

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

## Estonian University of Life 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 the Estonian University of Life Sciences in four years.

The Estonian University of Life Sciences submitted the following study programmes for evaluation:

- Biosystem Engineering Diploma of Professional Higher Education
- Technotronics Diploma of Professional Higher Education
- Engineering BSc
- Foodstuff Technology BSc
- Energy Application Engineering MSc
- Ergonomics MSc
- Meat and Dairy Technology MSc
- Production Engineering MSc

### 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 University is known in society as an educational institution where practice and theory are in good balance. Collaboration with enterprises and public authorities is good.*
- *Graduates have very good chances to obtain specialty-related jobs.*
- *The laboratories and other infrastructure are in a very good condition, well managed and well equipped. Financial support from the European Union Structural Funds has been expertly used.*
- *Due to the recruitment of young highly educated and motivated teachers, the average age level of the teaching staff is declining.*
- *The overall level of student support services is good.*
- *Several teachers actively use a problem-based technique and other alternative teaching methods.*
- *The ratio of academic staff's teaching workload to research workload is improving. The goal is to devote 40% of time to teaching, 40% to research and 20% to educational development.*
- *The proportion of academic staff holding a PhD has been increased.*
- *The students are provided with outward mobility opportunities.*

### **Areas for improvement and recommendations**

#### **Study programme and study programme development**

- *The University should offer more subjects, modules and study programmes in English within the study programme group to attract more international students.*
- *Soft skills, such as innovation, entrepreneurship and leadership, should be taught more extensively and better.*
- *Collaboration with alumni and employers, including their direct participation in study programme development, should be formalized and structured more clearly.*
- *More substantive feedback on courses should be asked from students and their role in study programme development should be defined more clearly.*
- *The proportion of compulsory subjects in study programmes is too large and the structure of programmes seems to fit teaching staff's demands more than students'. The study programmes should be made more flexible to offer the students more choices and take their different interests into account.*

### **Resources**

- *New laboratories should be used more effectively in teaching and learning and with this in mind revise the learning outcomes of the study programmes.*
- *The University should apply for more research funding, including Horizon 2020 funding. At the level of the University, as well as within a framework of international cooperation, a more professional approach to project writing and applying for research grants is needed. Individual approaches as opposed to cooperative grant proposals may not yield the best results.*
- *The University should also put more effort into getting Erasmus+ funding.*
- *It is recommended that the University prepare a long-term staff development plan for each structural unit.*
- *A strategy should be developed to address the declining number of students by:*
  - *better marketing,*
  - *increasing the number of international students,*
  - *closer collaboration with other institutes to prevent overlap and to increase synergy,*
  - *a review of learning outcomes of study programmes with an emphasis on the content and skills.*

### **Teaching and learning**

- *The use of modern online teaching technologies would enable students to better combine learning with working.*
- *The Institute should rethink its marketing principles for the study programmes and the choices available, as well as ensure a more internationally-oriented profile.*
- *Student applicants should be clearly informed about the requirements for completion of the study programmes and be made aware of possible future job profiles.*
- *A strategy should be formulated on how to better take into consideration the needs of part-time or distance-learning students, e.g. to make compulsory the compilation and follow-up of individual study plans.*
- *It is necessary to increase collaboration within the University as well as with other Estonian and foreign universities (primarily from Northern Europe).*
- *An internationalization strategy should be developed with regard to student and academic staff mobility in both directions.*

### **Teaching staff**

- *It is necessary to improve the quality of research of the academic staff by recruiting new teachers from outside (including foreign teachers) as well as by offering professional development programmes for the current teachers. The problem lies in the lack of or an overly conservative (non-innovative) use of human resources.*
- *It is necessary to define the criteria for a good teacher and to incorporate these in teacher training.*
- *More emphasis is needed on internationalization of academic staff (including on English language proficiency of teachers).*

### **Students**

- *Competition among applicants for many programmes is inadequate and high dropout rates are a general problem at the University. The main reasons for dropping out are not connected with difficulties in balancing work and studies,*

*but are due to loss of motivation or interest and also the difficulties encountered in mathematics and physics studies in the first year (primarily in the professional higher education programme). One reason for a loss of interest is that the study programmes do not meet student expectations and this implies that both student and applicant counselling services should be improved.*

- *Very few incoming exchange students from foreign universities study within the study programme group. The University is aware of the problem, but has not yet taken any specific actions to address this problem.*

Further information:

Assessment Report

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