Decision Regarding the Assessment of the Engineering, Manufacturing and Technology Study Programme Group

TTK University of Applied Sciences

18/06/2015

The Quality Assessment Council for Higher Education of the Estonian Quality Agency for Higher and Vocational Education decided to approve the assessment report by the Assessment Committee and to conduct the next quality assessment of the Engineering, Manufacturing and Technology study programme group in the first and second cycles of higher education at TTK University of Applied Sciences in seven years.

TTK University of Applied Sciences submitted the following professional higher education study programmes for evaluation:

- Automotive Engineering
- Electrical Engineering
- Engineering Materials and Marketing
- Technoecology
- Mechanical Engineering
- Resource Management in the field of clothing and textiles
- Technical Design and Technology of Apparel

Assessment Committee

Paul Rullmann (Chair)	Chairman of the WTR, the Scientific Technical Council of SURF (Netherlands)
Sigurdur Brynjolfsson	University of Iceland (Iceland)
Johan Driesen	Katholieke Universiteit Leuven (Belgium)
Sven Anders Flodström	President of the Royal Institute of Technology (Sweden)
Karmen Kütt	Delft University of Technology, Student (Netherlands)
Eero Puolanne	University of Helsinki (Finland)
Jan-Eric Ståhl	Lund University (Sweden)
Madis Võõras	Enterprise Estonia, Innovation Division, Manager (Estonia)

The Committee's Comments on the Study Programme Group

Strengths

- *The study programmes address the needs of the labour market and companies; graduate employment rates are high.*
- *Employers are very pleased with both the theoretical knowledge and practical skills of the graduates.*
- *The academic staff, students and alumni are very pleased with the study programmes. An open atmosphere prevails at the University.*
- *Companies, students and academic staff collaborate on the development of study programmes.*
- *The website of the University is attractive.*
- *The University carries out contract research in its laboratories.*

Areas for improvement and recommendations

- *Student dropout rates are too high. Dropouts in the earlier years of studies need special attention. To decrease dropouts, the following measures could be considered:*

- *Advise students in their transitions from secondary or vocational school to the higher education institution, and to introduce a mentoring system;*
- *Introduce a test at the start of each course and an interim assessment at the mid-point of each;*
- *In order to increase students' motivation, start with projects beginning in the first year of studies;*
- *Apply team work from the very beginning of studies in order to increase the social cohesion of students;*
- *Further develop the distance learning options and make study programmes more flexible to allow students to combine work and study.*

- *Counselling and support of students should be made significantly more effective and their progress systematically monitored and analysed.*
- *The learning outcomes of courses should not only express technical outcomes, but should also describe the so-called soft skills as well as managerial and entrepreneurial skills.*
- *The study programmes should be more flexible and integrated to make it easier for students to change their specialty (which may help to reduce dropout rates). The study programmes should include more electives.*
- *Collaboration with companies and alumni should be formalized and structured.*
- *Research opportunities are scarce mainly due to underfinancing, and awareness of European R&D funding possibilities (especially of Horizon 2020) seems to be limited. The Technology Transfer Centre of the University should prepare projects and grant proposals to apply for funds from such sources.*

- *The academic staff must keep up with rapid technological developments and integrate them in both their courses and laboratory equipment.*
- *The University should develop strategies for comprehensive internationalization (including to improve English language proficiency of the teaching staff) and for better cooperation within the University as well as with other higher education institutions in Estonia and abroad. Student international mobility should be vigorously encouraged.*
- *To encourage internationalization "at home", some courses or syllabi of the entire semester in some programmes should be taught in English.*
- *Preparation of a marketing and communications strategy by which to offer lifelong learning and lab services to companies is recommended.*
- *Special attention is needed for visiting teaching staff (from both companies and other higher education institutions) and they need to be informed about the University's expectations for the content and scope of the teaching, teaching methods and learning materials.*
- *There are not enough learning materials at the moment. The teaching staff should be encouraged to produce new materials for the use of students as well as for companies.*
- *Legal aspects and regulations should be systematically addressed in the courses.*
- *Secondary schools and vocational schools should be better informed about learning options for students. Care must be taken that the information describes career opportunities for graduates in a realistic way. Social media should be used more effectively and to a greater extent.*
- *The contents and methodologies of the study programmes should be renewed in an organized way and in collaboration with all teachers.*
- *It is recommended that a strategy for (applied) research be developed.*
- *It is recommended that the criteria for a good teacher be defined and that teacher training be based upon these criteria.*

For further information:

Assessment Report

Minutes of the Session of the Quality Assessment Council (in Estonian)