Approved by
Tbel Abuserisdze Teaching University of Georgian Patriarchate

Decision of the Academic Board № 02-01/04. 08.02.2019

Chairperson of Academic Board,

Rector, Skhalta Archbishop Spiridon

"Reviewed"
by the Board of the Faculty of Humanities and Education

Protocol № 02-04-06/01. 02.02.2019

Tbel Abuserisdze Teaching University of Georgian Patriarchate

Second Step of Higher Education/ Master's educational program
Educatrional Program: Agrarian Sciences
(Module: Agrotechnology, Food technologies, Forestry)

Volume of the program in credits 120 ECTS

Academic degree awarded:

Master of Agrarian Sciences – in Agrotechnology;

Master of Agrarian Sciences - in Food Technology;

Master of Agrarian Sciences – in Forestry

Program Supervisors:

Rezo Vasadze – Academic Doctor of Agriculture, Professor
Tamila Ardemanashvili – Doctor of Biology, Professor
Nana Jabnidze - Academic Doctor of Agriculture, Professor

Khichauri 2019

Program Title	Agrarian Sciences (Module: Agrotechnology, Food Technologyies, Forestry).
Academic Degree/qualification awarded	Master of Agrarian Sciences – in Agrotechnology; Master of Agrarian Sciences – in Food Technologies; Master of Agrarian Sciences - in Forestry
Faculty Title	Agrarian Sciences and Business Administration.
Program Supervisor(s)/coordinators	**Rezo Vasadze –** Academic Doctor of Agriculture, Professor **Tamila Ardemanashvili –** Doctor of Biology, Professor **Nana Jabnidze** - Academic Doctor of Agriculture, Professor
Program Duration/Volume (terms, number of credits)	The course of the master program is 2 academic year (4 semesters) - 120 ECTS credits, including training component - 50 mandatory training courses, basic training courses of elective specialties (agro technologies, food technologies, forestry) - 70, including 30 credits, preparation of master's thesis and defence.
Language of Instruction:	Georgian

Precondition (Requirements) for admission to the program

Masters program is adopted according to the Georgian legislation, as a result of Unified National Exams and TBEL Abuseridze State University of Georgian Patriarchate, according to the rules of implementation of secondary education programs, after which the student will pass the internal university test or interview according to the chosen direction.
Entrance Exams are conducted according to specialties (examination issues are published on the web site of St. Tbel Abuseridze State University of Georgian Patriarchate).
After the enrollment, the first semester is conducted through a unified learning system, and in the second semester the student will select one of the specialized (Agrotechnologies, Food Technologies, Forestry).

Program Objectives:

Program Objectives are: - Georgia's national interests, agrarian policies of the country, based on the Tbel Abuseridze University mission, the Agrarian Science Master Program is aimed at developing a highly adapted specialist with a highly qualified, competitive, easy-to-serve specialist with changing professional environment with the competence compatible with modern requirements, who will be able to determine and analyze the data received from the latest methods of research and research resulting from the agrarian field; will know regularities and threats identified in the agrarian field involving agricultural production and market activity, as well as the organizational forms of agricultural enterprises, their displacement, specialization, effectiveness and reproduce. Introduction and implementation of innovative methods of modern agro technological measures for cultivation and maintenance of agricultural crops; Implementation of measures for rehabilitation of plantations and saplings based on plant biomorphological and soil-climatic characteristics in extreme conditions, use of the newest technologies for the fastest and clone micro propagation of plants, adoption and production of healthy planting materials; Search for ways to solve the modern means of plant protection and environmental pollution problems; Use of technological processes of food production, chemical composition of raw materials and derivative products, modern methods of quality determination and evaluation. Practical experience of basic raw material processing. Development of innovative knowledge of the formation of forest-economic activities for solving the problems of permanent and continuous use of forest resources, arrangement of forest-parks and other recreational areas, rational use of wood and non-wood resources.

Registration of Forest Fund in Natural Forests and Cultural Cenosis - Assessment, which will enable the graduate to conduct its activities in accordance with market economy requirements.	
Program Learning Outcomes (Field Compeences)	
Knowledge and understanding	Has a deep and systematic knowledge in the Agrarian field, realizing the latest methods of research in the Agrarian field and analyzing the data obtained as a result of research; Implementing Innovative Methods of Modern Agro Tech Measures for Cultivation and Maintenance of Agricultural Crops; Timely and deliberately carrying out relevant measures for rehabilitation of plantations and saplings envisaging plant biomorphological and soil-climatic characteristics in extreme conditions, use of the newest technologies for the fastest and clone micro propagation of plants, adoption and production of healthy planting materials; Search for ways to solve the modern means of plant protection and environmental pollution problems; Use of technological processes of food production, chemical composition of raw materials and derivative products, modern methods of quality determination and evaluation. Practical experience of basic raw material processing. Development of innovative knowledge of the formation of forest-economic activities for solving the problems of permanent and continuous use of forest resources, arrangement of forest-parks and other recreational areas, rational use of wood and non-wood resources. Registration of Forest Fund in Natural Forests and Cultural Cenosis – Assessment
Ability to apply knowledge in practice	Will be able independently: Cultivate, care and keep, timely and deliberate handle agricultural measurements for rehabilitation of amortized plantations and saplings envisaging plant biomorphological and soil-climatic characteristics in extreme conditions; fast and clone micro propagation of plants, adoption of healthy plant material, creating and implementing system of integrated measures for combating pests, diseases and weeds of major agricultural crops. Detection, analysis and evaluation of the threats of food and food raw material; Creation of technological schemes of agricultural raw material processing; Technological control on product quality in raw materials and ready food production; Can develop and implement in practice forestry and agricultural activities for improving forest protection functions, as well as forestry and environmental factors based on the study of theoretical issues of forest recovery and renewal.
Judgement skills	Is able to evaluate, analyze, obtain information and provide reasonable conclusions based on modern, proven methods of agrarian field.
Communicative skills	Is able to provide written, schematic, electronic and graphic versions of ideas, react to the problems in agrarian issues, reasoning, debate skills, transfer the argumentationto the specialists and non-specialists.
Learning Skills	Will be able to understand the current issues in the agrarian field, independently conducting learning through the latest information technology, to ensure the advancement of the qualification and the adaptation of the changing environment.
Values	Recognizes the importance of the development of agrarian sector as the priority

	direction of public farming; Will be able to raise and independently solve the existing issues in the field, evaluate and contribute to the value of the sector.

Field competencies of specialty training courses

Specialization 1. Agrotechnology

Knowledge and understanding:

Has a deep and systemic knowledge: the peculiarities of agricultural production, organizational forms of agricultural enterprises, their displacement, specialization, efficiency and reproduction, management and agricultural marketing issues; On the latest methods of research used in the agrarian field and on the mathematical processing of data received as a result of research. Based on the nearest methods in the subtropical plant agro technologies on identifying new productivity, planting material, planting and caring new innovative technology for soil treatment; Pesticides in agricultural crops, peculiarities of their spread, damage symptoms, detecting methods, integrated protection principles of the plant and scientific basis, Phytosanitary monitoring, plant mineral, organic and complex feeding. Acknowledges the role of agro technology in agriculture.

Ability to apply knowledge in practice:

Ability to use the latest methods of research in agro technologies in agriculture. Establish farming and run it; Use of Scientific Research Methods in Agrarian Field in practice; Introduce the latest methods of improving product quality; To increase soil fertility, to create conditions for harvesting and realization of crop.

Use of Modern Methods of Prevention of Soil Pollution; Mastering and implementing the latest methods of plant cell engineering; Maintenance of subtropical and other cultural plants using the latest methods and new technologies.

Judgement skills:

Can make reasonable conclusions based on analysis of complex and incomplete information (including the latest research) in the subtropical plant agro technologies;Conduct fertilizers analysis in the system of fertilizing and make recommendations on received data;Planting and using new non-virus crops in plant cell engineering. Analyzing complex situations related to measures against pest control and making relevant conclusions.

Learning Skills:

Can independently plan and conduct studies in agro technologies and continue doctoral studies. Will be able to understand the current issues in the agrarian field, independently conducting learning through the latest information technology, to ensure the advancement of the qualification and the adaptation of the changing environment.

Communicative skills:

Can talk and discuss his opinions about the development of agricultural crops and discussions with colleagues, professionals and academic community in Georgian and foreign languages using modern information and communication technologies

Values:

Can evaluate and share his/her or others' dependence on the values that are characteristic for the professional activity. Recognizes the role and importance of agriculture in the country's food products, economic strengths and security; Has a sense of professional ethics norms; Respects the researches of others and is able to protect the results of his/her own innovative research in the field of agriculture

Specialization 2. Food Technologies

Knowledge and understanding:

Has a deep and systemic knowledge: the peculiarities of agricultural production, organizational forms of agricultural enterprises, their displacement, specialization, efficiency and reproduction, management and agricultural marketing issues; On the latest methods of research used in the agrarian field and on the mathematical processing of data received as a result of research; Knows the theoretical basics and principles of agricultural raw material processing; Basic technological and biochemical peculiarities of the raw materials used for production; Basic biochemical and microbiological processes based on the production of food products;The purpose and essence of the main technological processes and operations of food production; Technological machinery and apparatus of agricultural raw material processing, the principles of their work.

The essence and techniques of technological and chemical control of food production and way of implementation; Theoretical bases and principles of food analysis, ways of conducting their analysis by standard methods; Methods for quality assessment of raw materials and products made of it; Basic food security standardization and certification; Is aware of importance of healthy food products and the role of food technologies for safety of human life, in this case under conditions of today's civilization.

Ability to apply knowledge in practice:

Is able: to select and reasoning of technological schemes of agricultural raw material processing; select of machines and apparatus for the implementation of the technological scheme of production and draw up the hardware-technological scheme; Implementation of technical and chemical control over the production of individual products; Management and forecast of microbiological processes; Analysis of the raw materials and finished products using approved standards and special methods; Improve existing technologies based on scientific research and development of new technologies; Use of the obtained knowledge in the process of manufacturing and lead the processing enterprise.

Judgement skills:

Can observe and participate in the experimental processes, collect data, mathematical processing, analyze the results, do the logical reasoning and make conclusions; If necessary, determine the optimal regime for individual technological processes; Evaluate the quality of raw materials and finished products with the results obtained; Find information on the modern technologies of food production, compare the results of own research and create a new kind of food product.

Communicative skills:

Is able to use modern communication technologies to interpret analysis results, preparation and submission of project or other tasks in written and oral form on experimental results, problems and solutions to the society.

Learning Skills:

Critically evaluates his/her knowledge, realizes the specificity of learning process in food technologies, the need to continue further studies and the necessity of renewing knowledge; Can plan and guide his/her studies independently.

Values:

Recognizes the value of processing production for the economic growth of the country, the production of ecologically clean products and strengthening the country's defense capabilities.

Specialization 3. Forestry

Knowledge and understanding:

Has a deep and systemic knowledge: the peculiarities of agricultural production, organizational forms of agricultural enterprises, their displacement, specialization, efficiency and reproduction, management and agricultural marketing issues; The latest methods of research used in the field of forestry and the results of the research; At the evolutionary development phases of park construction and forest-parks; The characteristics of the structural-spatial orientation of the parks, the decorative qualities of the main material - wood plants and grass; Knows the areas covered forests, forestry, breeding forests, wooden foundations (spaces, supplies, etc.); Relatively widespread forest types; The agestructure of forest vegetation formations, the classes of quality of locality, the frequency, the degraded forest areas, and the causes of degradation, the sanitation and the modern methods of forest protection.

Ability to apply knowledge in practice:

Can use the Scientific Research Methods in Agricultural practices, use the knowledge in the construction of forest-parks; Study of the age of vegetation formations, the class of quality of locality, frequency, degraded forest areas, the causes of degradation and the sanitary condition of the grove; Determination of quantitative and qualitative indicators of the renewal process in the most widespread forest types of farming groups.

Judgement skills:

Is able to make concrete conclusions on forest biodiversity, widespread pest and diseases, combatting against them on the basis of analysis of complex and incomplete information (including the latest research).

Communicative skills:

Is able to discuss with the academic or professional community about his conclusions, arguments and research methods to in the field of forestry, taking into consideration academic standards. Prepare detailed written reports on existing problems and solutions, estimate quantitative and qualitative indicators of forest resources, rational multifunctional use of forest resources.

Learning skills:

Based on the knowledge of the latest achievements in the field of forestry, is ready to develop new ideas in learning and similar activities, including research. Can independently plan and conduct the course of his/her studies, and go on studying in doctoral studies.

Values:

Can evaluate and share his/her or others' dependence on the values that are characteristic for the professional activity.
Realizes the role and value of the forest in human life and participates in the establishment of this value. Will implement the record of forest and forest resources through international standards, modern methods that will facilitate precise determination of quantitative and qualitative indicators of natural resources in their continuous use and realization on the international market,

Teaching methods

In the course of achieving learning outcomes, modern techniques of interactive learning and the main activities envisaged by the Doctoral Program curriculum are used. Namely:

In the process of implementation of the educational program for the development of general and sectoral competences envisaged by the program, modern methods and strategies of teaching / learning will be utilized:

- ***Verbal, or oral method*** – Transfer of new material in oral form in a narrative form whereby different methods are used in the context of the content of the subject;
- ***A written working method*** – In the process of the course, the masters are able to make records and summeries;
- ***The method of working on the book*** - method is mainly used in the learning process. Students are willing to work on reproductive works or popular scientific articles for scientific conferences
- ***Discussion/debate*** – One of the most common methods of interactive teaching. discussion process increases the quality of a student's involvement and activity;
- ***Team/Collaborative method*** - this method of teaching involves dividing students into groups and giving them a study task. Members of the group individually elaborate the issue and concurrently share it with other members of the group. Depending on the task determined, it is possible to distribute the functions among the members of the group in the work process. This strategy ensures all students' involvement in the learning process
- ***Case study*** - The professor discusses particular cases during a lecture together with students who fundamentally study the issue, e.g. In the field of agriculture it can be the study of specific harmful insect or disease using laboratory work, etc.
- ***Demonstration method*** – this method implies the visual presentation of information. It is quite effective in terms of achieving the result. In most cases it is better audio and visual materials to be provided to the students simultaneously. The studied material can be demonstrated by a teacher as well as by a student. This method is used during laboratory studies when conducting various experiments, making some drugs, doing tests, studying soils in the field conditions, conducting learning in nature and so forth.
- ***Explanatory method*** – is based on a discussion on the certain issue. In the course of the program, the professor conducts a concrete example, which is discussed in detail within the given topic.
- ***The heuristic method*** - based on a gradual solution to the problem posed before students. This task is carried out through the identifying facts in the study process and linkages between them independently.This method is used to study the basis of the causal consequences of the processes in the living world and the study of its regularities
- ***Action-oriented teaching*** – requires intensive involvement of professors and students in the teaching process whereas practical interpretation of theoretical material is of special significance
- ***Observation (Descriptive) method*** - This method is carried out by studying environmental conditions, soils, plants and their various harmful diseases on practical exercises and identification of species in field conditions.

Student's knowledge evaluation system/criteria:

Students' achievements are evaluated by the Ministry of Education and Science of Georgia on January 3rd of January 5, 2007 and the Decree No102 / n of 18 August, and according to the Regulation Process of St. Tbel Abuseridze Teaching University of Georgian Patriarchate.

Student's semester work is calculated on each subject by 100 points accepted on various activities, group work / seminar / laboratory / practical work, abstracts, presentations, research component, intermediate assessments, final exams and other results provided by the course.

The final assessment of the training course is the fulfillment of the requirements set out in the same course, which is divided into two parts and implies a sum of midterm and final assessments.

Intermediate evaluation of the 100 course scores of the course is 60 and the final exam is 40 points. Intermediate and final assessments consist of assessment components that combine oral and / or written inquiries, exams, practical and theoretical work, assess the student using a number of evaluations that are detailed in the syllabus of training courses.

Intermediate assessment includes: midterm exam - 20 points. The number of midterm exams is determined by the requirements of the content of the specific course. Current evaluation - 40 points. Current evaluation can be made in written or/and oral or combined form. Besides these assessments may be applied to other assessment methods as per the course requirements.

Assessment methods of evaluation, assessment criteria and the rule of accumulation of the corresponding scores shall be determined by the syllabus of a separate course –in frames of the following minimum requirements:

a) Each written survey of the current assessment can be measured at a maximum of 10 points;

b) Each oral survey of the current assessment can be measured at a maximum of 5 points

The minimum competency threshold is 21 points, and the minimum score of the final exam is 20 points.

The student is obliged to attend at least 50% of the lectures, in case it does not apply to the final examination

Student's work is evaluated by the following scheme:

Positive evaluation:

A) A - Excellent 91 - 100 points of maximum evaluation

b) B - Very Good 81 - 90 points of maximum evaluation

C) C - Good 71 - 80 points of maximum evaluation

D) D - Satisfactory 61 - 70 points of maximum evaluation

E) E - Sufficient 51 - 60 points of maximum evaluation

Negative Evaluation

f) FX - Did not pass 41-50 points of maximum evaluation, meaning that a student requires some more work for passing and is given the right to sit an additional examination by means of an independent work;

G) F - Failed 40 and less points of maximum evaluation that means that the work of the student is not sufficient and he/she has to retake the course again.

1. The number of points received in the final exam is not added to the evaluatuon received by the student at the additional exam.

2. The assessment received by the student on the additional exam is the final assessment and will be reflected in the final evaluation of the component of the educational program.

3. In case of obtaining 0-40 points in the additional final evaluation in accordance with the educational component the the student will be awarded the F-0 score.

Master's thesis is evaluated by a 100 - point system (Criteria: Logic, argumentation, reasoning - 30 points, the architectonics of the work - 20 points, presentation skills – 15 points, novelty – 10 points, involvement in the discussion -10, use presentation materials – 10 points) Academic writing, submission and thesis defense rules are defined in accordance with the "Rules of Regulation of the Study Process" established by St. Tbel Abuseridze University of the Georgian Patriarchate

Employment Field

After completing the educational program the graduate will be able to find employment in the Ministry of Agriculture; Food Safety Agency, Food certificate service, ecology Supervision Offices, Special Educational Institutions, Higher Educational Institutions, Scientific Research Institutions, Governmental and NGOs working in the field of biodiversity Conservation, Governmental and non-governmental organizations of Natural Resources and Rational Use and other related organizations.

Possibility to continue learning:

Doctorate Educational Programs

Supporting / necessary resources for learning

Describe the material-technical base of the educational program implementation:

Resources required for implementation

a) Material resources

Material-technical base in the field of specialization: agro technologies, plant protection, forestry, includes the Chakvi and Gvara collective - demonstration plots of the Agro Service Center of the Ministry of Agriculture, research base of the tea subtropical crops and tea undustry research institute (SAU), Batumi Botanical Garden, BSU Agricultural and Membrane Technologies, Phytopathology and Biodiversity Research Institutions, Agro enterprises of Kobuleti, Khelvachauri, Keda, Shuakhevi and Khulo regions, Ltd Kobuleti tea processing plant, Collection of plots of citrus and other subtropical cultures of BSU technological faculty (Green Cape), LEPL Ajara Forestry Agency, Laboratory of Shuakhevi for the Fight Against Forest Disease of plants, ets.

Several auditors of the university are equipped with modern computer techniques that enable Doctorates to use Internet resources, create articles and scientific papers, develop computer skills for their doctoral work, prepare and organize presentations etc.

Apart from this, St. Tbel Abuseridze State University of Georgia is equipped with a large number of study cabinets, library, conference and meeting rooms, modern computers, accessible to media outlets that lead to adequate level of doctoral and handling academic processes.

b) Human Resources:

Implementation of an educational program is provided by highly qualified pedagogical staff, educational disciplines shall be conducted by academic staff of the relevant profile with experience in professional activities and in parallel pedagogic activities in the field of scientific research, practical and methodical work.

1. **Vano Papunidze -** The Member / Correspondent of the National Academy of Sciences. Invited lecturer;
2. **Rezo Jabnidze -** The Academician of the Academy of Agricultural Sciences of Georgia. Invited lecturer;
3. **Rezo Vasadze -** Academic Doctor of Agriculture, Professor
4. **Ruslan Davitadze -** Academic Doctor of Agrarian Sciences, Associated Professor
5. **Nana Jabnidze -** Academic Doctor of Agriculture,Full Professor;
6. **Shota Lamparadze-** Academic Doctor of Agriculture, Invited lecturer;
7. **Guram Chkhubadze -** Academic Doctor of Biology. Invited lecturer;
8. **Tsiuri Gogitidze -** Academic Doctor of Agriculture,Full Professor;
9. **Lamzira Gorgiladze** - Academic Doctor of Agriculture, Invited lecturer;
10. **Galina Meparishvili** - Academic Doctor of Agriculture, Invited lecturer;
11. **Nodari Beridze** - Academic Doctor of Agriculture, Invited lecturer;
12. **Khatuna Khalvashi** - Academic Doctor of Education
13. **Gogita Shainidze –** Master of Physical Geography, certified specialist of Geoinformational Systems (GIS), Invited lecturer.
14. **ბიძინა კოჩალიძე** - Master of Forest Arrangement. Invited lecturer

Curriculum

N	Components	Number of Credits	Number of hours	Including							Credit distribution in terms			
				lecture	Laboratory work.	Practical	Group work	Midtest	Final test	Independent work	I term	II term	III term	term
	Mandatory courses	50												
1	Methods of scientific-research work	10	250	19	8	30		1	2	190		10		
2	Agriculture of Georga	5	125	13			14	1	2	95	5			
3	Biochemistry of plants	5	125	13			14	1	2	95	5			
4	English Language B 1.2	10	250				57	1	2	190	10			
5	Management of Agriculture	5	125	13			14	1	2	95			5	
6	Fruit and vegetable storage and commodity processing	5	125	13			14	1	2	95	5			
7	Pedagogy	5	125	14			13	1	2	95	5			
8	Park construction – Forest parks	5	125	15			15	1	2	95			5	
	Total mandatory courses										**30**	**10**	**10**	
II	**a) Agro technologies**													
II.1	Agro technique of subtropical plants	10	250	28			29	1	2	190		10		
II.2	Plant Integrated Protection	5	125	13			14	1	2	95			5	
II.3	Plant Cellular Engineering	5	125	15			15	1	2	95			5	
II.4	Fertilizer use system and environment	5	125	15			15	1	2	95		5		
II.5	Soils of Georgia	5	125	15			15	1	2	95		5		
II.6	Internship	10	250				88		2	160			10	

II.7	Master Thesis design and defence	30	750				250			500				30
	Total	**70**	3000									**20**	**20**	**25**
III	**b) Forestry**													
III .1	Full Course of Forest Study	5	125	13			14	1	2	95		5		
III .2	Forrest arrangement	5	125	13			14	1	2	95			5	
III .3	Modern methods of forest inventory	5	125	15			12	1	2	95			5	
III .4	Geographical information systems	5	125	13			14	1	2	95		5		
III .5	Forest plant protection	5	125	10			17	1	2	95		5		
III .6	Rational use of forest resources and ecological principles	5	125	12			15	1	2	95		5		
III .7	Internship	10	250				88		2	160			10	
III .8	Master Thesis design and defence	30	750				250			500				30
	Total	**70**	**3000**									**20**	**20**	**25**
IV	**c) Food Technology**													
IV .1	Food prodacts safety	10	250	5	25			1	2	95			10	
IV .2	Food products analysis	5	125	5	25			1	2	95		5		
IV .3	Microbiology of food products	10	250	15	45			1	2	190		10		
IV .4	Standardization and certification of food products.	5	125	5	25			1	2	95		5		
IV .5	Internship	10	250				88	1	2	10			10	
IV .6	Master Thesis design and defence	30	750				250			500				30
	Total	**70**	**3000**									**20**	**20**	**30**

Map of outcome

N	Components	Number of Credits	Field competences					
			Knowledge and understanding	Ability to aply knowledge in practi	Judgment skills	Communicative skill	Learning skills	Values
1	Methods of scientific-research work	10	X	X	X		X	
2	Agriculture of Georga	5	X	x				
3	Biochemistry of plants	5	X	X				
4	English Language B 1.2	10	x	x		X		
5	Management of Agriculture	5	x	x	X			
6	Fruit and vegetable storage and commodity processing	5	X	X	X	X	X	X
7	Pedagogy	5	X	X	X		X	X
8	Park construction – Forest parks	5	X	x				
	Optional Specialty Training Courses							
	a) Agro technologies							
1	Agro technique of subtropical plants	10	X	X	X			
2	Plant Integrated Protection	5	X	X	X	X		
3	Plant Cellular Engineering	5	X	X	X			
4	Fertilizer use system and environment	5	X	X	X			
5	Soils of Georgia	5	X	X				
6	Internship	10	x	x	X	X		

	b) Forestry							
1	Full Course of Forest Study	5	X					
2	Forrest arrangement	5	X	X	**X**			
3	Modern methods of forest inventory	5	X	X	**X**	**X**	**X**	**X**
4	Geographical information systems	5	X	X				
5	Forest plant protection	5	**X**	**X**	**X**	**X**		
6	Rational use of forest resources and ecological principles	5	**X**					
7	Internship	10	**X**	**X**	**X**			
8	Master Thesis design and defence	30	X	X	X	X	X	X
	c) Food Technology							
1	Food prodacts safety	10	X	X	**X**		**X**	**X**
2	Food products analysis	5	X	X	**X**	**X**	**X**	**X**
3	Microbiology of food products	10	X	X	**X**			
4	Standardization and certification of food products.	5	X	X	**X**	**X**	**X**	**X**
5	Internship	10	X	X				**X**
6	Master Thesis design and defence	30	**X**	**X**	**X**	**X**	**X**	**X**