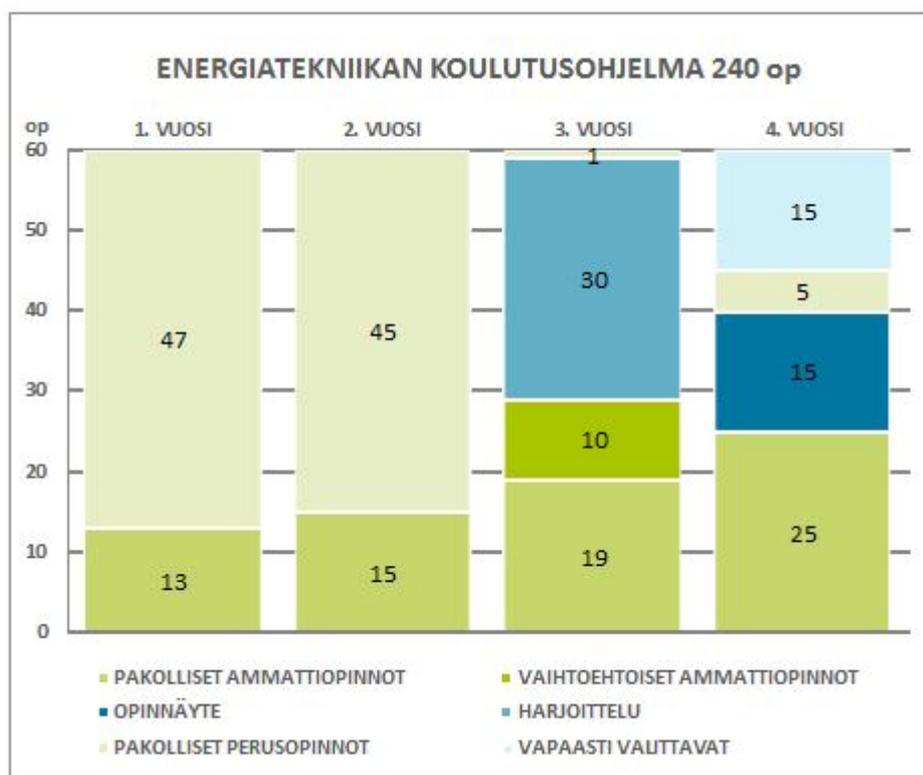




<b>GENERAL INFORMATION</b>	
<b>DEGREE PROGRAMME</b>	Degree Programme in Energy Technology
<b>PERIOD OF EXECUTION</b>	2013-2017
<b>SCOPE</b>	240 ECTS credits
<b>DESCRIPTION</b>	The Degree Programme in Energy Technology trains technology professionals to design and develop energy-efficient processes. These are the different processes for energy production, use and distribution.
<b>LANGUAGE OF STUDY</b>	Finnish
<b>CODE</b>	TTE13S1
<b>DEGREE</b>	Bachelor of Engineering
<b>DEGREE LEVEL</b>	National Qualifications Framework level 6.
<b>TARGET GROUP AND ADMISSION CRITERIA</b>	<p>The studies require an interest in technology and physical phenomena. See admission criteria: <a href="http://www.jamk.fi/koulutus/hakijanoppaat">http://www.jamk.fi/koulutus/hakijanoppaat</a>.</p> <p>Participation in the programme is applied for via the joint selection process.</p>
<b>STUDIES</b>	
<b>KEY LEARNING OUTCOMES</b>	The Degree Programme in Energy Technology is based on studies in Mechanical Engineering. Graduates have the capability to be able to apply modern technology in process and product design, product development, and in expert tasks that require energy technology skills. Typically, these tasks are defined by the process and technology industry, planning and consultancy firms, and in research organisations.
<b>PROFILE</b>	The skills achieved in the degree programme focus on energy efficiency for energy production and use.

## 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 key thematic areas of the studies are

- Energy Technology
- Process Engineering
- Mechanical Engineering
- Electrical Engineering
- Automation Engineering

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



	<p>(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> <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>
<b>ACCREDITATION AND RECOGNITION OF PRIOR LEARNING (RPL)</b>	The procedures for accreditation are described in the Degree Regulations and in the Study Guide.
<b>MODE OF STUDY</b>	The principle methods for performance of the studies are as follows: <ul style="list-style-type: none"><li>• contact study</li><li>• distance learning (eg. virtual learning, online studies)</li><li>• contact and distance studies</li><li>• independent study</li><li>• work-based studies</li><li>• additional description based on the specific form of education</li></ul>
<b>PROFESSIONAL GROWTH AND KNOW-HOW</b>	The first half of studies focus on the basics of energy technology and mechanical engineering. In the second half of studies, in the advanced and largely in the optional study modules, students focus on energy technology orientated study modules and acquire specific skills that are required in managerial and specialist positions.
<b>QUALIFICATION REQUIREMENTS AND REGULATIONS</b>	The profession does not have specific qualification requirements that are based on legislation.
<b>ADDITIONAL INFORMATION</b>	<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>
<b>GRADUATION</b>	<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>
<b>EMPLOYMENT AND FURTHER STUDIES</b>	
<b>EMPLOYMENT OPPORTUNITIES</b>	Graduates have the capability to be able to apply modern technology in process and product design, product development, and in expert tasks that require energy technology skills. Typically, these tasks are defined by the process and technology industry, design firms, and research organisations.



<b>OPPORTUNITIES FOR POST-GRADUATE STUDIES</b>	<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>JAMK University of Applied Sciences also offers continuing education opportunities in specialisation studies, in learning agreement type in-service training, and 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>
<b>OTHER INFORMATION</b>	
<b>HEAD OF THE DEGREE PROGRAMME</b>	Juha Isometsä, juha.isometsa@jamk.fi, +358 40 5283694
<b>PROGRAMME PLANNING PROCESS</b>	<p>The aim of the Degree Programme in Energy Technology is to produce engineers meeting the needs of working life. Based on this, the learning objectives of the Degree Programme have been defined on the basis of the current and future needs of the working life, benefiting from the staff of companies, experts in the field and public and prospective studies. The Head of Development together with the Head of the Degree Programme is responsible for monitoring the progress for planning of the learning objectives of the Degree Programme in Energy Technology 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 outcomes are divided into areas of expertise 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 representatives, student members, Head of the Department and the Head of the Programme. 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>
<b>SCHOOL</b>	JAMK University of Applied Sciences School of Technology, Degree Programme in Energy Technology Rajakatu 35, 40200 Jyväskylä
<b>QUALITY MANAGEMENT</b>	<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>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>



<b>PEDAGOGICAL PRINCIPLES</b>	The degree programme is implemented in accordance with the pedagogical principles established by the University of Applied Sciences Academic Board. For more information: <a href="http://www.jamk.fi/english/aboutus/facts/pedagogical-principles">http://www.jamk.fi/english/aboutus/facts/pedagogical-principles</a>
<b>ETHICAL PRINCIPLES</b>	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: <a href="http://www.jamk.fi/english/aboutus/facts/ethicalprinciples">http://www.jamk.fi/english/aboutus/facts/ethicalprinciples</a>
<b>LAST UPDATE</b>	20.12.2012
<b>CURRICULUM APPROVED</b>	21.12.2012 Heikki Malinen, Vice Rector