

DEGREE PROGRAMME IN LOGISTICS ENGINEERING
BACHELOR OF ENGINEERING

PROGRAMME DESCRIPTION

240 ECTS credits
Duration of studies 2012-2016

Approved 23.12.2011





DEGREE PROGRAMME	Degree Programme of Logistics Engineering
EXTENT OF DEGREE IN ECTS CREDITS	240
DEGREE PROGRAMME INSTRUCTION LANGUAGE	English
CODE	TEL12S1
QUALIFICATION AWARDED	Bachelor of Engineer
LEVEL OF QUALIFICATION	The European Qualifications Framework (EQF) level 6. Bachelor's degree corresponds to a bachelor's degree at scientific university level. (Act 426/2005, 10 §.)
SPECIFIC ADMISSION REQUIREMENTS	High school diploma or vocational school diploma is required as well as taking part to entrance exam. Logistics Engineering Programme is organising entrance exams in Finland and also in 16 other countries around the world. Entrance exams abroad are organised together with Finnips-organisation. Certificate of English language skills is required if the skills are not proved in high school or vocational school diploma.
ACCREDITATION AND SPECIFIC ARRANGEMENTS FOR RECOGNITION OF PRIOR LEARNING	Accreditation methods are described in degree regulations and the Study Guide. Recognition of prior learning in 2 nd level is required. High school or vocational school diploma is required as well as the certificate of English language skills if it is not visible in high school or vocational school diploma.
QUALIFICATION REQUIREMENTS AND REGULATIONS	There are no degree-specific qualification requirements and regulations.



PROFILE OF THE PROGRAMME

Logistics Engineering Programme educates future engineers to develop and manage logistics processes in local and global business life. Also the achievement is to provide students good background for possible future professional development.

The programme is strongly connected to the future needs of business life. The advisory board of the programme consists of participants of several local and global companies from industry, trade, transportation and authorities. Advisory board meets annually and plans co-operation possibilities and reviews and develops the programme structure.

The programme has co-operation with business life during the whole period of studying. Co-operation actualises in the form of practical trainings, final thesis, visiting lectures, excursions and project works.

The programme has strong international co-operation network. This is actualised in the forms of visiting lectures, exchange students and exchange periods for Logistics Engineering students, excursions abroad and international seminars and project works.

Practical training is totally amount of 30 ECTS. Practical training is divided into three parts each with its own learning tasks and learning targets. Students are responsible to find the training placements for themselves but faculty lectures will help them with their connections. Also the portal network (point to point) is in students and companies use. Most often students get salary from the practical training.

Project works are a way for students and lectures to have constant co-operation to business life. Project works are research works for business life which can be connected as a natural part of studies during the course.

Visiting lectures are coming from both co-operating Universities from around the world and business life. Visiting lectures are organised either as short period exchange, for example Erasmus staff exchange or then longer period of intensive visiting programme. In shorter exchanges visiting lecturer gives minimum 5 hours of teaching of the certain topic in course curriculum. In longer exchange the visiting lecturer teaches bigger part of the course or even the whole course intensively.

Final thesis is business orientated research work in the final part of the studies. This is also a link for student to the business life. More than 90% of the final thesis are done to business life and normally student is working in the company during the final thesis.

Logistics Engineering programme supports JAMK:s target of being the most entrepreneur based educator in Finland. During the studies the student will understand the entrepreneurship as a positive and potential way to use the skills and knowledge learned. Studies regarding the entrepreneurship are a part of Logistics professional studies. A student can deepen his/her knowledge in entrepreneurship according to the guidelines given in JAMK:s principles of curriculum document.



Logistics Engineering programme is international in a natural way. About half of the students are from abroad. The whole programme is conducted in English language. There are many visiting lecturers from abroad visiting in the programme annually. There is also a mandatory exchange period abroad for Finnish students of the programme. In addition to this there are excursions abroad in the content of the programme.

KEY LEARNING OUTCOMES

The learning outcomes of JAMK's Degree Programme in Logistics Engineering are based on the common learning outcomes for the JAMK University of Applied Sciences and learning outcomes of the degree programme.

Common learning outcomes are Transferable Skills, JAMK Compulsory Studies and they have been described in the document Principles of the Curriculum.

Learning outcomes of the degree programme of Logistics Engineering are:

1) Natural Sciences (40 ECTS) Students of Logistics Engineering Programme will graduate as engineers. They need to have strong background in the fields of Mathematics, Physics and Chemistry. These areas of sciences are learned in the wholeness of Natural Sciences.

2) Engineering (30 ECTS) In the wholeness of Engineering students will learn basics of various selected areas of Engineering Sciences. These areas are such as technical drawing, electrical engineering, mechanics, production technologies, materials technology and telematics.

3) Logistics Professional Studies (55 ECTS) is the wholeness in which students will learn professional skills and knowledge from the area of logistics. Courses are often suitable mixtures of economical and technical studies and practises. Also entrepreneurial skills and knowledge are learned in this content. Students will learn several courses from the areas of materials management, transportation, production logistics, purchasing, quality and risk management, project management, management accounting and aircraft and aviation operations.

4) Logistics Management (20 ECTS) is the wholeness in which students will learn global logistics management skills and knowledge. Students will learn the importance of information logistics in the modern business life (Enterprise Resource Planning). They will also learn environmental thinking and sustainable logistics (Logistics Environmental Management) as well as areas of business relationships and human resources and global supply chain management.

5) Life Cycle Support (20 ECTS) content expertises students to the philosophy of life cycle support (Introduction to Life Cycle Support, Life Cycle Support Planning and Life Cycle Support Analysis). Students will also learn the skills and knowledge of the maintenance concepts.

Wholenesses Logistics Management and Life Cycle Support are elective. Students who want to study more generalistic and global logistics can choose the Logistic Management and students who want to expertise and deeper their knowledge can choose the Life Cycle Support. Students have also free choice studies (15 ECTS) which they can study the courses offered in JAMK University of Applied Sciences or in our co-operation Universities. When



wanted student may also choose both elective wholenesses and add the other ones content into free choice courses.

For Finnish students of Logistics Engineering there is an exchange period abroad in one of Logistics s co-operation Universities. It is recommended that in exchange students will study different logistics expertises than in JAMK:s Logistics Engineering Programme. Exchange period is recommended to do during the fourth year Autumn semester. For foreign students of the programme the exchange period is voluntary.

PROFESSIONAL GROWTH AND KNOW-HOW

The curriculum of Logistics Engineering Programme consist of learning areas, courses and competences. Learning areas are logically structured from the courses and courses are planned so that introductory and expertising courses from certain area are chronologically following each others supporting the learning process of the student. Competences are interwoven to the learning areas and courses.

Curriculum of the Logistics Engineering Programme, learning areas, courses and courses extents as well as competences which will be developed during the studying process have been described in the study guide.

OCCUPATIONAL PROFILES OF GRADUATES WITH EXAMPLES

Graduates of Logistics Engineering Programme are typically employed in the fields of industry, trade, services and governance. Typical professions for logistics engineers are for example logistics manager, logistics planner, transportation engineer, transportation manager, purchase manager, purchase engineer, product manager, warehouse manager, warehouse engineer, sales manager, project manager, production manager, production engineer, quality manager and quality engineer.

ACCESS TO FURTHER STUDIES

Upon graduation and approximately 3 years after the workplace phase, the student may continue their studies in a university of applied sciences' degree programme leading to a Master's degree. A Master's degree earned at a university of applied sciences is equivalent to a Master's degree earned at university. Studies may also be continued by applying to, for example, university Master's degree programmes or equivalent. After earning a Bachelor's degree at JAMK, it is also possible to continue studying in Master's degree programmes at foreign universities.

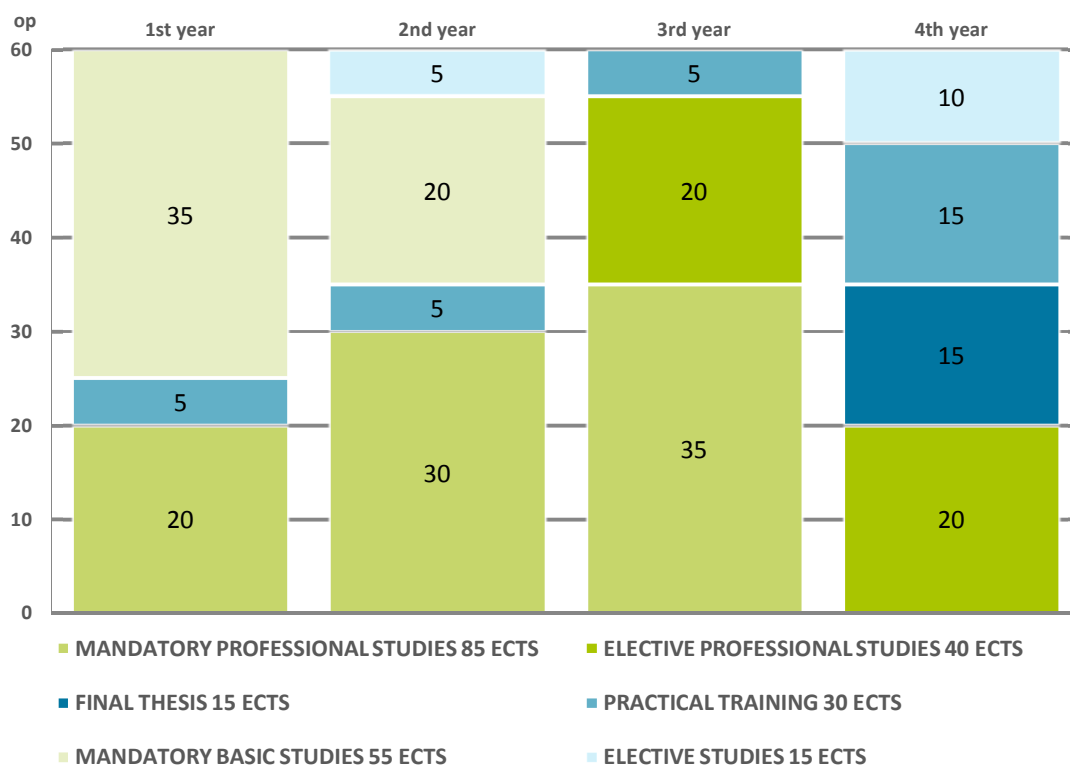
JAMK also offers opportunities for continuing education in professional specialisation studies, higher education level apprenticeship training and professional development studies. If the student earns a Master's degree, they may be given the opportunity to enrol in academic or artistic post-graduate studies at university (Section 37 of the Universities Act 558/2009). Students must apply for post-graduate studies separately.

Logistics department in JAMK University of Applied Sciences has also the Master's degree programme of Logistics and it is the only one of it's kind in Finland. The content of the education is totally 60 ECTS.



**COURSE
STRUCTURE
DIAGRAM**

PROCESS OF STUDIES BASED ON STUDY YEARS
DEGREE PROGRAMME IN LOGISTICS 240 CREDITS



**EXAMINATION
REGULATIONS,
ASSESSMENT
AND GRADING**

Studies are comprised of courses and broader competence areas. Courses are taken during one academic year. However, they must be completed by no later than the end of the autumn term for the following academic year. If a course remains incomplete, the student must take it over again during the following academic year. Exceptions to this include theses, internships and special workplace-based project studies.

In the first classroom session, the course's key learning objectives and content as well as its various assignments and assessment criteria are gone over, possible examination dates are discussed (main examination) and the end date of the course, after which no more assignments are accepted, is announced. The student is given a total of three chances to complete a given course: the main examination of the course or two separately specified re-examinations.

Learning outcomes are assessed in accordance with course's key learning objectives. If not mentioned otherwise in the programme description, a grading scale of 5 to 1 (5 Excellent, 4 Very Good, 3 Good, 2 Satisfactory, 1 Sufficient) is used. The students have the right to know how the assessment criteria have been applied to them. In special cases, a pass/fail scale may be used. The completion of a course will be entered in the record of credits within a month from the given end date of the course, and always before the end of the academic year.



GRADUATION REQUIREMENTS A prerequisite for receiving a Bachelor's degree is that the student completes the studies (courses, internship, thesis and maturity exam) in their degree programme, within the period of their right to study, in accordance with their personal study plan.

MODE OF STUDY Face-to-face learning

Studying in the Logistics Engineering programme is full time studying. The curriculum is divided into courses and learning in courses happens in the forms of contact lessons, self studying, individual and group work assignments, project works and various methods for measuring the learning outcomes.

In the curriculum there belongs the practical training which is divided into three parts. Practical trainings are done in companies during the summer periods. Practical training links education in the University and practical issues in business life together.

In the curriculum there is also possible to study by flexible learning methods. These learning methods are for example excursions, studying virtual courses, seminars and alternative ways of proving the earned competences.

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PROGRAMME PLANNING PROCESS Logistics Engineering Programme has close co-operation with selected business life representatives and authorities. Advisory board meets 1-2 times in a year. Main focus for advisory board working is to ensure that curriculum of Logistics Engineering programme supports the skills and knowledge that working life requires in the future when students will graduate. Advisory board also plans co-operation methods for the programme and the business life such as practical training placements, final thesis ideas, excursions, project works, assignments and visiting teachers. Advisory board consist of members of industrial companies, global transportation companies and authorities in addition to head of logistics department and head of the programme. In addition to this the results of Delphi-system which is used in Logistics Master programmes curriculum planning is used in Logistics Engineering programmes planning as well.

SCHOOL JAMK University of Applied Sciences
School of Technology,
Degree Programme in Logistics Engineering,
Rajakatu 35, 40200 Jyväskylä

FURTHER INFORMATION



**QUALITY
MANAGEMENT**

JAMK's quality system is audited by the Finnish Higher Education Evaluation Council (FINHEEC). Quality management consists of four elements: 1) planning, 2) action, 3) follow-up and evaluation and 4) quality improvement. The most important elements of quality management in education are

- PLANNING: JAMK strategy, Pedagogical principles, RDI principles, Performance agreement, OPS & HOPS
- ACTION: Education processes, Degree regulations, Study guide
- FOLLOW-UP AND EVALUATION: Course feedback, Student feedback, Follow-up surveys, External evaluations
- QUALITY IMPROVEMENT: Making use of follow-up and evaluations, Daily improvement.

For more information, see JAMK's Quality Manual.

**PEDAGOGICAL
PRINCIPLES**

The Degree Programme is implemented in compliance with the Pedagogical Principles approved by the Board of JAMK University of Applied Sciences. More information: www.jamk.fi/english/aboutus/facts/pedagogical-principles

**ETHICAL
PRINCIPLES**

The students and staff of JAMK act in compliance with the Ethical Principles approved by the Board of JAMK University of Applied Sciences on 15 December 2010. More information: www.jamk.fi/english/aboutus/facts/ethicalprinciples

LAST UPDATE

21.12.2011