



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

ALEKSANDRO STULGINSKIO UNIVERSITETAS

**STUDIJŲ PROGRAMOS**

*Miškininkystė (valstybinis kodas – 621D50001)*

**VERTINIMO IŠVADOS**

---

**EVALUATION REPORT**

*of Forestry (state code - 621D50001)*

**STUDY PROGRAM**

at ALEKASANDRAS STULGINSKIS UNIVERSITY

1. **Brian O'Connor** (team leader) *academic,*
2. **Prof. dr. Jose Antonio Bonet,** *academic,*
3. **Prof. dr. Jan-Erik Hällgren,** *academic,*
4. **Prof. Hardi Tullus,** *academic,*
5. **Dr. Kęstutis Armolaitis,** *representative of social partners',*
6. **Justinas Staugaitis,** *students' representative.*

Išvados parengtos anglų kalba  
Report language - English

Vilnius  
2014

## DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programmeos pavadinimas	<i>Miškininkystė</i>
Valstybinis kodas	621D50001
Studijų sritis	Biomedicinos mokslai
Studijų kryptis	Miškininkystė
Studijų programmeos rūšis	Universitetinės
Studijų pakopa	Antra
Studijų forma (trukmė metais)	Nuolatinės studijos (2 metai) Ištęstinės studijos (3 metai)
Studijų programmeos apimtis kreditais	120
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Miškininkysės magistras
Studijų programmeos įregistravimo data	<b>1997 m. gegužės 19 d.</b>

---

## INFORMATION ON EVALUATED STUDY PROGRAM

Title of the study programme	<i>Forestry</i>
State code	621D50001
Study area	Biomedical Sciences
Study field	D500 Silviculture
Type of the study programme	University studies
Study cycle	Second
Study mode (length in years)	Full-time (2 years) , part –time (3 years)
Volume of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master of Forestry
Date of registration of the study programme	<b>19 May 1997</b>

© Studijų kokybės vertinimo centras  
The Centre for Quality Assessment in Higher Education

## CONTENTS

<b>I. INTRODUCTION .....</b>	<b>4</b>
1.1. Background of the evaluation process.....	4
1.2. General.....	4
1.3. Background of the HEI/Faculty/Study field/ Additional information.....	5
1.4. The Review Team.....	6
<b>II. PROGRAMME ANALYSIS .....</b>	<b>6</b>
2.1. Programme aims and learning outcomes.....	6
2.2. Curriculum design .....	9
2.3. Teaching staff .....	11
2.4. Facilities and learning resources .....	13
2.5. Study process and students' performance assessment.....	15
2.6. Programme management .....	17
<b>III. RECOMMENDATIONS .....</b>	<b>20</b>
<b>IV. EXAMPLES OF EXCELLENCE (GOOD PRACTICE).....</b>	<b>22</b>
<b>V. SUMMARY .....</b>	<b>22</b>
<b>VI. GENERAL ASSESSMENT .....</b>	<b>25</b>

## I. INTRODUCTION

### 1.1. *Background of the evaluation process*

The evaluation of on-going study programmes is based on the **Methodology for evaluation of Higher Education study programmes**, approved by Order No 1-01-162 of 20 December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC).

The evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: 1) *self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter - HEI)*; 2) *visit of the review team at the higher education institution*; 3) *production of the evaluation report by the review team and its publication*; 4) *follow-up activities*.

On the basis of external evaluation report of the study programme SKVC takes a decision to accredit study programme either for 6 years or for 3 years. If the programme evaluation is negative such a programme is not accredited.

The programme is **accredited for 6 years** if all evaluation areas are evaluated as “very good”. (4 points) or “good” (3 points).

The programme is **accredited for 3 years** if none of the areas was evaluated as “unsatisfactory” (1 point) and at least one evaluation area was evaluated as “satisfactory” (2 points).

The programme is **not accredited** if at least one of evaluation areas was evaluated as "unsatisfactory" (1 point).

### 1.2. *General*

The Application documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document

### ***1.3. Background of the HEI/Faculty/Study field/ Additional information***

The Aleksandras Stulginskis University (hereinafter referred to as ASU) is the only Lithuanian University awarding all the academic degrees, namely PhD, MSc and BSc levels in the fields of agriculture, forestry, food sciences, water and land resources management, bio energy and mechanical engineering, climate change and sustainable use of natural resources. The academic offer of the ASU meets the requirements of the European Higher Education Area covering other areas of knowledge such as biomedicine, technologies and social sciences.

The mission of the University (approved in 2011) is to create and disseminate scientific knowledge, striving for safe and healthy food and full-fledged living environment for every citizen of Lithuania. At the end of 2013, over 4500 students were enrolled in ASU, while the teaching staff and research staff were 340 and 52 persons respectively.

The Master in Forest Science (second level University study programme in Forestry), is administered by the Dean's Office of the Faculty of Forest Sciences and Ecology and coordinated by the Institute of Forest Biology and Silviculture and the Institute of Forest Management and Wood Science. Other institutes, organisations and companies are also involved in teaching, information and supervision of students.

The study field - forest sciences- has during recent year's undergone large changes in Lithuania as well as in other universities in Europe. The changes have been due to developments in the forest sector and in the society as a whole. Forestry is of economic importance for the country and for employment and there is at the same time more emphasis on the role of forests in the society, greater interest in environmental problems, such as global change and biodiversity and also a focus on landscape and recreational values. Technical development leads to new effective machinery and new possibilities to measure, survey and plan operations. The subject area has been broadened very quickly and is still rapidly developing. Education in "forestry" has grown into an interdisciplinary subject incorporating many scientific disciplines, beside traditional forestry subjects (Silviculture, Tree Physiology and Genetics, Forest Operation and Engineering, Forest Management, Forest Assessment and Modelling, Forest products, Social aspects of forests, Forest health, Forest Policy and Economics). For example it also now includes ecology, soil science, environmental science, geo-science, bio-engineering, wild-life, and recreation to name a few. Hence the universities have had to adjust their forest-related curricula and at the same time shift their teaching from intensive lecturing to learning and focus more on output and problem solving. Generic skills, such as ability to analyse problems, transferable skills, such as communication, are needed in addition to deep subject knowledge. The education is based on science with a focus on decision making in the forestry sector in its broadest sense. Education is also practically oriented and anchored in well documented experience. The Lithuanian educational system is harmonising with the Bologna process. In the whole of Europe, new Master programmes in forest sciences have been launched and the necessity to intensify cooperation between countries has been realised. ASU offers a Master in forestry with a broad and interdisciplinary approach that build on studies in the first level with a broad forest science base. This Master programme is analysed for the first time by an international review team.

The Lithuanian Quality Agency SKVC has organized the external evaluation of the Master of Forest Science. Based on their rules, a Self-Assessment was conducted and a report was prepared by a Self-Evaluation Team of eight persons who are directly involved in the programme.

#### **1.4. The Review Team**

The review team was completed according *Description of experts' recruitment*, approved by order 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on 22<sup>nd</sup> October 2014.

- 1. Brian O'Connor (team leader)**, *independent consultant in education, former Head of School of Business and Social Studies at the Institute of Technology Tralee, Ireland.*
- 2. Prof. dr. Jose Antonio Bonet**, *professor at the Department of Crop Science and Forest Science, University of Lleida, member of the Board of European Forest Institute, Spain;*
- 3. Prof. dr. Jan-Erik Hällgren**, *professor emeritus of Department of Forest Genetics and Plant Physiology, Faculty of Forest Sciences at Swedish University of Agricultural Sciences, Sweden;*
- 4. Prof.dr. Hardi Tullus**, *Professor of Department of Silviculture, Institute of Forestry and Rural Engineering at Estonian University of Life Sciences (Estonia);*
- 5. Dr. Kęstutis Armolaitis**, *Chief researcher at the Institute of Forestry, Lithuania;*
- 6. Mr. Justinas Staugaitis**, *master of study programme "Environmental Engineering" at Kaunas University of Technology, Lithuania.*

## **II. PROGRAMME ANALYSIS**

### **2.1. Programme aims and learning outcomes**

The review team is very satisfied with the aims and learning outcomes of this master programme in forestry at ASU. ASU has a unique position among universities in Lithuania as the only provider of a master programme in forestry. The aims and learning outcomes are well suited to the needs in the Lithuanian society. The aims and learning outcomes are well defined, clearly explained and publicly accessible. It is possible to find information about the programme on internet. It was understood by the review team that aims and learning outcomes are understood and strongly supported by students and stakeholders. ASU interacts with stakeholders in the society and the information and feed-back process seems to be very well established and functioning.

The learning outcomes are defined by the overall aim and the partial aims. The learning outcomes are expressed as knowledge and application, research abilities, special abilities, social abilities and individual abilities. This is a modern approach and it is evident that the Faculty in all subject areas in the master programme have the objectives to give the students good possibilities to reach learning up-to-date outcomes.

The aim stated for the programme is: "The aim is to equip the masters of forestry science with the fundamentals of methodological and systematic thinking, with the knowledge of

contemporary forestry technologies and forestry science theories and methods". The aim is presented on the Faculty and University web sites.

The master programme at ASU has the aim to provide both theoretical, technical, and professional training mixed with training for certain abilities. To achieve a good balance between these subjects is complex. The review team noticed that the balance between practical training and theoretical studies were thought through and found that the balance was good and well in line with university studies in other countries in this subject area. The review team concluded that the aims to equip students with fundamentals of methodological and systematic thinking combined with knowledge of contemporary forestry science, technology and methods are well met by this programme.

A strength for ASU is its 90 years long tradition in the forestry science area. This programme is built on interactions with professionals in the forestry sector, with academics in forest sciences, with students, teachers and stakeholders to build up a vision of a modern master programme in forestry. The Faculty and its partners have long experience and are well aware of what is needed. A challenge for ASU is, and was, to create a learning environment that closely mimics real work conditions in today's organisations and at the same time give deep scientific insight into core areas and prepare the students for the unknown and changing future. The Committee of the study programme of Forestry has organised the continuous ongoing update of the programme very well.

The Faculty has developed a broad forestry programme, based on science and practical training, and forms of studies that also give students general and methodological skills. Students will with this master programme get very good possibilities to achieve a good combination of relevant knowledge, abilities and values. The review team was pleased to see this and also that the aims and learning outcome harmonized with the development of forestry education internationally, especially in Europe. A continuing discussion concerning the balance between subject areas and generic and methodological competences, as well as practises and skills is expected to be ongoing and is encouraged by the reviewers.

The review team also note the good international links of the university with other universities abroad. It is important that the educational programmes are compatible in different countries. It is a prerequisite for international cooperation and a possibility for increased harmonisation of learning outcomes in this field. Therefore the international arena must be taken into consideration when changing the programme.

It can also be concluded that student exchange between programmes in Europe is one of the aims of the Bologna process. This exchange will most probably increase in the future. The review team noted that ASU students in forestry programmes in other European countries were successful in their studies and that their competencies were at the same level as other European forestry students. It is hence obvious that the programme is fully compatible with other programmes internationally and that it is recognised and can lead to a double diploma with the Swedish University of Agricultural Sciences.

A second cycle study programme like this Master programme cannot cover all possible requirements and aspects in the forestry sector but it should together with the competences acquired during the first cycle reach a deeper level.

Employability is one of the goals in all educational programmes in the Bologna system and this programme is no exception. As was described in the self-evaluation report, the ASU-students eventually get an employment with the current studies. Since employability corresponds to having qualities that facilitate and improve employment opportunities i.e. good knowledge, necessary skill and abilities to work in the sector, the conclusion is that the programme provides a good example of a qualified academic education. Obviously, the education corresponds to needs in the labour market. The time it takes for a graduate to get an employment is always dependent on the economic situation but also on the numbers that are educated in the area. The review team suggest that ASU and the faculty carefully monitor student intake and employment

and suggest that the University does not increase student numbers for the programme. The review team conclude that expected competencies are met very well, and that the master students are attractive to hire in the forest sector in Lithuania.

The support for the programme that the review team met from students, alumni and stakeholders was very strong. This type of support is a very positive factor for the programme. An excellent interaction with the forest sector, the Institute of Forestry of LRCAF, the Ministry of Environment, Lithuanian Academy of Science and the State Forest Management Institute and other stakeholders is strength. The review team notice that relevant partners are involved in the design, updating and management of the programme. This is a form of guarantee that competences that are required will be included in the programme. This system should be kept.

Today the name is; Master in Forestry and the name corresponds well with the content and also with expected qualifications.

*In summary the programme aims and learning outcomes are very well presented both for students and stakeholders and they are most appropriate for studies in a master programme in forestry. It is a good base for continued doctoral studies in the area.*

- *The aims reflect and are in line with professional requirements. The programme name, aim and learning outcomes and content of the programme are all compatible.*
- *The programme aims and learning outcomes are based on academic and scientific as well as on professional requirements. Public needs and the needs for forest management and forest sector labour market are also very well met.*
- *The learning outcomes are very well integrated in the programme contents.*
- *The learning outcomes give a broad knowledge in forest science and forestry and at the same time provide graduates with important generic, methodological and transferable skills.*
- *The programme aim and learning outcomes has a good balance between scientific and practical skills.*
- *The education leads to employment in the forest sector in Lithuania and also in other enterprises.*
- *The learning outcomes of the programme are modern and harmonise with the Bologna process and give good opportunity for internationalisation. Graduates reach the same level of competences as in other European universities.*
- *There exist good international links to other universities and programmes, and the education has been recognised internationally. Students from the programme can successfully participate in international study programmes in the forestry science sector.*
- *There is a strong support for the programme from both students and alumni and a good interaction with State Forest Management Institute, Ministry of Environment Lithuanian Academy of Science, the Institute of Forestry of LRCAF, the industry and other stakeholders, and this is strength for the programme.*
- *The review team is very satisfied with the aims and learning outcomes of the programme. The aims and learning outcomes are clear, well formulated and represent a very good balance between scientific knowledge in core subject areas and generic and methodological skills.*



## *2.2. Curriculum design*

The curriculum design meets all legal requirements. This is the only curriculum in the country that leads to a Master degree in Forest Science. After the changes in 2011, the curriculum design has been adapted to the European credit transfer and accumulation system (ECTS) with 120 ECTS. The final thesis corresponds to 30 ECTS. The websites of the university and faculty have all the details of the programme curriculum.

The Faculty with its Committee of the study programme of Forestry has chosen to have a number of compulsory subject areas (60 ECTS) and groups of optional study subjects (24 ECTS) plus the prescribed subjects for preparing for PhD studies or professional activity (6 ECTS). Students study a maximum of 5 study subjects during a term. The mandatory subjects are deepening the knowledge from the Bachelor level. The study subjects are spread evenly and all correspond to 6 credits. The compulsory subjects of high problematic or innovative scientific level are fairly broad, and are designed to be broad. In line with that, peatland science could have been replaced with a broader subject area, such as soil science. To introduce new subjects is always problematic. Sanitary forest protection was suggested by the self-evaluation team. However, (sanitary problems) i.e. forest health could also be a part of for example ecological sustainability or silviculture. If the number of credits per subject area were more flexible it might be possible that some of these problems could be solved.

There are advantages and disadvantages with the design of the curriculum. The trend in Europe is not uniform but more universities in Europe change to organise subjects into more concentrated blocks, similar to doctoral studies. This has the advantage that the study is concentrated in one area and then assessed. Blocks can easily be of different sizes, which is an advantage. Students can take a course together with students that are not studying full time. This will then allow for more students in the lecture class at the same time, hence an economic argument. It also has the advantage that it simplifies cooperation between universities. Students can for example take a 5 credit course in another country and return after a few weeks. However, ASU has tested both models and the teachers seem to prefer the current curriculum as expressed during the meeting. Some students though had a different opinion during their meeting with the review group. The design of the curriculum i.e. to introduce block courses should be analysed and discussed in the Forestry Study Programme Committee.

The second cycle in forest science builds on knowledge and skills from the first cycle or equivalent from other educational programmes. The knowledge should be deepened at the master level. It is deepened in this programme, scientifically and in other ways with a demand for new knowledge and skills. However, the basic knowledge and skills that are needed to enter some of the courses in the master programme are not clearly expressed. It is for example too vague, “to have listened to”, or “to know plant..”, or too unclear “..are desirable” or not informative enough since only mandatory courses in the master programme is mentioned as prerequisites. All prerequisites for courses should be clarified by the responsible teachers.

Generic skills and methodological competences are considered important parts of the curriculum. The review team was pleased to see active teaching methods to stimulate creativity and general social competences. These skills are needed and it is positive too see that it is actively included in the curriculum of the master programme. Development of skills enabling graduates to tackle new complex problems has generally been sought for. At the master level it is expected that the level of the skills should be higher than earlier and clearly expressed and understood. The review team was very pleased to hear from teachers and students during meetings that generic skills were practised and that the demands were increasing during the master studies. Obviously there was a master plan for developing generic skills. The review team found this very good, and concluded that the development of generic and methodological skills and the also demands on students should be more visible in the curriculum.

In a two cycle programme there might be some overlap, and some students indicated that this happens also at ASU. In pedagogy it is often said that repetition is important for learning. Repetition of the same subject without problematizing the area or deepening of the understanding is not intentional from teachers. In multi-disciplinary studies like forestry it is almost inevitable that the students will come across teachers that take up the same problem area. Hopefully, they will meet views that emanate from different scientific theories and different background. This can in best cases improve critical thinking among students. The review team did not find any remarkable overlaps between courses at the bachelor level and master level or between different master courses. Communication between teachers in different subjects that discuss the same problem areas can always be improved. The review team therefore recommend teachers to meet before the start of the term (semester) and discuss programme content and problems that can occur, such as overlap.

The modules and content is consistent with the type and level of studies, but the balance between different modules and alternative content and modules can always be analysed and discussed. Both Mathematical and Statistical Methods in Forestry and Methodology in Forestry has been chosen as mandatory courses. Basic subject areas such as mathematics, statistics etc. could also be covered earlier in the 3 +2 years long education. Students in forestry should learn mathematics and statistics as early as possible. The subjects can be practised and integrated in e.g. in forest mensuration, -economy, -genetics, and -ecology. Methodology in forestry is to some extent also needed at the bachelor level as well as knowledge in statistics. The review team recommend that the Forestry Study Programme Committee analyse the volume and structure of subjects that are similar at bachelor and master level.

The review team concluded that the content and methods correspond very well with intended learning outcome. Stakeholders are involved in the design and updating of the programme on an *ad hoc* basis. The review team recommend that relations with social partners should be organised on a more systematic basis. The programme has traditions, subjects and courses have been given before, teachers are experienced and content, form and methods have developed that suits most students very well. This is an important part of the success of this master programme.

There are some difficulties with a broad and interdisciplinary programme. If less than 6 students select an optional study subject they face a new situation. Seminars and practicums are replaced by consultations and the contact work decrease by 50 percent. The self-evaluation team suggested that an acceleration of the implementation of remote learning methods should be one of the ways out. The review team fully agree with this conclusion. The review team also want to point out that not only students with optional subjects but also part time students would gain very much if the Faculty could offer much more learning material on the net. It is strongly recommended by the review team that the faculty accelerate innovative teaching methods such as e-learning. Lectures, study material, problem solving materials, information etc. can easily be produced. This will eventually benefit both students and teachers. It will also be beneficial for international exchange since the material is easy to present with translation. The programme is already wide and with increased international cooperation there will be even more subject areas to consider in a curriculum in the future. International partners may have a similar curriculum design or a different system and therefore a maximum flexibility is needed. Hence, e-learning techniques are expected to become more important and should be developed.

The review team also noticed that not only students but also alumni were interested in updated courses. This can preferably be short courses or net based courses. It is also recommended by the reviewers to create summer courses, for example dealing with special subjects like for example fire-risk and fire-protection.

The scope of the programme at 120 ECTS is sufficient to ensure learning outcomes. Of that 30 ECTS is for the thesis work. This is a minimum of what is required. Taken that into consideration the review team was pleased to see examples of very good quality of master

theses. The high quality is a result of good planning and professional job from teachers and supervisors and intensive hard work of students that kept the deadlines.

The review team conclude that the master programme provides very good knowledge in forest science subject areas. It covers the latest theories and technologies, methodological competences and is complemented with ability to identify, analyse and integrate data and critically interpret data/results. All this can be achieved with the current curriculum. The ultimate goal of the programme is to offer the latest in science, art and technologies. It must be understood that to achieve this is not a simple task and probably no university can give all students the latest in science, art and technology all the time. This is especially difficult task in a broad inter-disciplinary subject area as forestry. From what the evaluation team learned from the visit it was obvious that the outcome varies between different subject areas. Based on observations and recommendation of literature and books and publication dates of the literature, some updating will be needed. This is noticed especially with the foreign language literature. Another remark is the balance between foreign language literature and Lithuanian literature. With a more international education and more students attending international courses, international literature will be more important in the future. It must be stated that the evaluation team was very pleased to see that the master theses in general also included up-to-date international literature references.

*In summary the curriculum design meets the legal requirements. The spread of the subjects is in line with required knowledge in forestry sciences. The curriculum design also meets expected demands for generic and methodological skills.*

- *The content of the programme subjects is consistent with the type and level of studies in Lithuania and internationally. The mandatory subjects are well chosen and continuously updated.*
- *The strength of the programme is its coupling to partners in the society.*
- *The scope of the programme is met with a curriculum that offers a broad knowledge in forestry sciences and good possibilities for generic and methodological skills.*
- *Relevant stakeholders are involved in design, updating and management but it is suggested that relations with social partners could be organised on a more systematic basis.*
- *The strength of the master programme curriculum is its interdisciplinary nature with a sound focus on science coupled to practical problems and employability.*
- *There are possibilities for selecting optional courses for student, with some restrictions*
- *It is recommended that the programme team continue to develop courses with international connections.*
- *It is recommended that the programme provider has an increased focus on international literature.*
- *It is recommended that the faculty implement more e-learning and courses on the net both for Lithuanian students but also for English speaking persons.*
- *The development in society, in forest science and in the forest sector with the need for continuous learning also calls for an increased interest from the academic partner with good knowledge in the area to form new courses and update courses also for alumni.*

### **2.3. Teaching staff**

The qualifications of the staff of 28 teachers are adequate to ensure the learning outcomes. More than 85 percent have a degree as doctor of science. Eleven persons are professors, five are associate professors and eight are lecturers. The number of professors has increased lately.

The majority of the teachers do their research in relevant areas where they also teach (90%). Some of the teachers are persons invited from the Institute of Forestry in Kaunas and specialists in different forest subject areas. Thus the absolute majority of teachers a student will meet at ASU are active researchers. It is natural that they talk about the research that they are most familiar with. Even if the research area only covers a more specialised part of a subject area the researchers are generally very familiar with the whole subject area. If not, they are well trained and have the ability to seek relevant information about the subject and also to present that for students. The teachers are involved in research directly related to the study programme and they act as supervisors of these work.

The number of teachers is adequate for the programme with 86 students (36 full-time). It can be concluded that the students face a good situation. The more experienced teachers are certified and some professors and senior lecturers are also used as coordinators. The qualifications of the teachers comply with requirements for master degree programme teachers.

The teaching staff in the programme is, as a group, statistically getting younger every year. This can be interpreted as a positive sign, younger teachers with new knowledge replace older men, (the gender of older generation is usually men). At the same time the master programme will lose persons with a broad knowledge and experience. The mean age is not a problem. The spread between younger and older teachers is also quite normal. The teaching experience is 12,8 years and for natural reasons longest among professors ( 19,9 years) and shortest among assistants (1,7 years). The challenge is to ensure that new teachers can be given good prospects for the future and possibilities to develop as teachers and scientists.

The evaluation team was pleased to see and hear that beside Lithuanian teachers also a number of international teachers were invited -two on a regular basis, and the others *ad hoc*. This exchange was also positively received by the students. The recommendation from the review team is to continue and even to increase the number of invitations of professors and teachers from abroad. This exchange has several advantages. Experienced persons with background from other arenas will provide new information, insights and experience of problem solving that not is feasible to find in books or by Google. International teachers will in most cases introduce new aspects, knowledge and literature. An active exchange programme will allow Lithuanian teachers to visit other universities abroad. The University could also consider establishing teaching posts to be filled by professors from abroad. With an increasing international cooperation it is also necessary that ASU creates conditions for the staff to start to develop courses also in foreign languages.

The review team was impressed and pleased to see that ASU has adopted a good system for motivation of staff and development of teachers. Teachers also had possibilities for sabbatical leave. Also shorter visits abroad were used and encouraged by the faculty. A system that could stimulate teachers to make shorter visits abroad which will enable possibilities to come across new ideas, methods and concepts both in research and teaching is a very good initiative indeed. The teachers are in close liaison with foreign colleagues. More than half of the number of programme teachers have recently upgraded their qualifications abroad. The review team strongly support continuing efforts in this direction to strengthen teachers' skills in science and teaching.

Pedagogic skills are generally needed and asked for among teachers. The situation is common for all universities all over the world. The pedagogical qualifications must always be upgraded and pedagogical skills of teachers are the most common complaint from students. The situation at ASU is hence not an exception. The review team learned from the self-evaluation report and from the discussions with students that increased education in pedagogy was a priority. Development of pedagogical competences has been ongoing at ASU and teachers have participated in pedagogic training also at other universities. A certification system is in place. This is all very good. However, the gain for the experienced teachers is not always obvious. For them the question is often if it is better to do more science or to upgrade pedagogical skills. It is

recommended that ASU should have a programme where active teachers get some sort of obvious reward for their efforts to become better teachers. Higher salary was suggested by the teachers.

The second area where teachers in general would like more knowledge is in the use of modern IT. When e-learning becomes more frequent all teachers need to get familiar with new e-learning techniques. The students generally know more than older teachers in this area and this is not always beneficial for the education. The recommendation from the review team is thus to find programmes that stimulate teachers to improve their pedagogical - and IT skills and at the same time create incentives to get teachers to participate and upgrade their competences.

Some younger teachers may need more practical work experience and some sort of work experience exchange programme with enterprises in the forest sector can be one possibility. To invite specialist-practitioners as teachers in the programme is of course recommended to continue with. Professional foresters also act as teachers. The evaluation team found the blend of scientific and practical views, very well balanced in the programme.

For academic teachers to reach top level positions in the university a combination of excellent scientific work and pedagogic skills are necessary. Scientific experience is very important also for teaching and teachers must have the ability to do scientific work. The review team find this of importance and suggest that teachers should be even more encouraged to participate in international scientific projects. An active Helpdesk at ASU could be of value since the European research programmes offer possibilities.

*In summary, the programme has a highly qualified staff and meets all legal requirements.*

- *The teaching staff is to a high degree active as researchers and ensure a good academic education based on science. We consider the research and coupling to research as strength for the programme.*
- *The review team was pleased to see the support from ASU to teachers and researchers to go abroad and recommend a continuing programme of development.*
- *The review team was pleased to see an active internationalisation and recommend expanding the exchange programme with foreign universities. Both shorter and longer visits, for visiting teachers and for teachers to go abroad, should be continued and even increased.*
- *The teachers should be given good possibilities to develop professionally with pedagogical training and increased method training in information technology.*
- *The staff should be encouraged and helped to be able to participate in European research programmes.*

#### **2.4. Facilities and learning resources**

The faculty uses premises in the central building and in building 6 and 7. The facilities in 6 and 7 are newly renovated and modernised (2010) or new built and up-to date, with some exceptions where the buildings are not new but still in good condition. Some buildings need to be adjusted for access for disabled persons. The long term plan to renew facilities has so far been successful. The students can also choose to live in the residences of the University. This is of importance for students who, like many forestry students, come from the countryside and not from the city.

The students have good and up to date wireless equipped rooms, and class-rooms with modern computers, projectors and internet access. There are also some classrooms that are designated for special purposes, and also e.g. computer labs which is very good for students. There were adequate rooms for group studies and reading rooms where students could study undisturbed. The students have good access to field studies e.g. in the Arboretum. There are also good possibilities for field studies, especially in Kazlu Ruda Training and Dubrava Experimental

and Training Forest Enterprises. The students also have opportunities to prepare their final theses at the Institute of Forestry of LRCAF.

The teaching and learning equipment that the evaluation team had possibilities to see were new and adequate. The laboratories, for example in forest genetics, are excellent. Modern equipped laboratories of Valley Nemunas are open for students and teachers in their scientific work. The only remark is that some of the equipment is very advanced (and expensive) and may require help from technical assistance. The review team recommend the faculty to analyse the future requirement for technical assistance for students.

Some of the students complained about low capacity of some computers, but the evaluation team was told that these were to be replaced the week after the visit.

The evaluation group did not meet any students or teachers that complained about facilities, equipment, laboratories or learning resources. The premises for studies are definitively adequate at ASU, both in size and quality.

The University has made adequate arrangements for students practice. Some students asked for more practise but the majority of students expressed that they were satisfied with the situation today and did not want to expand the practical training. The evaluation team found that the balance between theory and practise was well thought through. The problem with practice for a master student is generally coupled to the work with the thesis and it is of importance that the students get started in time. This has also been emphasised by the teachers in the programme and the situation is improving.

Master students have a greater demand for international literature then students at the first level. The newly renovated library offers good possibilities. However, literature in foreign languages for students, especially in English, is limited and should increase. Today, almost all literature is electronic and ASU must guarantee that the library has access to English student literature, international journals and databases. The experience from other countries is that this is becoming more and more expensive, and hence must be included in future budgets for the Faculty and University. Students also need study material in other forms, i.e. databases, and special programmes. It is available in the library (or elsewhere), if planned in time.

Students also request more and more e- learning material on the net. However, even if the situation is improving, there are still study subjects that do not adapt to studies in virtual environments. The Moodle system is used but according to the students it could be more efficiently used.

*In summary ASU offer very good facilities and learning resources for students in forestry.*

- *New or newly renovated buildings with modern class-rooms and rooms for special activities are well designed for studies.*
- *Students have very good access to Arboretum and very good possibilities for field studies.*
- *Students have possibilities to use modern equipment and have good access to computers and internet which give good premises for studies.*
- *Students have access to well equipped and modernised laboratories (e.g. Nemunas) but may need more technical assistance to handle the advanced equipment.*
- *The library offer good possibilities for studies*
- *There is a need to increase the international literature both books and journals especially in English ( this will be more expensive for the library in the future).*
- *The review team suggest that ASU should pay attention to access for disabled persons.*

## ***2.5. Study process and students' performance assessment***

The rules for programme admission are common to all universities. The admission requirements are well-founded and handled by the Senate. Fifteen students (both full time and part-time) were admitted to the programme. There were 2.5 applicants per place. Admission to the programme requires completion of bachelor studies or completion of college (professional bachelor) followed by one year professional experience and completion of bridging courses in the field of forestry. The review team found this solution very good, since it can take care of all interested students with good basic knowledge.

The review team also looked at the number of applicants and the number that successfully completed the programme. After discussions with students and teachers the conclusion was that the number of admitted students is well balanced and the recommendation is not to increase the intake to the programme at this stage. The review team is convinced that monitoring of student interests and the labour market will continue and serve as a basis for future decisions on the volume of students in the programme.

The high percentage of students' success in completing the programme is good and a result of high motivation of the students. Some of the part-time students already work in the forest sector and they have a high motivation to finish their studies. The organisation of the study process thus seems efficient and not an obstacle for part time students. The students were very pleased with the organisation of the studies and also expressed that teachers were very helpful. If there were any problems the Dean's office was very helpful and efficient. The Rector approves the academic calendar and the Dean of the Faculty is responsible for the course schedules. ASU has a system of monitoring the progress of students. Midterm assessment is performed for all courses. Internal meetings evaluate the results and personal interviews with the less advanced students are the next step. Measures for correcting the detecting problems are established as a final step in the process. It can be concluded that forestry students are very well looked after and helped by the programme providers.

The master programme as a whole is evaluated and analysed in different processes both by internal and external evaluations. These evaluations usually lead to adjustments of the programme. Recommendations for improvements from students, teachers also play a central role. Stakeholders have possibilities to express their views on the programme and this can also influence the design and content of the programme

A relatively high number (approx. 44 to 62% of full time studies last years) of students can get some economic support from the system with scholarships, memorial scholarships and social grants. Nevertheless, some students have a problematic economic situation and sometimes need to work. This can be a reason for the failure of some students. It is natural that students expressed a wish for more scholarships and social grants with higher amounts of money.

The forestry students are very satisfied with the studies and also with the possibilities that are given for their social interests. One such example is the possibilities to get a hunting licence. Many of the forestry students come from small villages and are familiar with and interested in wild-life and hunting and this is also studied in some courses. Another example was the possibility to learn to drive a tractor. The review team found that ASU ensures a very good level of social support for students.

Students in the master programme were offered both academic and social support. Students at the master level are supposed to be willing to do research, since many of them study the second cycle because of their scientific interest. Therefore, the students are generally easy to encourage to participate in applied and/or basic research. From the discussion with students it was clear that students were encouraged to do research. The contacts from researchers were mostly on a personal basis and it was not clear if all students were approached with exactly the same offerings. All students that the review team met were pleased with the possibilities and

support that the faculty provided. The part-times students will have more difficulties for natural reasons, but no complaints or negative judgements were put forward from students. It is concluded by the review team that the Faculty of Forestry Sciences and Ecology ensures a very good academic support for students in the master programme.

Another example of this is the opportunities to participate in student mobility programmes. Students at the master level have better opportunities and are generally more motivated to participate in mobility programmes than at the bachelor level. Some of the students that the evaluation team met had participated in such programmes. Most of them were very pleased with this opportunity. However, the numbers of master students that participate in mobility programmes are limited. The evaluation team was pleased to find out that the department of internationalisation at ASU was very active and stimulated international exchange. A good system for internationalisation seems to be in place but ASU should consider getting students more involved in the future to increase the exchange.

Increased exchange will mean that the University has attractive offerings in place for foreign students. The good facilities and premises at ASU and in Kaunas will help. There are relatively few foreign students that studied in the master programme. The Faculty participates in international exchange programmes and students are supported by the Department of International Relations. The participation from Lithuanian forestry students is too small (8%). If the students were organised in a Forestry Student Union, their possibilities should increase. They should be welcomed by the International Forestry Student Association (IFSA). The reason not to participate in exchange programmes is first of all the language barrier. This can easily change if Lithuanian forest science students could be encouraged to visit other universities and also to read more English texts. The review team will encourage continuing efforts to stimulate international exchange and also courses in English. The economic barriers cannot be ignored but the students should be encouraged to seek European mobility programme support. It is concluded that ASU and the Faculty must continue with its active internationalisation.

According to employers and graduates it does not take long to get an employment - from 0,5 to 1 year. In 2013, 76 percent had a job in Lithuania 6 months after graduation. However, where employment is concerned, it is obvious that the economic situation is a factor to consider as well as the number of graduates studying in the third cycle (doctoral level). This corresponds to 9 percent, a normal figure in international forestry faculties.

The assessment system of students' performance is clear, adequate and publicly available. The grading system is similar (0-10) in all study subjects. The results are published on the website. How the final grade is determined is clearly reported. The course content is specified and clearly explained. Exams are either oral or in written form. The exam assessment procedure is very well documented. Students' appeals are regulated. The final thesis is defended in front of a mixed Committee headed by a scientist from another department. The assessment procedure is a system that is secure and well executed. It is understood by all partners, and has support from students and stakeholders. The system is in line with norms and regulations in Lithuania and also in other European HEI's. The review team has concluded that the theses were generally of very high quality. The average final grades 2013 are high and correspond to 8.52 and 8.35 for full time and part time students, respectively. It is concluded by the review team that the assessment system works very well. The assessment system is clear, adequate and publicly available.

The programme has undergone changes due to input from several partners. The programme providers are very proud of the evaluation of the graduates and point at figures well above 4 in a 5 degree scale. This is a very good result. The evaluation team was also met by great enthusiasm for the master programme from students, alumni and also from stakeholders. The active and supportive participation of stakeholders is a clear strength of the programme. The professional activities meet the programme provider's expectations. Graduates get an employment. All of the important actors show a very strong support for the admission, the study



process and the assessments and this is very positive for an educational programme. The programme has been given a very strong support from all partners. It is also clear that master theses show a good quality and are at the same level as other international universities. It is evident that the professional activities of the vast majority of the graduates meet the programme provider's expectations very well.

*A review of the study process and the students' performance assessment in the master programme show that it is overall very good.*

- *The admission requirements are very well-founded, ASU uses the common rules and procedures for HEI's in Lithuania*
- *There is a strong student demand for the programme and a stable number of students can be admitted. The review team recommend not to increase the number of students at this stage.*
- *Admission to the programme requires completion of bachelor studies or completion of college (professional bachelor) followed by one year professional experience and completion of bridging courses in the field of forestry. This is an excellent solution.*
- *The organisation of the study process is very good. It is clear and it ensures a very good provision of the programme and the achievement of the learning outcomes.*
- *The faculty is very active and motivate students to take part in basic and applied research in a very good way.*
- *The activities at ASU also stimulate students to artistic and social activities. This is very well received by the students.*
- *The international programme stimulates students to take part in mobility programmes*
- *The assessment system of students' performance is clear, adequate and publicly available. The assessment of master theses is based on a sound and factual system.*
- *The result of the master programme is excellent. The master theses get a high final grade and graduates get a relevant employment*
- *The support for the programme is very strong from students, alumni, academics and stakeholders and there is a good interaction with all social partners.*
- *The faculty is now in a position to continue to provide a very good programme and this is promising for the future. ASU and the Faculty is very well positioned for international activities.*
- *The review team suggest that the students organise themselves in a Forestry Student Union.*

## **2.6. Programme management**

The master programme is managed according to regulations of the University and the Government of the Republic of Lithuania. The procedures for improvement and administrations is governed by law. The responsibilities for the programme are divided between the Forestry Study programme Committee, the Institute, The faculty Council, The Dean's Office, the Centre for study Quality and Innovation, the Department of International Relations, the Career centre and the senate of the University. Even if there seems to be relatively many partners involved, it is clear where decisions are taken and where the responsibilities are located.

- The Forestry Study Programme Committee is in charge of the coordination, assessment and monitoring of the master programme and carries out its evaluations. The Committee is the central body responsible for the collection and analysis of the data provided by the surveys and other sources of information. In the committee, teachers, students, graduates and social stakeholders participate in the submission to the Council of Faculty for final consideration and the Senate for approval.

- The committee makes decisions as a collegiate body, and work in liaison with the academic community members.
- The Institute approves reorganisation and descriptions of study subjects. It is responsible for quality of teaching.
- To secure the quality of teaching a pre-review system exist. Textbooks and students books are approved by the central commission of the University.
- The faculty council is responsible for the composition of studies, and for obtaining the opinion of the academic community.
- The Faculty holds meeting with target groups of teachers involved in the programme.
- The Dean's Office organise the study process and administration of the work.
- The sociological surveys, and e.g. students' surveys are standardised and the Centre for Quality and Innovations is responsible
- The department of International Relations is in charge for study exchange.
- The Career centre is in charge for students preparation for the labour market
- The Senate is the highest body of the University

The review team noticed that students are represented by student representation of the university and the student council of the faculty. Students are invited to all committees and meetings. Students can also initiate meetings and have done so with meetings with administrative staff and with teachers. The review team conclude that in relation to other universities the students have a relatively weak position. It not clear how the information from the students' representatives is transferred to the students in the programme and how the students get feedback from their ideas and views. The advice from the review team to the students is to organise a Forestry Students Union. Such a body could help the students to get a stronger position.

Stakeholders have a stronger position but it is *ad hoc*. Stakeholders participate in activities of the Forestry Study Programme Committee, the Faculty and its committees, final thesis assessment committees and others.

The Committee is the central body and where most important decisions are taken. The external stakeholders participate in the activities of the Committee and also in several teaching activities including practices. It seems clear that one of the keys for the success of the programme is the strong involvement of relevant stakeholders in the design, updating and management of the programme. The review team recommends that there should be a more systematised basis for this engagement.

The internal monitoring of the programme and of the students is very good. The programme is followed up at least once a year and sometimes twice a year. The students are also followed up regularly, sometimes twice a year. The programme analysis feeds from several databases, systematic surveys of social stakeholders, graduate employment monitoring and contacting data of the graduates. Other sources of information are annual reports of the departments and faculties, reports of final thesis defence and other data. Hence the monitoring of the programme is very rigorous.

There is also external monitoring and evaluation of the programme. The last was in 2007. The review team noticed that all recommendations from that evaluation have now been taken care of.

The students are surveyed at the end of each term and also after the defence of the final thesis.. The teachers are also consulted every two years about the improvement of the programme system and student's motivation and performance. Six months after the graduation, a new survey is conducted by the Centre for Quality and innovation aiming to evaluate the quality of the employment of the graduates and how the competences acquired during the programme

matches with the expectations. Employers are also consulted with specific surveys carried out by the Centre of Career. The University is currently involved in an EU project aiming to develop and implement an internal study quality assurance system. The main risk is that the academic staff may perceive the internal quality assurance system more as a bureaucratic burden rather than a tool of continuous programme improvement. The evaluation team agrees with the self-evaluation report that further improvements to the Programme management require improved efficiency of the dissemination of information received in the process of management among teachers and students. The conclusion from the review team is that the current procedure is a balanced system that should not be increased.

During the meetings with students the review team concluded that the students considered that the management and administration of the programme was functioning very well. They did not have any problem with the management of the programme and the students reported that they were helped by the Deans office.

Internal monitoring and analyses and external evaluations are used for improvement of the programme. One difficulty with this is that one year may be a too short period to know with certainty how to improve the programme. Student groups are different each year, special circumstances and incidents can occur, etc. That is why a change in a programme must be based on solid information analytical capability and experience. Another difficulty is to get all partners to take an active interest in the programme improvement. The primary interest of teachers is to improve the subject they teach and the primary interest for other partners is to improve their speciality. That is one reason why the review team find the involvement of social partners and also other academicians important.

*In summary the programme management is on a good level and follows well tested procedures*

- *Responsibilities for decisions and monitoring of the implementation of the programme are clearly allocated.*
- *Information and data on the implementation of the programme are regularly collected and analysed.*
- *The quality is monitored regularly and the data are analysed and used for improvements of the programme.*
- *The outcome from external evaluations and stakeholders together with internal collection of data and analyses of data and trends are used to improve the programme.*
- *The students are very satisfied with the management of the study process, its rules and satisfied with assessments*
- *The process of programme improvement involve all important partners but the stakeholders should be involved on a more systematic basis*
- *The complexity of the system requires an extra effort for information dissemination.*
- *the evaluation and improvement processes involve stakeholders; however the review team recommend that the relations to social partners is organised on a more systematic basis*
- *the internal quality assurance system exists but more systematic feedback for programme improvement is needed.*

### III. RECOMMENDATIONS

1. A challenge for ASU is also now, to create a learning environment that closely mimics real work conditions in today's organisations and at the same time give deep scientific insight into core areas and prepare the students for the unknown and changing future. It is recommended that a continuous ongoing update of the programme is implemented.
2. A continuing discussion concerning the balance between subject areas and generic and methodological competences, as well as practises and skills is expected to be ongoing and this is recommended by the reviewers.
3. It is important that the educational programmes are compatible in different countries. It is a prerequisite for international cooperation and a possibility for increased harmonisation of learning outcomes in this field. Therefore it is recommended that the international arena must be taken into consideration when changing the programme.
4. The review team recommend that ASU and the Faculty carefully monitor student intake and employment and suggest that the University does not increase student numbers for the programme.
5. The review team notice that relevant partners are involved in the design, updating and management of the programme. This is a form of guarantee that competences that are required will be included in the programme. It is recommended that this system should be continued.
6. The compulsory subjects of high problematic or innovative scientific level are fairly broad, and are designed to be broad. In line with that, it is recommended that peatland science could have been replaced with a broader subject, such as soil science.
7. To introduce new courses is always problematic. Sanitary forest protection was suggested by the self-evaluation team. However, (sanitary problems) i.e. forest health could also be a part of for example ecological sustainability or silviculture. It is recommended that the number of credits per subject be reconsidered to determine if it might be more flexible to enable the introduction of additional/new courses.
8. The possibility to redesign of the curriculum by introducing block courses should be analysed and discussed in the Forestry Study Programme Committee.
9. The review team recommend teachers to meet before the start of the term (semester) and discuss programme content and problems that can occur, such as overlap.
10. The review team recommend that the Forestry Study Programme Committee analyse the volume and structure of subjects – particularly mathematics and statistics - that are taught at bachelor and master levels. They should ensure that the timing of when such subjects are presented is logical and that there is sufficient opportunity for the students to apply, at the higher level, the skills learned.
11. It is strongly recommended by the review team that the Faculty accelerate the introduction of innovative teaching methods such as e-learning.
12. It is also recommended by the reviewers to create summer courses, for example dealing with special subjects like for example fire-risk and fire-protection.
13. It is recommended to provide special short courses for alumni on their request.
14. It is recommended to supplement the international literature, especially in English, for students to read. The relation between Lithuanian and English text-books should be better balanced.
15. The recommendation from the review team is to continue and even to increase the number of invitations to professors and teachers from abroad.
16. The review team strongly support continuing efforts to encourage teachers to strengthen their skills in science and teaching in Lithuania and abroad.

17. It is recommended that ASU create conditions for the staff to start to develop courses also in foreign languages.
18. It is recommended that development programmes be identified that encourage teachers to improve their pedagogical and IT skills and at the same time create incentives to get teachers to participate and upgrade their competences.
19. The review team recommend that teachers should be further encouraged to increase their participation in international scientific projects. An active Helpdesk at ASU could be of value since the European research programmes offer possibilities.
20. The review team recommend the faculty to analyse the future requirement for technical assistance for students.
21. The review team encourage continuing efforts to stimulate international exchange.
22. The review team recommend that the relations with social partners is organised on a more systematic basis

#### IV. EXAMPLES OF EXCELLENCE (GOOD PRACTICE)\*

- The aims and objectives of the master programme in Forestry is an excellent example of a modern university education that fits the academic and societal demands and is highly appreciated. It represents a university programme where practical and problem solving learning are combined with science based learning in core subject areas in an excellent way. Moreover, students are trained for generic and transferable skills integrated in the courses. The percentage of students that pass the programme is high and the qualification leads to employment.
- In the area of the study process and students' performance assessment for this programme, it is evident to the evaluation team that the University provides for a clear and very well organised programme. It excellently guides and encourages students to research, mobility and social activities. The students' studies and assessments are very well organised. A feature and strength of this programme is the close and professional interaction with stakeholders.

*\* if there are any to be shared as a good practice*

#### V. SUMMARY

*The programme **aims and learning outcomes** are very well presented both for students and stakeholders and they are most appropriate for studies in a master programme in forestry. It is a good base for continued doctoral studies in the area.*

*The aims reflect and are in line with professional requirements. The programme name, aim and learning outcomes and content of the programme are all compatible.*

*The programme aims and learning outcomes are based on academic and scientific as well as on professional requirements.*

*Public needs and the needs of forest management and the forest sector labour market are also very well met.*

*The learning outcomes are very well integrated in the programme contents.*

*The learning outcome gives a broad knowledge in forest science and forestry and at the same time provides graduates with important generic, methodological and transferable skills.*

*The programme aim and learning outcomes has a good balance between scientific and practical skills.*

*The education leads to employment in the forest sector in Lithuania and also in other enterprises.*

*The learning outcomes of the programme are modern and harmonise with the Bologna process and give good opportunity for internationalisation.*

*Graduates reach the same level of competences as in other European universities.*

*There exist good international links to other universities and programmes, and the education has been recognised internationally. Students from the programme can successfully participate in international study programmes in the forestry science sector.*

*There is a strong support for the programme from both students and alumni and a good interaction with State Forest Management Institute, Ministry of Environment Lithuanian Academy of Science, the Institute of Forestry of LRCAF, the industry and other stakeholders, and this is strength for the programme.*

*The review team is very satisfied with the aims and learning outcomes of the programme. The aims and learning outcomes are clear, well formulated and represent a very good balance between scientific knowledge in core subject areas and generic and methodological skills.*

*The **curriculum design** meets the legal requirements. The spread of the subjects is in line with required knowledge in forestry sciences. The curriculum design also meet expected demands for generic and methodological skills.*

*The content of the programme subjects is consistent with the type and level of studies in Lithuania and internationally. The mandatory subjects are well chosen and continuously updated.*

*Strength of the programme is its coupling to partners in the society.*

*The scope of the programme is met with a curriculum that offers a broad knowledge in forestry sciences and good possibilities for generic and methodological skills.*

*Relevant stakeholders are involved in design, updating and management but it is suggested that relations with social partners could be organised on a more systematic basis.*

*Strength of the master programme curriculum is its interdisciplinary nature with a sound focus on science coupled to practical problems and employability.*

*There are possibilities for selecting optional courses for students, with some restrictions*

*It is recommended that the programme team continue to develop courses with international connections.*

*It is recommended that the programme provider has an increased focus on international literature.*

*It is recommended that the faculty implement more e-learning and courses on the net both for Lithuanian students and for English speaking persons.*

*The development in society, in forest science and in the forest sector with the need for continuous learning also requires the University to develop new courses for the programme as well as update courses for the alumni.*

*The programme has a highly qualified **staff** and meet all legal requirements.*

*The teaching staff is to a high degree active as researchers and this ensures a good academic education based on science. We consider the research of the staff and their linkages to research as strength for the programme.*

*The review team was pleased to see the support from ASU to teachers and researchers to go abroad and recommend a continuing development in this area.*

*The review team was pleased to see an active internationalisation and recommends that the exchange programme with foreign universities is expanded. Both shorter and longer visits for visiting teachers and for ASU teachers to go abroad should be continued and even increased.*

*The teachers should be given good possibilities to develop professionally with pedagogical training and increased training in information technology.*

*The staff should be encouraged and helped to be able to participate more in European research programmes.*

*ASU offers very good **facilities and learning resources** for students in forestry.*

*New or newly renovated buildings with modern class-rooms and rooms for special activities are well designed for studies.*

*Students have very good access to the Arboretum and very good possibilities for field studies.*

*Students have possibilities to use modern equipment and have good access to computers and internet which give good premises for studies.*

*Students have access to well equipped and modernised laboratories (e.g. Nemunas) but may need more technical assistance to handle the advanced equipment.*

*The library offers good possibilities for studies*

*There is a need to increase the international literature both books and journals especially in English ( this will be more expensive for the library in the future).*

*The review team suggest that ASU should pay attention to access for disabled persons.*

*A review of the **study process and the students' performance assessment** in the master programme shows that it is overall very good.*

*The admission requirements are very well-founded, it uses the common rules and procedures for HEI's in Lithuania*

*There is a strong demand for the programme and a stable number of students can be admitted.*

*The review team recommend not to increase the number of students at this stage.*

*Admission to the programme requires completion of bachelor studies or completion of college (professional bachelor) followed by one year professional experience and completion of bridging courses in the field of forestry. This is an excellent solution.*

*The organisation of the study process is very good. It is clear and it ensures a very good provision of the programme and the achievement of the learning outcomes.*

*The faculty is very active and motivates students to take part in basic and applied research in a very good way.*

*The activities at ASU also stimulate students to artistic and social activities. This is very well received by the students.*

*The international programme motivates students to take part in mobility programmes*

*The assessment system of students' performance is clear, adequate and publicly available. The assessment of master theses is based on a sound and factual system.*

*The result of the master programme is excellent. The master theses get a high final grade and graduates get relevant employment*

*The support for the programme is very strong from students, alumni, academics and stakeholders and there is a good interaction with all social partners.*

*The faculty is now in a position to continue to provide a very good programme and this is promising for the future. ASU and the Faculty is very well positioned for international activities.*

*The review team suggest that the students organise themselves in a Forestry Student Union.*

*The programme **management** is on a good level and follows well tested procedures*

*Responsibilities for decisions and monitoring of the implementation of the programme are clearly allocated.*

*Information and data on the implementation of the programme are regularly collected and analysed.*

*The quality is monitored regularly and the data are analysed and used for improvements of the programme.*

*The outcome from external evaluations and feedback from stakeholders together with the internal collection of data and analyses of data and trends are used to improve the programme.*

*The students are very satisfied with the management of the study process and its rules and are satisfied with assessments.*

*The process of programme improvement involves all important partners but the stakeholders should be involved on a more systematic basis.*

*The complexity of the information system requires an extra effort for information dissemination to the relevant parties.*

*The internal quality assurance system exists, but more systematic feedback for programme improvement is needed.*



## VI. GENERAL ASSESSMENT

The study programme Forestry (state code – 621D50001) at Aleksandras Stulginskis University is given **positive** evaluation.

*Study programme assessment in points by evaluation areas.*

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	4
2.	Curriculum design	3
3.	Teaching staff	3
4.	Facilities and learning resources	3
5.	Study process and students' performance assessment	4
6.	Programme management	3
	<b>Total:</b>	<b>20</b>

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

Grupės vadovas: Team leader:	Brian O'Connor
Grupės nariai: Team members:	Prof. dr. Jose Antonio Bonet
	Prof. dr. Jan-Erik Hällgren
	Prof. dr. Hardi Tullus
	Dr. Kęstutis Armolaitis
	Justinas Staugaitis

**ALEKSANDRO STULGINSKIO UNIVERSITETO ANTROS PAKOPOS STUDIJŲ  
PROGRAMOS MIŠKININKYSTĖ (VALSTYBINIS KODAS – 621D50001) 2014-12-11  
EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-598 IŠRAŠAS**

&lt;...&gt;

**VI. APIBENDRINAMASIS ĮVERTINIMAS**

Aleksandro Stulginskio universiteto studijų programa *Miškininkystė* (valstybinis kodas – 621D50001) vertinama **teigiamai**.

<b>Eil. Nr.</b>	<b>Vertinimo sritis</b>	<b>Srities įvertinimas, balais*</b>
1.	Programos tikslai ir numatomi studijų rezultatai	4
2.	Programos sandara	3
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	4
6.	Programos vadyba	3
	<b>Iš viso:</b>	<b>20</b>

\* 1 - Nepatenkinamai (yra esminių trūkumų, kuriuos būtina pašalinti)

2 - Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)

3 - Gerai (sistemiškai plėtojama sritis, turi savitų bruožų)

4 - Labai gerai (sritis yra išskirtinė)

&lt;...&gt;

**V. SANTRAUKA**

Programos **tikslai ir studijų rezultatai** yra itin gerai parengti ir tinkami tiek studentams, tiek socialiniams dalininkams; jie puikiai atitinka miškininkystės magistrantūros studijų programos lygmenį. Tai užtikrina pagrįstą studijų tęstinumą tolesnėse šios srities doktorantūros studijose. Tikslai atspindi ir atitinka profesinius reikalavimus. Programos pavadinimas, tikslas ir studijų rezultatai, taip pat jos turinys dera tarpusavyje.

Programos tikslai ir studijų rezultatai grindžiami akademiniais, moksliniais ir profesiniais reikalavimais.

Studijų programa puikiai atspindi ir tenkina visuomenės poreikius, miškotvarkos bei miškų sektoriaus darbo rinkos poreikius.

Studijų rezultatai yra ypač gerai integruoti į programos turinį.

Studijų rezultatai suteikia išsamių miškų mokslo ir miškininkystės žinių bei kartu padeda absolventams įgyti svarbių bendrųjų ir metodinių įgūdžių, taip pat perkeliamųjų gebėjimų.

Programos tikslai ir studijų rezultatai užtikrina puikią teorinių mokslinių ir praktinių įgūdžių pusiausvyrą.

Įgytas išsilavinimas suteikia galimybę įsidarbinti Lietuvos miškininkystės sektoriaus ir kitų sričių įmonėse.

Programos studijų rezultatai yra šiuolaikiški ir suderinti su Bolonijos procesu bei sudaro tinkamas sąlygas tarptautiškumui.

Absolventai pasiekia tokį patį kompetencijos lygį kaip ir kitų Europos universitetų studentai.

Užmegzti geri tarptautiniai ryšiai su kitais universitetais ir studijų programomis, o įgytas išsilavinimas pripažįstamas tarptautiniu mastu. Programą baigę studentai gali sėkmingai dalyvauti tarptautinėse studijų programose miškų mokslo sektoriuje.

Apie programą teigiamai atsiliepia tiek studentai, tiek absolventai; be to, glaudžiai bendradarbiaujama su Valstybiniu miškotvarkos institutu, Aplinkos ministerija, Lietuvos mokslų akademija, LAMMC miškų institutu, pramonės įmonių atstovais ir kitais socialiniais dalininkais – tai programos stiprioji pusė.

Vertinimo grupė gerai vertina programos tikslus ir studijų rezultatus, kurie yra aiškūs, tinkamai suformuluoti ir užtikrina puikią studijų krypties studijų dalykų mokslinių žinių ir bendrųjų bei metodinių įgūdžių pusiausvyrą.

**Studijų programos struktūra** atitinka teisinius reikalavimus. Studijų dalykų parinkimas atitinka miškininkystės mokslams keliamus reikalavimus.

Studijų programos turinys (Curriculum) taip pat tinkamas bendrųjų ir metodinių įgūdžių įgijimui. Programos dalykų turinys atitinka studijų formą ir antros pakopos lygmenį Lietuvoje ir tarptautiniu mastu. Privalomi studijų dalykai yra gerai parinkti ir nuolat atnaujinami.

Programos stiprybė – bendravimas su socialiniais partneriais.

Programos apimtis tinkama studijų programos turiniui ir užtikrina plačių žinių miškų mokslų srityje įgijimą, taip pat geras galimybes įgyti bendrųjų ir metodinių įgūdžių.

Atitinkami socialiniai partneriai dalyvauja programos rengimo, atnaujinimo ir valdymo procesuose, tačiau siūloma sistemingiau organizuoti bendradarbiavimą su socialiniais dalininkais.

Magistrantūros studijų programos stiprioji pusė – tarpdisciplininis pobūdis, kai daugiausia dėmesio skiriama praktinių problemų sprendimui pasitelkiant mokslinius metodus ir įsidarbinimui.

Studentai gali rinktis laisvai pasirenkamus dalykus, bet tik esant tam tikriems apribojimams.

Studijų programos rengimo grupei rekomenduojama toliau nuosekliai plėtoti tarptautinius ryšius įgyvendinant programas.

Studijų programos rengėjams rekomenduojama daugiau dėmesio skirti literatūrai užsienio kalba.

Fakultetui rekomenduojama plačiau taikyti e-mokymąsi ir kursus internetu, skirtus tiek Lietuvos studentams, tiek kitiems asmenims, kalbantiems angliškai.

Dėl miškų mokslo ir miškininkystės sektoriaus plėtros bei atsižvelgiant į tęstinio mokymosi poreikį Universitetas taip pat turi diegti naujus tęstinio mokymo kursus ir atnaujinti absolventams skirtus kursus.

Programą įgyvendina itin kvalifikuoti **darbuotojai**, todėl ji atitinka visus teisinius reikalavimus.

Pedagoginiai darbuotojai labai aktyviai dalyvauja mokslinėje veikloje, o tai užtikrina tinkamą mokslinę veiklą grindžiamą akademinę švietimą. Manome, kad darbuotojų aktyviai vykdomi moksliniai tyrimai yra programos stiprioji pusė.

Ekspertų grupė palankiai vertino ASU paramą dėstytojams ir tyrėjams, vykstantiems į užsienį, ir rekomenduoja tęsti darbą šioje srityje.

Ekspertų grupė palankiai vertino aktyvią tarptautinę veiklą programoje ir rekomenduoja plėsti mainų programą su užsienio universitetais. Turėtų būti toliau kviečiami tiek trumpiems, tiek ilgesniems vizitams vizituojantys dėstytojai iš užsienio šalių, o taip pat ASU dėstytojai turėtų būti skatinami dažniau išvykti tobulinti kvalifikacijos į užsienį.

Dėstytojams turėtų būti sudarytos tinkamos galimybės tobulėti profesijos srityje, organizuojant jiems pedagoginės kvalifikacijos tobulinimo mokymus ir rengiant mokymus informacinių technologijų srityje.

Pedagoginiai darbuotojai turėtų būti skatinami ir jiems padedama labiau įsitraukti į Europos mokslinių tyrimų programas.

ASU turi labai gerus **materialiuosius išteklius** miškininkystės studijų programos studentams.

Nauji arba renovuoti pastatai, kuriuose yra šiuolaikiškai įrengtos auditorijos ir specialiai veiklai skirtos patalpos, yra gerai paruošti studijoms.

Studentams sudarytos puikios sąlygos atlikti praktikas medelyne ir puikias sąlygas krypties dalykų studijoms.

Studentai turi puikias galimybes naudotis modernia įranga; turi puikią prieigą prie kompiuterių ir interneto – tai sudaro palankias sąlygas studijoms.

Studentai turi galimybes naudotis gerai įrengtomis ir modernizuotomis laboratorijomis (pvz., Nemuno Slėnis), bet jiems gali prireikti ateityje daugiau techninės pagalbos, naudojantis pažangiais įrenginiais.

Bibliotekoje sudarytos tinkamos sąlygos studijuoti.

Reikėtų didinti literatūros užsienio kalba skaičių: tiek knygų, tiek žurnalų, ypač anglų kalba (biblioteka dėl to turėtų didesnių išlaidų ateityje).

Ekspertų grupė siūlo ASU atkreipti didesnę dėmesį į studijų prieinamumo galimybes neįgaliesiems.

**Magistrantūros studijų proceso ir studentų rezultatų vertinimo peržiūra** rodo, kad jie iš esmės yra labai geri.

Priėmimo į programą reikalavimai yra tinkamai pagrįsti, taikomos bendrosios taisyklės ir procedūros, nustatytos Lietuvos aukštojo mokslo institucijoms.

Programos paklausa yra didelė ir gali būti priimamas stabilus studentų skaičius. Ekspertų grupė rekomenduoja nedidinti studentų skaičiaus artimoje ateityje.

Priimant į programą reikalaujama būti pabaigus universitetinio bakalauro studijas arba kolegiją (profesinio bakalauro studijas). Po pastarųjų studijų įgyjama vienerių metų profesinė patirtis ir baigiamos papildomosios miškininkystės studijos. Tai puikus sprendimas.

Studijų procesas organizuotas labai gerai. Jis yra aiškus ir užtikrina itin gerą programos įgyvendinimą bei studijų rezultatų pasiekimą.

Fakultetas yra labai aktyvus ir skatina studentus dalyvauti moksliniuose bei mokslo taikomuosiuose tyrimuose.

ASU taip pat skatina studentus užsiimti meno ir kita socialine veikla. Studentai tai vertina itin palankiai.

Tarptautinė programa skatina studentus dalyvauti įvairiose judumo programose.

Studentų mokymosi rezultatų vertinimo sistema yra aiški, tinkama ir viešai skelbiama. Magistro baigiamųjų darbų vertinimas grindžiamas patikima ir faktiniais įrodymais pagrįsta sistema.

Magistrantūros studijų programos rezultatai yra nepriekaištingi. Magistro baigiamieji darbai vertinami labai aukštu pažymiu, o magistrantai, baigę studijas, nesunkiai įsidarbina.

Programa sulaukia labai didelio palaikymo iš studentų, absolventų, akademikų ir kitų socialinių dalininkų, taip pat plėtojami geri santykiai su visais socialiniais partneriais.

Šiuo metu fakultetas geba toliau vykdyti ypač gerą studijų programą ir tai yra puikus pagrindas ateičiai. ASU ir fakultetas turi geras galimybes plėtoti tarptautinę veiklą.

Ekspertų grupė siūlo studentams susiburti į Miškininkystės studentų sąjungą.

Programos **valdymas** yra tinkamas, vadovaujamas gerai patikrintomis procedūromis.

Atsakomybė už programos įgyvendinimo stebėseną ir sprendimų priėmimą yra aiškiai paskirstyta.

Informacija ir duomenys apie programos įgyvendinimą yra reguliariai renkami ir analizuojami. Studijų kokybė nuolat stebima, o duomenys analizuojami ir naudojami programai tobulinti. Išorinio vertinimo rezultatai ir socialinių dalininkų grįžtamasis ryšys kartu su vidaus mastu surinktais duomenimis, taip pat duomenų ir tendencijų analizė, naudojama programai tobulinti. Studentai labai patenkinti studijų proceso valdymu ir taisyklėmis bei atliekamu studentų pasiekimų vertinimu. Programos tobulinimo procesas apima visus svarbius socialinius dalininkus, bet socialiniai partneriai turėtų būti sistemingiau įtraukiami į šį procesą. Informacinė sistema sudėtinga, todėl reikia papildomų pastangų tam, kad informaciją gautų atitinkami socialiniai dalininkai. Vidaus kokybės užtikrinimo sistema veikia, tačiau reikalingas sistemingesnis grįžtamasis ryšys, galintis padėti tobulinti programą.

<...>

### **III. REKOMENDACIJOS**

1. Dabartinis ASU iššūkis – sukurti mokymosi aplinką, kurioje gerai atsispindėtų realios darbo sąlygos šiuolaikinėse organizacijose, ir kartu užtikrinti gilų mokslinį pagrindinių sričių supratimą bei parengti studentus nežinomai ir besikeičiančiai atečiai. Rekomenduojama tęsti nuolatinę programos atnaujinimą.
2. Tikimasi, kad bus tęsiamos nuolatinės diskusijos dėl studijų krypties dalykų ir bendrųjų bei metodinių kompetencijų balanso, dėl praktikos ir numatomų įgūdžių pusiausvyros, taip kaip rekomenduoja ekspertų grupės nariai.
3. Svarbu, kad studijų programos būtų suderintos įvairiose šalyse. Tai yra tarptautinio bendradarbiavimo sąlyga, užtikrinant, kad studijų rezultatai būtų geriau derinami šioje srityje. Todėl rekomenduojama tobulinant programą atsižvelgti į tarptautinį aspektą.
4. Ekspertų grupė rekomenduoja ASU ir fakultetui nuosekliai stebėti priimamų studentų skaičių ir įsidarbinamumą bei siūlo Universitetui nedidinti šios programos studentų skaičiaus.
5. Ekspertų grupė pažymėjo, kad kuriant, atnaujinant ir valdant programą dalyvauja atitinkami partneriai. Tai užtikrina, kad į programą būtų įtrauktos darbo rinkai reikiamos kompetencijos. Rekomenduojama ir toliau taikyti šią sistemą.
6. Privalomi dalykai, pasižymintys aukštu probleminiu ar inovaciniu moksliniu lygiu, yra gana platus, tad vertėtų ir toliau išlaikyti plačius dalykus. Atsižvelgiant į tai, rekomenduojama durpynų mokslą pakeisti platesniu studijų dalyku, pavyzdžiui, dirvožemio mokslu.
7. Naujų studijų dalykų įvedimas visada yra problemiškas. Miško sanitarinės apsaugos dalyką pasiūlė įtraukti savianalizės grupė. Tačiau sanitarinės problemos, pavyzdžiui, miško sveikatingumas, taip pat galėtų būti įtrauktos į ekologinio tvarumo ar miškininkystės studijų dalykus. Rekomenduojama iš naujo apsvarstyti studijų dalykui vidutiniškai nustatytą apimtį kreditais, kad naujo/ papildomo studijų dalyko įvedimo procedūra būtų lankstesnė.
8. Turėtų būti apsvarstyta galimybė pertvarkyti studijų programas jas sudarant studijų dalykų blokais. Šią galimybę turėtų aptarti Miškininkystės studijų programos komitetas.
9. Ekspertų grupė rekomenduoja dėstytojams susitikti prieš prasidedant mokslo metams (semestru) ir aptarti programos turinį bei problemas, kurios gali kilti, pavyzdžiui, studijų dalykų turinio persidengimo atvejais.
10. Ekspertų grupė rekomenduoja Miškininkystės studijų programos komitetui analizuoti studijų dalykų, ypač matematikos ir statistikos, kurių mokoma bakalauro ir magistrantūros studijų programose, apimtį ir struktūrą. Turėtų būti užtikrinta, kad dalykų

išdėstymo nuoseklumas būtų logiškas ir kad būtų suteikta pakankamai galimybių studentams pritaikyti įgytus įgūdžius aukštesnės studijų pakopos programose.

11. Ekspertų grupė primygtinai rekomenduoja fakultetą paspartinti naujoviškų mokymo metodų, pavyzdžiui, e- mokymosi, diegimą.
12. Ekspertų grupės nariai taip pat rekomenduoja organizuoti vasaros kursus, pavyzdžiui, susijusius su specialiais dalykais, kaip antai miškų gaisro pavojus ir apsauga nuo gaisro.
13. Rekomenduojama, absolventų prašymu, organizuoti trumpus specialius jiems skirtus kursus.
14. Patariama papildyti literatūrą užsienio, ypač anglų kalba, kurią studentai galėtų skaityti. Vadovėlių lietuvių ir anglų kalbomis santykis turėtų būti labiau subalansuotas.
15. Ekspertų grupė rekomenduoja didinti iš užsienio kviečiamų profesorių ir dėstytojų skaičių.
16. Ekspertų grupė tvirtai remia nuolatinės aukštosios mokyklos pastangas skatinti dėstytojus tobulinti savo mokslinę ir pedagoginę kvalifikaciją Lietuvoje bei užsienyje.
17. Rekomenduojama, kad ASU organizuotų darbuotojams kursus užsienio kalbomis.
18. Rekomenduojama parengti plėtos programas, kuriose dėstytojai būtų skatinami tobulinti pedagoginius ir informacinių technologijų srities įgūdžius, ir kartu skatinti mokytojus dalyvauti ir tobulinti savo kompetenciją.
19. Ekspertų grupė rekomenduoja toliau skatinti mokytojus aktyviau dalyvauti tarptautiniuose moksliniuose projektuose. Aktyviai veikianti ASU pagalbos tarnyba gali būti itin naudinga, nes Europos mokslinių tyrimų programų įgyvendinimas suteikia naujų galimybių.
20. Ekspertų grupė rekomenduoja fakultetui išanalizuoti reikalingos teikti techninės pagalbos studentams poreikį ir jos suteikimo galimybes.
21. Ekspertų grupė ragina ir toliau skatinti tarptautinius mainus.
22. Ekspertų grupė rekomenduoja sistemingiau plėtoti santykius su socialiniais partneriais.

<...>

---

Paslaugos teikėjas patvirtina, jog yra susipažinęs su Lietuvos Respublikos baudžiamojo kodekso 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

Vertėjos rekvizitai (vardas, pavardė, parašas)