

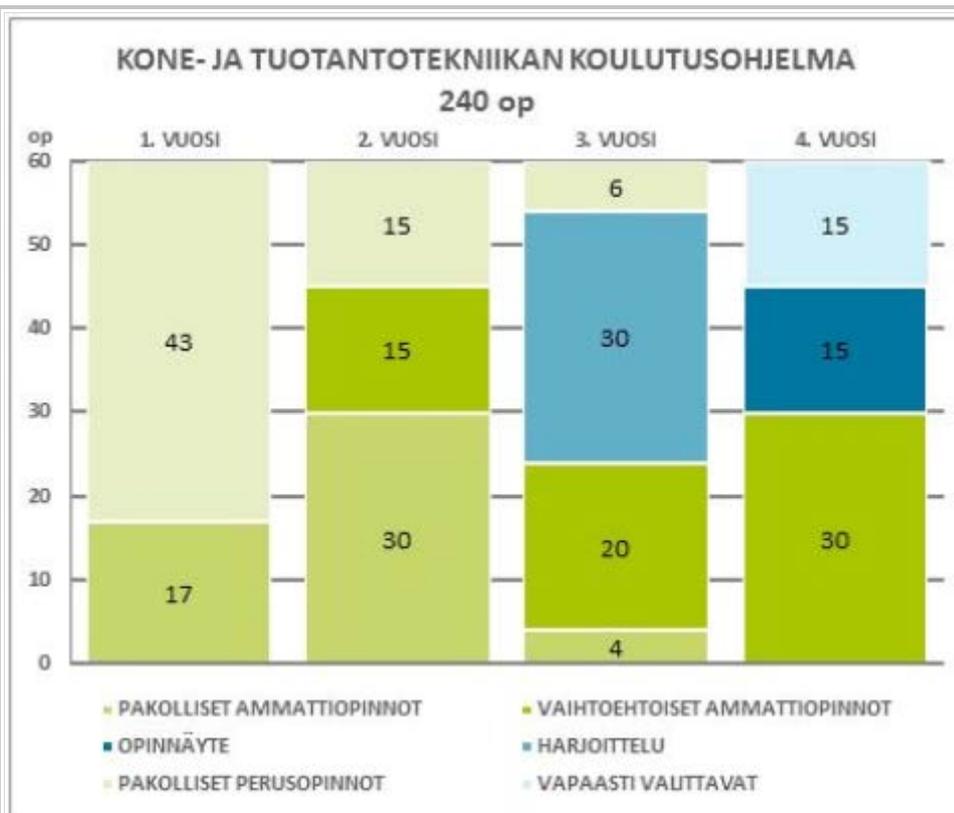


GENERAL INFORMATION	
DEGREE PROGRAMME	Degree Programme in Paper Machine Technology
PERIOD OF EXECUTION	2013-2017
SCOPE	240 ECTS credits
DESCRIPTION	The students of the Degree Programme in Paper Machine Technology will understand the information and knowledge needs of the paper industry, and engineers in mechanical engineering are motivated to meet them. After the completion of basic studies, students will specialise according to their choice in directional vocational studies from the applicant-orientated overview of the training programme.
LANGUAGE OF STUDY	Finnish
CODE	TPA13S1
DEGREE	Bachelor of Engineering
DEGREE LEVEL	National Qualifications Framework level 6.
TARGET GROUP AND ADMISSION CRITERIA	<p>In principle, the field of education in paper machine technology is targeted towards young people.</p> <p>More detailed information on the admission criteria can be found in the Guide -> http://www.jamk.fi/download/38509_JAMK_nuorten_hakijanopas_2013_kevyt.pdf, pages 42-55.</p>
STUDIES	
KEY LEARNING OUTCOMES	<p>The students on the degree programme understand the information and knowledge needs of the paper industry and servicing mechanical engineering. Students understand the logical thought processes required, which are based on mathematics and natural philosophy, and on which the vocational studies are built. In addition, students will master interaction skills, including communications and language skills, as well as information technology.</p> <p>Students also understand the key concepts, as well as key theoretical and professional knowledge of the field of paper machine technology. Students are able to apply the theoretical knowledge they have gained to the central problem areas of their profession. In the Degree Programme in Paper Machine Technology, students can specialise on the design or maintenance of machines. The degree programme prepares them for specialist positions in industrial maintenance, or for different types of machine design tasks.</p> <p>According to their specialisation option, students understand their professional image and are able to work as the machinery designers that are so necessary for design firms, and machinery and equipment manufacturers, as well as being able to work in project development functions or in maintenance planning and development functions.</p> <p>Courses can be carried out wholly or partly in English, so that the students will be well prepared for international assignments. Typical for the studies is project work with partner companies that is carried out in groups. Practical training can also be completed in partner companies abroad.</p>



	<p>Students are able to apply their new knowledge and skills in everyday working life. Students are motivated to seek additional theoretical knowledge that is applicable to working life. Students are able to work in target-orientated projects that are typical of the field. Students are aware of the fact that reporting skills are part of their professional skills. Students have the ability to apply their acquired knowledge and skills to specialist tasks that are related to their vocational studies. Students are able to work independently and purposefully, understand the importance of criticality, and have the creativity and ability to solve problems, etc.</p>
PROFILE	<p>Paper machine technology engineers will be able to work in the forest industry or in the service of companies that supply forest industry equipment. The degree also provides a wide range of skills in general process engineering and process industries equipment engineering, as well as for the maintainable life-cycle management of such equipment. The aim of the studies is strong internationalisation, because the Finnish forestry and forest industry equipment supply companies are global, internationally strong players.</p> <p>In their studies, students can specialise either in machine design or maintenance, both of which use the latest design or maintenance competencies or application software.</p> <p>JAMK University of Applied Sciences closely monitors developments in the field, and by using these changes the training process is developed at a constant rate according to the needs for change in the field. An important role is played by international partner universities, both in the USA and in the EU, with which active student exchange is carried out. During the course of their studies, students will be carrying out project work in cooperation with companies, and will study on a computer network, as well as in virtual environments that correspond to reality.</p> <p>The training programme provides students with the opportunity to acquire extensive knowledge and skills so that they can operate in forest industry production development and managerial tasks, as a machine designer and maintenance engineer of process industry equipment.</p>

COURSE STRUCTURE



(the figure is explained for students in English)

COURSE CONTENT AND PERFORMANCE

The course includes basic and vocational studies, elective studies, specialization training, and a graduation thesis.

The course shall be completed within two semesters from its beginning. The exception is the graduation thesis, practical training, special working life oriented project studies, as well as extensive courses implemented in a number of semesters. In cases where a course remains incomplete, the student shall re-start it.

In the first contact lesson of a course, a review is carried out of the course's learning objectives and content, along with the different procedures and evaluation criteria; additionally, the possible examination date is agreed upon (the immediate time at which this will be carried out) and the course completion date is announced, after which no further attempts are accepted. Students have the opportunity to try to complete a course a total of three times: during the immediate performance of the course or in two specially determined resit exam times.

LEARNING ASSESSMENT

Learning outcomes are assessed in relation to the course's learning objectives. Assessment decisions are based on the evaluation criteria provided in the course descriptions. Courses are assessed on the assessment scale that is specified in the course description. According to its purpose, the scale may be one of five steps: 5 (excellent), 4 (very good), 3 (good), 2 (satisfactory) and 1 (adequate) or a pass (P) or fail (0). The course has been failed (with a fail (0)) if the student does not achieve the minimum outcomes that are set for the completion of the course.



	<p>Students have the right to know how the evaluation criteria are applied to their skills. Course performance is recorded in the transcript of records no later than one month after the declared point of completion for the course and always before the end of the academic year.</p>
ACCREDITATION AND RECOGNITION OF PRIOR LEARNING (RPL)	<p>The procedures for accreditation are described in the Degree Regulations and in the Study Guide.</p>
MODE OF STUDY	<p>Contact study as well as distance learning</p> <ul style="list-style-type: none">• Group work, independent study, online learning, problem based learning, specialization training, project work, entrepreneurial studies, studies supporting internationalisation skills (including courses in English and studies that are carried out abroad).
PROFESSIONAL GROWTH AND KNOW-HOW	<p>During the training, competence is built of profession specific competencies and of the common competence of various professional groups developing transferable skills, in addition to the graduating student's own entrepreneurial skills. Competency areas for the Degree Programme in Mechanical and Production Engineering, where this profession's specific competencies for creating joint transferable skills are:</p> <p>Transferable skills which will help students to become capable of continuous self-development and a wide range of communications and information retrieval in various work and cultural environments, as well as providing them with a strong ethical foundation in their own field.</p> <p>Basic technical skills which will help students to become capable of technical computing, will help them to understand technical documentation, will provide them with an understanding of domestic and foreign publications in the technical field, and will allow them to be able to apply these areas to their own work. Students understand the operating principles of the equipment.</p> <p>Machine design capability: students are able to develop and design cost-effective forest industry machines and equipment from the customer-centred point of view. They have the ability to make use of modern software and can take into account the strength, materials and manufacturing technical aspects. They know the basics of the forest industry, and paper machine technology actuator technology especially, and they are able to choose the equipment used for this area of operation.</p> <p>Maintenance skills: students master the operational model and development conditions of paper machine technology production maintenance. Students are able to develop preventive maintenance programmes and have the capability to lead them to practical implementation. Students are also able to develop daily maintenance activities.</p>
QUALIFICATION REQUIREMENTS AND REGULATIONS	<p>The profession does not have specific qualification requirements that are based on legislation.</p>



ADDITIONAL INFORMATION	<p>Students may be charged separately for the cost of materials where such costs correspond to real life acquisitions or production costs in terms of teaching materials, tools, equipment, or supplies that remain in the student's possession after their education has been completed. If a student obtains similar materials from other sources, he or she is not charged for the cost of materials (Government Decree 1230/2009 2 §).</p> <p>Bachelor's degree programme is free for students.</p>
GRADUATION	<p>The requirement for the receipt of the certificate of Bachelor degree is that students complete the studies for their degree programme during the study period in accordance with the personal learning plan (PLP).</p> <p>JAMK University of Applied Sciences provides students with a certificate of completion of the Bachelor's degree (210, 240 or 270 ECTS credits). A transcript is attached to the certificate.</p>
EMPLOYMENT AND FURTHER STUDIES	
EMPLOYMENT OPPORTUNITIES	<p>The degree programme prepares students for development and specialist positions or different types of design tasks in paper and cardboard industry production. In addition, it provides the skills for operating as an entrepreneur and supplies experience in working in managerial positions.</p> <p>Machine design: forest industry machine design tasks.</p> <p>Maintenance: planning and operation and maintenance tasks of the maintenance of forest industry.</p>
OPPORTUNITIES FOR POST-GRADUATE STUDIES	<p>After graduation and after about three years of a working life phase, the students of a Bachelor's degree programme can continue their studies in a Master's degree programme. The Master's degree at the University of Applied Sciences is a university level Master's degree. Students can also continue their studies by applying for courses such as, for example, the Master's degree programmes at universities or for an equivalent training course. After the completion of Bachelor's studies it is, of course, also possible to continue in foreign institutions of higher education on the Master's level degree programmes.</p> <p>The University of Applied Sciences also offers continuing education opportunities for specialisation studies, learning agreement type in-service training, as well as in working life based continuing education. If a student graduates from the Master's degree programme, he or she can get the opportunity to continue their studies in the scientific or artistic studies at universities (37 §/558/2009). All further studies must be applied for separately.</p>
OTHER INFORMATION	
HEAD OF THE DEGREE PROGRAMME	Matti Kurki, Head of Department, matti.kurki@jamk.fi, +358 (0) 40 5482230
PROGRAMME PLANNING PROCESS	<p>The aim of the Degree Programme in Paper Machine Technology is to produce engineers who meet the needs of business and industry, and the forest industry in particular. Based on this, the learning objectives in the degree programme have been defined on the basis of the current and future needs of business life, benefiting from the staff of companies, experts in the field, and public and prospective studies. The Head of Department together with the programme coordinator are responsible for</p>



	<p>monitoring the progress for planning the learning objectives for the Degree Programme in Mechanical and Production Engineering and for the management of resources.</p> <p>The preparation of learning objectives is performed by the working group, which consists of the teachers of the degree programmes. Members of the working group will negotiate with the representatives of business life in their competence area when it comes to the requirements of working life skills. The working group collects the learning objectives needed and determines them for the degree programme.</p> <p>Learning objectives are divided into competence areas and the competencies therein and included into the structure of the degree programme in the form of various courses. Learning objectives are reviewed in the Advisory Committee, which consists of business life representatives, student members, Head of Department and programme coordinator. The Advisory Committee will meet yet again to investigate the compliance of the structure of the degree programme to the skill requirements of the working life.</p>
SCHOOL	JAMK University of Applied Sciences School of Technology, Degree Programme in Paper Machine Technology Rajakatu 35, 40200 Jyväskylä
QUALITY MANAGEMENT	<p>JAMK University of Applied Sciences is using the quality management system that has been audited by the Finnish Higher Education Evaluation Council (FINHEEC). Education is developed on the basis of course feedback collected from students.</p> <p>In addition to course feedback, in School of Technology is used mid-term feedback based on which the teacher can make immediate corrective measures to their teaching. See more information in the JAMK's quality guide of School of Technology.</p> <p>The principles of the curriculum are approved by the JAMK University of Applied Sciences Academic Board and by the Vice Rector of the degree programme specific curriculum.</p>
PEDAGOGICAL PRINCIPLES	<p>The degree programme is implemented in accordance with the pedagogical principles established by the University of Applied Sciences Academic Board.</p> <p>For more information: http://www.jamk.fi/english/aboutus/facts/pedagogical-principles</p>
ETHICAL PRINCIPLES	<p>The students and employees of JAMK University of Applied Sciences operate jointly according to the accepted (by JAMK Academic Board on 15.12.2010) ethical principles. For more information: http://www.jamk.fi/english/aboutus/facts/ethicalprinciples</p>
LAST UPDATE	20.12.2012
CURRICULUM APPROVED	21.12.2012 Heikki Malinen, Vice Rector