-face: 50h Online: 85h
Learning activities and teaching methods	Active participation in face-to-face seminars and collaborative and individual work. Successful completion of all the learning assignments and exercises.
Target group	2nd year students on the LET Master's Programme
Prerequisites and co-requisites	Qualitative research
Recommended optional programme components	Qualitative Methodology (QUALI) Quantitative Methodology (QUANT)
Recommended optional programme	

components	
Recommended or required reading	The recommended or required study materials depend on the topic of the student's Master's thesis
Assessment methods and criteria	Master's thesis seminars are assessed as pass/fail, and Master's theses on a scale from 1 to 5. A full description of the assessment criteria for the thesis is available at http://oulu.fi/let. Criteria for passing the course: The student participates actively in both face-to-face meetings and online studies. All course assignments are comprehensive in terms of the contents of the course, and they represent good familiarity with course materials, and are in line with the topic of one's own master's thesis. The student is an active peer tutor for his study mates. Criteria for failing the course: The student participates passively or is absent from face-to-face meetings and online studies. S/he has not done all course assignments or the assignments are superficial in terms of the main course contents and the use of course materials. The student is not able to connect the course assignments into the topic of one's own master's thesis. S/he is not actively participating in the peer tutoring activities in the course.
Grading	pass/ fail
Person responsible	Hanna Järvenoja ja Essi Vuopala
WORK PLACEMENTS	LET students are able to complete their Master's theses as part of authentic research projects, school context or in the context of local companies.
OTHER INFORMATION	

ENTREPRENEURSHIP IN LEARNING, EDUCATION AND TECHNOLOGY	
Code	413322S
ECTS credits	5
Language of instruction	English
Timing	2nd year 3rd period
Learning outcomes	After completion of this course, the student is able to • Define the key concepts related to entrepreneurship and entrepreneurship education • Connect entrepreneurship education to the theoretical perspectives of learning sciences and technology-enhanced learning • Identify and evaluate their own entrepreneurial competences • Recognize the potential and opportunities for educational entrepreneurship • Recognize the possibilities for supporting entrepreneurial competences in different educational settings
Contents	• Entrepreneurial competences and recognizing one's own expertise and potential • Different perspectives and key concepts of entrepreneurship in education • Educational experts as entrepreneurs • Educators and teachers as promoters of entrepreneurial competences
Mode of delivery	Face-to-face: 10 h lecture Individual: 125 h
Learning activities and teaching methods	Course consists mainly of web-based studying both individually and collaboratively. Learning activities include watching video-clips, participating in group discussions and other collaborative activities, and doing individual assignments.
Target group	2nd year LET Master's Degree students
Prerequisites and co-requisites	
Recommended optional programme components	Possibility to include more advanced studies on the theme to the optional studies in the student's personal study plan.
Recommended or required reading	
Assessment methods and criteria	Criteria for passing the course: The student participates actively in all the learning activities both face-to-face and online. The student participates in collaborative activities, and is able to contribute to the group task significantly. His or her contribution indicates good

	familiarity with the learning materials. The student has accomplished all individual tasks. Criteria for failing the course: The student is passive or absent from face-to-face meetings and online activities. The student participates infrequently in collaborative activities, and his/her contribution to the group task is minor. S/he has not accomplished all individual tasks, and s/he cannot prove his or her familiarity with the learning materials of the course.
Grading	Pass/ fail
Person responsible	Niina Impiö
WORK PLACEMENTS	The course is implemented in cooperation with different experts and organizations in and outside of the university.
OTHER INFORMATION	

OPTIONAL STUDIES (10 ECTS)

The student can select a total of 10 credits of optional studies from a selection of courses announced separately. The courses are implemented in collaboration with the other Master's Degree Programmes at the University of Oulu and international partners. The available study module selection varies by academic year. Students can select their optional studies, e.g. on the basis of their previous studies, thesis topic, or personal interests.