



**Τμήμα
Δασολογίας και Φυσικού Περιβάλλοντος**

**Ξενόγλωσσο
Προπτυχιακό Πρόγραμμα Σπουδών**

**β.
Εσωτερικός Κανονισμός Λειτουργίας
του ΞΠΠΣ
(Απόφαση Συγκλήτου) (eng)**

Ιανουάριος / 2026

Internal Regulation of the Undergraduate Program of Studies in English (EUPS) entitled "Bachelor in Forestry and Natural Environment" of the School of Forestry and Natural Environment of the Faculty of Agriculture, Forestry and Natural Environment of the Aristotle University of Thessaloniki

Preamble

The first cycle of studies involves attending an Undergraduate Programme (U.P.) and is completed with the award of an Undergraduate degree. Successful completion of the programme leads to the award of a level six (6) degree, in accordance with the National and European Qualifications Framework, i.e., a basic university degree (Bachelor's).

This Undergraduate Studies Regulation are drafted in accordance with the provisions of Chapter Z of Law 4957/2022 (Government Gazette A, 141/21.07.2022) "New Horizons in Higher Education Institutions: Enhancing the quality, functionality and connection of HEIs with society and other provisions" concerning the organization and operation of study programmes, as well as Chapter IA of the same law, which specifically concerns Undergraduate Program of Studies in Englishs. Furthermore, it is harmonized with the Regulation for the Operation of Undergraduate Programmes of the Aristotle University of Thessaloniki, ensuring that the provisions herein are in line with the current institutional framework.

Article 1

Subject Matter, Purpose of the EUPS

The School of Forestry and Natural Environment of the Aristotle University of Thessaloniki organizes and operates a Undergraduate Program of Studies in English (hereinafter referred to as EUPS) with the subject of Forestry and Natural Environment Studies, as defined by the Science of Forestry and Natural Environment, which is **a full four-year course of study** and leads to the award of a Bachelor's Degree in Forestry and Natural Environment (**formal title: "Bachelor in Forestry and Natural Environment" (BScFNE)**).

The subject of the Undergraduate Program of Studies in English is the science of forestry and the natural environment. The Programme provides students with the necessary knowledge and skills to pursue careers in forestry and, more generally, in natural resource management and protection, as well as any other professional or academic activity that requires training in forestry.

The aim of the programme is to provide high-level forestry education to an international audience, so that upon graduation, students will be able to address the challenges of applying the science of forestry and the natural environment and conduct research. The programme aims to prepare graduates to contribute positively to the development of international forestry with respect to the protection and sustainable management of forests and the natural environment, as well as to the utilization of forest products, strictly adhering to the fundamental principle of sustainability while serving the multiple purposes of forestry. It also aims to prepare graduates for

the development of entrepreneurship in the forestry sector, the bioeconomy, the implementation of agroforestry systems, the management and improvement of grassland ecosystems, the establishment and management of wildlife and fish farms, the establishment, administration, and operation of forest industries for the utilization of wood and biomass, as well as the establishment and management of commercial forest plantations. Finally, the Programme aims to strengthen critical thinking and scientific depth, promoting Greek forestry and the sustainable management of complex natural ecosystems, as well as generally strengthening the extroversion of the School of Forestry and Natural Environment and Aristotle University of Thessaloniki.

Learning outcomes and qualifications. Upon successful completion of the EUPS of the School of Forestry and Natural Environment, students will have acquired:

- Comprehensive theoretical knowledge in all key areas of Forestry and Natural Environment.
- Skills in applying theory to forestry practice, management, and protection of the natural environment through practical training in the forest.
- Skills in managing all types of forest ecosystems (natural and artificial), applying new technologies for monitoring and assessing ecosystem productivity, applying optimal methods for monitoring and protecting forest ecosystems, species and genetic resources.
- Skills in establishing and operating forest plantations to produce timber, biomass, woody and non-woody forest products, edible forest fruits, aromatic and medicinal plants, farmed wildlife and fish species, drafting of grazing management plans.
- Skills in forest clearing, natural hazard management, such as hydrological management of catchment basins, flood risks, forest fires, and stress from biotic and abiotic factors, as well as drafting environmental impact studies, taking into account the climate crisis.
- Skills in understanding complex forestry and environmental scientific texts, as well as the ability to analyze and synthesize forestry and environmental issues.
- Application of the principles of sustainability in forestry practice to serve the multiple purposes of forestry.
- Ability to continue studies in the second cycle (Master in Forestry and Natural Environment or related postgraduate programme).

The programme provides students with the academic prerequisites for continuing their studies at postgraduate and then doctoral level and the professional prerequisites for their careers in fields that require documented knowledge of the science of forestry and the natural environment, while the degree awarded is equivalent to Bachelor in Forestry or Bachelor in Forestry and Natural Environment degrees awarded by foreign universities.

Article 2

Title awarded by the EUPS

The School of Forestry and Natural Environment of Aristotle University of Thessaloniki awards a Bachelor in Forestry and Natural Environment.

Successful completion of the programme corresponds to level six (6) of the National and European Qualifications Framework, in accordance with the provisions of Article 47 of Law 4763/2020 (Government Gazette A' 254).

Article 3 Bodies of the EUPS

The bodies responsible for the organization, administration, and operation of the Undergraduate Program of Studies in English of the School of Forestry and Natural Environment are as follows:

1. The Senate of Aristotle University of Thessaloniki
2. The Program Steering Committee of the EUPS of the School of Forestry and Natural Environment
3. The Director of the EUPS of the School of Forestry and Natural Environment
4. The Assembly of the School of Forestry and Natural Environment, which is responsible for organizing the EUPS

More specifically:

1. **The Senate of the Institution** exercises the following powers:

1. Approves the establishment of the EUPS, upon the recommendation of the School's Assembly, as well as the amendment of the decision to establish the EUPS, upon the recommendation of the Program Steering Committee.

2. It approves the Internal Regulation of the EUPS, following a recommendation by the School's Assembly, as well as any amendments thereto, following a recommendation by the Program Steering Committee.

3. Establishes the EUPS' Program Steering Committee and appoints the Director of the EUPS, following a recommendation by the School's Assembly.

4. Approves the abolition of the EUPS, following a recommendation by the School's Assembly.

5. Exercises any other authority relating to academic, administrative, financial, and organizational matters of the EUPS that are not specifically assigned to other bodies by this document.

2. **The Program Steering Committee of the EUPS of the School of Forestry and Natural Environment** consists of seven (7) members of members of Teaching and Research Staff (TRS) of the School, of which at least two (2) TRS members are Full Professors or Associate Professors. The Committee has a four-year term and is formed by a decision of the University Senate, following a recommendation by the School's Assembly. The members of the Committee do not receive any compensation for their administrative duties. The EUPS Program Steering Committee exercises the following powers:

1. It makes recommendations to the Senate regarding amendments to the decision establishing the EUPS, as well as any other matter related to its operation, for which the Senate is the competent body.

2. Distributes teaching duties among the lecturers of the EUPS

3. Prepares the annual budget of the EUPS

4. It approves all types of expenses for the operation of the EUPS

5. Confirms the successful completion of studies to award the EUPS title.

6. Exercises any other authority related to the organization, administration, and management of the EUPS programme.

3. The Head of the School of Forestry and Natural Environment is appointed **Director of the Undergraduate Program of Studies in English**, with the aim of ensuring a unified strategy

and administrative supervision and targeting of the Greek and Foreign Language Study Programmes. The Director exercises, indicatively, the following responsibilities:

1. Chairs the Program Steering Committee and convenes its meetings
2. Makes recommendations to the Program Steering Committee and other bodies of the University on issues related to the effective operation of the EUPS
3. Is the Scientific Supervisor of the EUPS, in accordance with Article 234 of Law 4957/2022.

4. Coordinator of the Undergraduate Program of Studies in English of the School of Forestry and Natural Environment. By decision of the Program Steering Committee, a Programme Coordinator may be appointed for a period equal the Programme's duration. The Coordinator is a Faculty Member of the School of Forestry and Natural Environment and works closely with the Program Steering Committee and the Director, undertaking coordination and organizational tasks under their supervision. The Coordinator exercises, indicatively, the following responsibilities:

1. Monitors the smooth daily operation of the Programme and ensures the timely implementation of the decisions of the Committee and the Director
2. Organizes the schedule and communication with the lecturers
3. Cooperates with the Secretariat of the EUPS on issues related to the operation of the Programme
4. Ensures that the students are informed about the curriculum, assessment procedures, mobility, scholarship opportunities, and any other academic or administrative issues
5. In coordination with the Secretariat of the EUPS, drafts and submits regular reports to the Committee and the Director on the operation of the Programme
6. Represents the Programme in administrative and/or academic contacts with bodies within and outside the Aristotle University of Thessaloniki, following a relevant decision by the Committee or the Director
7. Exercises, upon authorization by the Committee, any other authority assigned to the Director by this Regulation.

Article 4

Categories of Candidates for the EUPS of the School of Forestry and Natural Environment

Foreign candidates who are eligible to apply are:

a) Graduates of high schools or equivalent schools headquartered abroad. Interested parties, provided they have completed the last two (2) years of high school or equivalent school in a foreign country, must submit a high school diploma or other equivalent secondary education qualification that entitles them to the admission to higher education institutions in the country in which they graduated.

b) Graduates of a recognized foreign school in other European Union member states or third countries, which is legally established and operates in Greece, whose qualification entitles them to the admission to higher education institutions located in the country whose educational programme is followed by the foreign school from which they graduated, provided that:

- (ba)** they and their parents do not have Greek citizenship and
- (bb)** they have attended at least the last two (2) years of high school in full-time education.

c) Students of Forestry and/or Natural Environment at higher education institutions abroad who hold the certificate referred to in paragraph 1 of Article 314A of Law 4957/2022, in order to continue their studies in the corresponding semester and be awarded a degree by the EUPS of the School of Forestry and Natural Environment of the Aristotle University of Thessaloniki.

Foreign schools in Greece must be recognized as legally operating by the local Secondary Education Directorate.

The authenticity of the high school diploma and the candidate's detailed grades can be verified:

1. with an Apostille stamp, provided that the country of origin of the documents is a member of the Hague Apostille Convention,
2. with a notary's certification (notarial act),
3. with certification by the Ministry of Foreign Affairs and/or the Ministry of Education of the issuing country,
4. by submitting the diploma and/or detailed transcript and simultaneously informing the foreign school by the interested party. The notification is accompanied by an official email from the foreign school, enabling the Secretariat of the EUPS to verify the authenticity of the documents in question.

Proof of English language proficiency

Applicants must demonstrate proficiency in English at least at level B2, according to the Common European Framework of Reference for Languages (CEFR), in one of the following ways:

1. English as their first language.
2. Possession of a language proficiency certificate of at least level B2 from a recognized examination body, in accordance with the applicable decisions of the Supreme Council for Personnel Selection (ASEP) or the Ministry of Education on recognized language proficiency certificates.
3. Degree from a Department of Foreign Languages and Literature or a Department of Foreign Languages, Translation, and Interpreting in Greece, or an equivalent qualification from a recognized institution abroad.
4. Bachelor's/Master's/Doctorate degree from a recognized foreign university, provided that the programme is conducted entirely in English.
5. High school diploma, provided that the candidate has attended at least the last two (2) years of secondary education at a school where the official language of instruction is English.
6. A foreign language teaching certificate does not constitute proof of knowledge of that language, as it is necessary to submit a certified degree on the basis of which the certificate was issued, as well as an official translation of it, if required.

Article 5

Number of Admissions, Selection Criteria, and Required Documents

The **annual number of students admitted** to the EUPS of the School of Forestry and Natural Environment is set **at a maximum of thirty (30)** undergraduate students, while the minimum number of students admitted is set at twenty (20) undergraduate students. By decision of the Program Steering Committee, the minimum number of admissions may be changed in each cycle of the Programme.

In the event of a tie between candidates, those who are tied with the last successful candidate are admitted to the EUPS, according to their evaluation ranking **and until the maximum number (30) is reached**.

The **selection** of admitted students is based on the candidates' CVs, following evaluation of their files and supporting documents by the Program Steering Committee and the candidates' participation in the selection process. This includes an online interview conducted by members of the Committee, which assesses communication and reasoning skills, academic and personal readiness, and general understanding of issues related to forestry and the natural environment. By decision of the Program Steering Committee, which is referred to in the announcement, an English comprehension test may be conducted prior to the interview, in a form and on topics to be determined each time by the said decision.

Applications are submitted electronically throughout the year and until the available places are filled. Prospective students are invited to submit their applications, accompanied by the necessary supporting documents, to the Secretariat of the EUPS in electronic form. The English language test and interviews are conducted on predetermined dates set by the Program Steering Committee, while the evaluation order follows the chronological order of the receipt of applications. The relevant announcement and the corresponding required supporting documents are published on the Programme's website.

Applicants must submit the following **supporting documents**:

- Application form for participating in the EUPS, available in electronic form on the Programme's website
- Photocopy of both sides **of the ID Card or Passport**
- High school **diploma** (with official translation into English)
- **Detailed transcript** of all courses taken in the final year of high school (with official translation into English)
- Certificate of **English language** proficiency at least at level **B2**
- **Motivation letter** of up to five hundred (500) words, presenting the candidate's interest in forestry and the natural environment, their motivation for studying the programme, and their future goals
- A **brief CV** including information on studies, distinctions, volunteer work, or other activities related to the subject.

The above-described candidate selection criteria and supporting documents may be revised following a proposal by the Program Steering Committee and approval by the Senate of the Aristotle University of Thessaloniki.

In addition, the following optional academic criteria are taken into account positively in the evaluation of the candidate's file:

- Minimum overall high school diploma grade: **sixty-five percent (65%) of the maximum grade** or equivalent
- Possession of admission test certificates for higher education, such as:
 - *International Baccalaureate (IB)*: at least **28/45**,
 - *GCE A-levels*: at least **BBB** in three subjects, with particular emphasis on subjects such as Biology, Physics, Chemistry, Mathematics, English
 - *Advanced Placement (AP)*: Grade 4 or 5 in relevant subjects such as Environmental Science, Biology, Statistics, Physics (Algebra-based), Calculus, Chemistry, Micro-economics, English Language and Composition
 - *SAT / ACT*: **SAT**: $\geq 1000/1600$ **ACT**: $\geq 22/36$

- *TSA (Thinking Skills Assessment)*: $\geq 65/100$ or raw score $\geq 27/50$

Additional criteria are taken into account for the evaluation and selection of candidates, which are defined and may be revised upon recommendation of the Program Steering Committee and in accordance with the applicable legal framework.

The relevant original documents, if deemed necessary, may be requested from the candidate to be sent by mail or submitted in person to the Secretariat of the EUPS.

The **final selection process for candidates** to the Programme is carried out by the Program Steering Committee, as follows: The Committee compiles a complete list of all candidates and, after the relevant review, it rejects those who do not meet the minimum criteria set by the Law and the Programme and invites the shortlisted candidates who have submitted the required supporting documents to an interview. After completion of the process [evaluation based on the supporting documents, the interview, and the knowledge test (if applicable)], the final list of successful candidates is drafted.

The **final list of successful candidates** and any alternates is validated by the Program Steering Committee. The candidate selection process, the publication of the results, and the registration of successful candidates must be completed by September 30 of each academic year, subject to the filling of vacancies arising from students who voluntarily withdrew from the Programme by discontinuing their studies. These places are filled in order of priority from the list of alternates compiled by the Program Steering Committee during the evaluation of applications.

In addition to the above, the opportunity of admission to the EUPS of the School of Forestry and Natural Environment of the Aristotle University of Thessaloniki is provided to Forestry and/or Natural Environment students at higher education institutions abroad who hold a certificate of successfully evaluated periods of study, which have been completed at a recognized higher education institute abroad (paragraph 1 of Article 314A of Law 4957/2022, as amended by Article 128 of Law 5094/2024), in order to continue their studies and be awarded the corresponding degree.

Students must submit an application with the required supporting documents to the Secretariat of the EUPS in printed or electronic form, through the Electronic Registration Information System of the Ministry of Education, Religious Affairs and Sports.

Filling vacant positions

In the event of a student's withdrawal or expulsion, the Program Steering Committee may, by a specially justified decision, fill the vacant position, exceeding the number of thirty (30) admissions for the corresponding year, in order to ensure the smooth operation of the Programme by maintaining a stable number of students in each year of study.

The position may be filled by students of Forestry and/or Natural Environment who are studying in the same or higher semester at internationally recognized higher education institutions abroad.

Candidates may be selected either from among those who applied in the initial application cycle or through a separate public call.

Interested parties are requested to submit the following supporting documents:

- Copy of ID or passport,
- High school diploma (original and official translation into English),
- Transcript of all grades from the final year of high school (original and official translation into English),
- Detailed transcript from the school of origin,

- Official curriculum of the school of origin for academic equivalence verification,
- Proof of English language proficiency in accordance with the relevant section of Article 4 of this Regulation,
- Letter of interest, and
- Curriculum vitae.

The Committee evaluates the candidates' files and may invite them to an interview before issuing its final decision.

Appeals against the results may be submitted within five (5) working days of the notification of the results, by written request to the Secretariat of the EUPS.

The registration of successful candidates takes place following a relevant announcement by the Secretariat of the EUPS within fifteen (15) days, with the submission of any necessary supporting documents. If a candidate does not enrol within the specified deadline by paying the relevant advance tuition fees, this will be considered a refusal to accept the place, which will be filled by the next candidate on the reserve list.

It should be noted that applications and the possible acceptance of candidates relate exclusively to the academic year specified in the relevant call for applications. There is no provision for provisional admission for subsequent academic semesters or years, regardless of the reason, including, but not limited to, military service or personal obligations. Candidates who wish to study in a subsequent year must reapply in the next cycle and the corresponding call for applications.

Exceptionally, the Program Steering Committee may, by reasoned decision, approve the postponement of the start of studies for one academic year, provided that there are serious reasons and they are sufficiently documented by the candidate. The decision on whether to grant the postponement is at the sole discretion of the Committee.

Article 6

Duration and Conditions of Study at the EUPS

The duration of study at the EUPS leading to a degree in Forestry and Natural Environment Science is set at **eight (8) academic semesters** of full-time study.

The program for each semester course lasts thirteen (13) weeks and consists of lectures, assignments, etc., depending on the requirements of the course and the choice of the respective lecturer.

All courses are conducted **in person**, utilizing the infrastructure of the School of Forestry and Natural Environment, including the facilities of the Aristotle University of Thessaloniki's University Forests in Pertouli, Trikala, and Taxiarchis, Chalkidiki. The use of **synchronous distance learning** methods is provided, on an exceptional basis, for teaching activities carried out with the participation of professors from foreign institutions or collaborating professors, in cases of force majeure or exceptional circumstances, where it is not possible to conduct the educational process in person or to use the infrastructure of the School of Forestry and Natural Environment for educational, research and other activities, as well as for the organization of in-depth courses and tutorial exercises, beyond the compulsory teaching hours per course. Distance learning courses are conducted using ICT, utilizing the material and technical infrastructure of the School of Forestry and Natural Environment and the University Forests, as well as the expertise and support of the Digital Governance Unit (D.G.U.) of the Aristotle University of Thessaloniki.

The minimum duration of study at the EUPS for awarding the degree is eight (8) academic semesters, while the maximum duration of study is defined as this period plus four (4) academic semesters.

After completing the maximum duration of study [twelve (12) semesters], and subject to the provisions in force at any given time in accordance with the applicable legislation on Higher Education Institutions, a decision to remove the student from the programme is issued by the competent body of the EUPS

Once registration has been completed and all the procedures relating to the formal commencement of studies have been completed, students who have not exceeded the maximum period of study specified in paragraph 1 may apply for a leave of absence for a period not exceeding a total of two (2) academic years. The right to suspend studies may be exercised once or in instalments for a period of at least one (1) academic semester, but the duration of the interruption may not exceed a total of two (2) years if granted in instalments. Student status is suspended during the period of interruption of studies and participation in any educational process is not permitted. The period of interruption of studies is not counted towards the maximum duration of normal studies, and upon resumption of studies, students return to normal study status with all the rights and obligations provided for in the Programme. The relevant procedure is initiated by a written request from the student concerned to the Secretariat of the EUPS, accompanied by the necessary documents, as appropriate, and is evaluated by the Program Steering Committee.

For serious health reasons relating to the student or a first-degree relative, spouse, or person with whom the student has entered into a cohabitation agreement, an exception may be made to exceed the maximum duration of study, which shall not exceed one (1) year. This extension is approved by the Program Steering Committee, following a fully justified and adequately documented request by the student, and may not exceed two (2) consecutive academic semesters.

Part-time study is not available in the EUPS

For issues of re-examination of courses in outstanding courses or withdrawal for reasons such as:

a) insufficient progress by the student (as evidenced by lack of participation in the educational process: attendance, exams),

b) behaviour that violates academic ethics, and

c) the student's own request,

the Program Steering Committee shall decide on the conditions for re-examination and the reasons for expulsion.

Article 7

Student Rights and Obligations

Within the framework of the social policy of the School of Forestry and Natural Environment, in collaboration with the Equal Access Unit of Aristotle University of Thessaloniki, full, equal and meaningful participation of all students with disabilities or special educational needs in all educational, research, and administrative activities of the Faculty in general and the EUPS in particular.

Access to the teaching and examination areas of the School of Forestry and Natural Environment is facilitated by appropriate infrastructure, such as ramps, special bars, and elevators. Students who, due to disability or learning difficulties, are unable to participate in written examinations are given the opportunity to take an oral examination either in person in an accessible room or remotely via a digital teleconferencing platform.

Students enrol and participate in the EUPS under the terms and conditions set out in this Regulation. Students in the programme have **all the rights**, benefits, and facilities provided for students in the Greek-language programme, **except for** the right to free textbooks.

Students admitted to the EUPS **are required to:**

1. Attend all courses of the Curriculum, regardless of whether they are conducted in person or, exceptionally, remotely, provided that the latter has been approved by the competent bodies of the Programme. Participation in courses, exercises, exams, public lectures, and other educational activities is mandatory. Students are entitled to an absence of up to thirty percent (30%) of the total teaching hours of each course per semester. In the event of a serious and justified impediment, it is possible to make up for the teaching hours, after consultation with the lecturer and with the approval of the Program Steering Committee.

2. Submit the required assignments on time, if these are specified in the course by the lecturer.

3. Select in a timely manner, at the beginning of each semester, any courses from previous years that have not been successfully completed. Selections are registered electronically through the electronic secretarial service and are included in the student's individual file.

4. To purchase or borrow the necessary textbooks, based on the recommendations of the instructor of each course, if deemed necessary.

5. To systematically follow the announcements of the Programme and the Secretariat of the EUPS, regularly checking their electronic mail.

6. Issue an academic ID card through the relevant electronic service of the Ministry of Education, Religious Affairs and Sports.

7. Pay tuition fees on time before the winter and spring semesters of each academic year, in accordance with the deadlines set.

8. They must have settled any financial or other outstanding issues with the Programme and the Foundation before their graduation. Otherwise, they are not entitled to participate in the graduation ceremony.

9. In the case of a work-study scholarship, they must provide the required work, which may involve supporting the educational or research activities of the Programme, the library, or other needs of the Faculty.

10. Respect the decisions of the Programme's bodies and adhere to the rules of academic ethics.

Systematic or serious violation of the obligations arising from this Regulation, without sufficient and documented justification, may result in failure of a course or, in serious cases, exclusion from educational activities and/or expulsion of the student from the Programme, following a decision by the Program Steering Committee.

The same penalty may be imposed in cases of disciplinary offenses that offend the academic community and the dignity of its members, such as sexist, racist, homophobic, or transphobic behaviour, verbal or physical violence, inappropriate behaviour on university premises, as well as any action that is contrary to the principles of respect, equality, and inclusion. Finally, the Committee reserves the right to refer relevant cases to the competent disciplinary bodies of the Institution or, if there are grounds for doing so, to forward them to the competent authorities of the legal system, in accordance with the applicable legislation.

Article 8

Curriculum - Course Content - Assessment

The Undergraduate Program of Studies in English (EUPS) "Bachelor in Forestry and Natural Environment" offers a unified, full-time curriculum lasting four (4) academic years, structured into eight (8) academic semesters. The programme includes a total of forty (40) courses, all of which are mandatory. Specifically, students are required to attend and successfully pass forty (40) mandatory courses, from which they will accumulate two hundred and forty (240) credit units (ECTS) during their studies.

Teaching is conducted in person, with the use of digital support for educational material and communication between students and teachers, provided by the Aristotle University of Thessaloniki e-learning platform. Attendance at courses is compulsory, and absences exceeding thirty percent (30%) of the teaching hours of each semester are not permitted, unless there are documented reasons of force majeure.

The academic year is divided into two (2) semesters (winter and spring), each of which consists of thirteen (13) weeks of teaching, with an examination period at the end of each semester. Successful completion of studies requires the accumulation of two hundred and forty (240) ECTS credits.

The language of instruction for all courses is English.

The programme does not include a mandatory internship. However, students will attend lectures and participate in practical training at the two University Forests (Taxiarchis in Chalkidiki and Pertouli in Trikala) during the month of May of the 4th and 6th semesters, as part of specific courses during the spring semester, as well as through educational field trips. In addition, counselling support and opportunities to participate in research projects related to forestry and natural environment management applications are offered.

Curriculum

Code	CURRICULUM Mandatory Courses	Hours/week	ECTS
1st Semester		25	30
FNE11	Applied Statistics and Modeling in Forestry	5	6
FNE12	Ecology, Sustainability and Climate Change	5	6
FNE13	Meteorology and Climatology	5	6
FNE14	Forest and Environmental Informatics	5	6
FNE15	General Soil Science	5	6
2nd Semester		25	30
FNE21	Environmental Pollution	5	6
FNE22	Wood Structure and Properties	5	6
FNE23	Topography	5	6
FNE24	General Hydraulics and Hydrology, Potamology	5	6
FNE25	Forest Botany I (Plant Morphology – Systematics and Taxonomy)	5	6

3rd Semester**25****30**

FNE31	Plant Physiology	5	6
FNE32	Forest Soil Science	5	6
FNE33	Forest Protection from Biotic Factors	5	6
FNE34	Forest Road Construction	5	6
FNE35	Forest Botany II (Trees and Shrubs – Geobotany)	5	6

4th Semester**25****30**

FNE41	Wildlife Biology	5	6
FNE42	Forest Biometrics and Mensuration	5	6
FNE43	Inland Water Applied Ichthyology	5	6
FNE44	Forest Economics	5	6
FNE45	Wood Chemistry and Chemical Products (Bioenergy and Biofuels)	5	6

5th Semester**25****30**

FNE51	Forest Genetics	5	6
FNE52	Wildlife Ecology, Conservation and Management	5	6
FNE53	General Silviculture (Forest Ecology)	5	6
FNE54	Wood Technology	5	6
FNE55	Wildland Fire Ecology and Rehabilitation	5	6

6th Semester**25****30**

FNE61	Genetic Improvement of Forest Tree Species	5	6
FNE62	Applied Silviculture	5	6
FNE63	Wildland Fire Suppression and Management	5	6
FNE64	Geographic Information Systems – Geospatial Analysis	5	6
FNE65	Mountain Hydromonics	5	6

7th Semester**25****30**

FNE71	Rangeland Science	5	6
FNE72	Forest Management Planning	5	6
FNE73	Remote Sensing of Environment	5	6
FNE74	Harvesting of Forest Products	5	6
FNE75	Forest and Environmental Policy	5	6

FNE81	Nature Conservation, Landscape Planning and Urban Greening	5	6
FNE82	Agroforestry: Climate and Ecosystem Services	5	6
FNE83	Reforestation, Forest Nurseries, and Ecological Restoration	5	6
FNE84	Forest Recreation	5	6
FNE85	Conservation of Forest Genetic Resources	5	6

CONTENT OF COURSES
(All courses are mandatory)

FNE11 – Applied Statistics and Modeling in Forestry

Introduction: Statistics as a concept and science throughout time. Forest Biometrics as a branch of applied Statistics today. Introduction to the statistical programming language R. Introduction to the statistical package IBM® SPSS® Statistics (SPSS). Introductory statistical definitions. *Statistical Data Pre-Processing:* Methods and means of collecting primary data, pre-processing process, Exploratory Data Analysis (EDA), Figures and Tables. *Empirical Frequency Distributions. Location Measures-Measures of Dispersion:* arithmetic mean or average, weighted arithmetic mean, trimmed mean, geometric mean, harmonic mean, quadratic mean, M-estimators, median, mode, quantiles, range, inter-quartile range, mean absolute deviation, variance, coefficient of variation, coefficient of quartile variation, Lorenz curve. *Measures of Skewness and Kurtosis:* skewness, kurtosis. *Probabilities, Probability Distributions:* Basic definitions and concepts of probability theory – basic notation, statistically independent events, conditional probability, Bayes' theorem or Bayes' law or Bayes' rule, Combinatorial analysis, random or stochastic variable, binomial distribution, Poisson distribution, Normal and standard normal distribution, chi-squared distribution, t-distribution or Student-distribution, F-distribution. *Statistical Inference - Hypothesis Testing:* Basic theory, ANOVA, one-way ANOVA, two-way ANOVA, factorial ANOVA. *Correlation - Regression:* covariance, correlation, partial correlation, simple linear regression, multiple linear regression, nonlinear regression, Ridge regression analysis, Lasso regression. *Categorical Data Handling:* goodness of fit test, Chi-square test for independence/of association, Test of Homogeneity, binomial logistic regression, Cluster Analysis, K-modes, Hierarchical clustering, Factorial Analysis of Mixed Data, Validity and Reliability of a questionnaire. *Non-Parametric Tests:* Wilcoxon Signed-Rank test, Wilcoxon Rank-Sum test, one sample Kolmogorov-Smirnov test, Kruskal-Wallis H test, Friedman test.

FNE12 – Ecology, Sustainability, and Climate Change

Introduction to the science of Ecology, definitions. Auto-ecology (relationships and interactions between organisms and ecological and environmental factors). Population ecology (population concept, population characteristics, patterns of population change, population regulation mechanisms). Synecology: Ecosystem definition, analysis of ecosystem structure and function. Factors affecting ecosystem stability. Productivity of various natural ecosystems. Biogeochemical cycles: Nitrogen (N), Phosphorus (P), carbon cycle (C), Greenhouse effect and Global warming. Biodiversity, levels (categories) of biodiversity, value of biodiversity and basic principles for its preservation and enhancement. Academic approach of Sustainability, human societies and natural resources. Sustainable goals. Climate change and impacts on natural

ecosystems. Carbon Cycle–Climate Feedback. Global warming and ecosystem degradation. Anthropogenic Land Use and Land-Cover Change. Carbon sequestration. Forest contribution to climate change mitigation.

FNE13 – Meteorology and Climatology

Meteorological instruments, general knowledge of their function, organization of a meteorological station, processing of meteorological data. Atmosphere: Structure, perpendicular movement, general circulation, radiation, sunshine period, radiation laws. Temperature of earth surface. Relief effect on temperature. Air humidity: evaporation, condensation, showers, fog, dew, white-frost, frost. Atmospheric pressure, general and local winds. Climatic classifications, climatograms, and climate indices. Geographic climate factors, sunshine period, cloudiness, days of rain. Rain measurement systems. Case study: Climate types of Greece. Description and appearance frequency. Climate change.

FNE14 – Forest and Environmental Informatics

Introduction to computers, computer systems, types of data files, information systems, operating systems, principles and goals of programming, flowcharts and algorithms, structured programming, introduction to programming languages, programming language C++, commands and programming techniques. Solving forest problems with MS Excel. Forest Informatics, Environmental Informatics, Green Informatics use in forestry, environmental protection, sustainability, and climate change. Smart and Green Transition. Technologies for Green Policies for sustainability, energy sustainability, and smart green cities. Applications of contemporary software in forest and natural environment. ICT apps for smart green city, smart devices, smart apps for the forest, the environment, sustainability, achievement of 17 sustainable Development Goals and confrontation and mitigation of climate change.

FNE15 – General Soil Science

Functions of soils in our ecosystem. Minerals and rocks from which the soils are formed. Factors and processes of soil formation. Physical properties of the soils. Soil moisture and its importance for plant growth. Soil chemical properties and soil fertility. Cation exchange capacity. Origin of soil acidity. The general chapters of the course are: (a) The soils around us; (b) Formation of soils from parent materials; (c) Soil classification; (d) Soil architecture and physical soil properties; (e) Soil water characteristics and behavior; (f) Soil and the hydrologic cycle; (g) Soil aeration and temperature; (h) The colloidal fraction: Basics of soil chemical and physical activity; (i) Soil acidity.

FNE21 – Environmental Pollution

Pollution of forests and natural ecosystems in general. Deterioration of the composition or physical state of the environment. Direct or indirect introduction of pollutants into the atmosphere, water, and soil, due to human activity, which may potentially affect human health or the environment. Impact of organic compounds on the ecosystem. Mining activities. Effects of acid rain. Biological damage to forests. Ecosystem protection measures for sustainable development. Organic farming. Practices for the protection and restoration of polluted areas.

FNE22 – Wood Structure and Properties

Natural, macroscopic characteristics and identification of basic wood species. Transverse, radial, and tangential surface. Physical characteristics of wood: Color, gloss, odor, taste, texture,

design, weight, hardness. Microscopic structure: Wood tissues, cell walls and cavities, intercellular layer, pits. Description of cell types of coniferous and deciduous species. Intercellular spaces and ducts. Chemical composition and infrastructure of wood: inorganic components, organic components, and extractives. Microfiber structure and basic theories related to wood infrastructure. Cell wall structure, pits, warty layer. Distribution of chemical components in the cell walls of wood and effects on its properties and uses. Wood production mechanism: Production of new wood cells. Importance and action of the cambium. Evolution stages of wood cells. Variability and structural defects. Horizontal and vertical variability. Heartwood formation. Immature, mature, and overripe wood. Growing rings. Variability between trees. Structural defects. Deviations a) the formal external form b) the responsibility. Irregular structure of growth rings. Compressed and tensile wood. Tissue discontinuations, color abnormalities, knots, and pith. Density: Factors affecting it, density variability, determination, and importance. Hygroscopicity: Ways of retaining moisture in the wood, adsorption - desorption. Equilibrium moisture content. Fiber saturation point. Determination and importance of the hygroscopicity of wood. Wood shrinkage and swelling. Identification and their importance. Mechanical, thermal, electrical, and acoustic properties. Factors that affect them and their identification.

FNE23 – Topography

Basic principles and concepts in surveying. Elements of Geodesy. Coordinates geometry. Geodetic reference systems. Units of measurements. Methods and instruments for distance and slope measurement. Methods and surveying instruments for coordinates, angles, azimuth, bearing, and leveling measurements as well tree height. Traversing. Theory of errors. Methods of measuring area. Projections and mapping. Principles and use of GPS. Design of topographic diagram.

FNE24 – General Hydraulics and Hydrology, Potamology

General Hydrology: Hydrological cycle, hydrometeorology, water balance, hydro-measurements analysis. Precipitation origin, measurements, analysis and prognosis of rain and snow, evaporation and transpiration. Underground water flow, underground hydro-carriers, permeability, soil hydraulic parameters. Runoff development, measurement and analysis of surface runoffs and water supply, hydrographs, precipitation-runoff simulations. Extreme runoff events, forecasting of flood events. Characteristics of watersheds, hydrographic networks, receivers, limnography. Methods and applications of technical hydrology. Principles and systems of environmental hydrology. *General Hydraulics:* Hydrostatics. Principles and equations of hydrodynamics. Open pipes and channels, flow types (steady, uniform and non-uniform, unstable), weirs, hydrofalls, watersheds, branching, cross section and slope changes, flow profile, closed pipes, underground hydraulics, flow inflation, shrinkage and suppression. Lake and coastal hydraulics. Principles and systems of environmental hydraulics. *Potamology:* Water flow, cobble movement, formation of fluvial beds, river management works.

FNE25 – Forest Botany I (Plant Morphology – Systematics and Taxonomy)

The anatomy/morphology of plant cells. The Cell cycle (mesophase, cell division, cytoplasmic division). Types of cell division (mitosis, meiosis). Plant tissues. Meristems. Protective tissue. Secondary Periderm. Parenchyma. Sclerenchyma. Vascular tissue. Vascular bundles. Stem anatomy. Primary stem anatomy of angiosperms, major differences between monocots and dicots, stem modifications. Secondary stem growth and anatomy. Vascular cambium formation, tree rings, wood anatomy. Leaf morphology and anatomy. Differences between gymnosperms, dicots, and monocots. Macroscopic morphology of the root. Root growth. Root modifications. Morphology and

anatomy of the flower. Fruit formation. Simple (fleshy, dry), multiple, syncarpus fruits. Micro and macro-sporogenesis of angiosperms and gymnosperms. Pollination and fertilization of angiosperms and gymnosperms. Embryo formation in dicots, monocots and gymnosperms. Seed morphology and anatomy, seed transport and germination. Basic concepts and definitions of plant systematics and taxonomy. Morphological traits used in the taxonomic determination of plants. Floral diagrams. Inflorescences, fruit types, seeds. Methods of plant determination (taxonomic keys, written description, plant sample comparison, comparison of plants based on pictures, determination by specialists). Diagnostic features of major taxa (division, class, order, family) found in forest ecosystems.

FNE31 – Plant Physiology

Water and plant cells. Plant water balance. Inorganic plant nutrition and assimilation of mineral nutrients. Mass flow in plants. Phloem transport. Photosynthesis: light and dark reactions, effects of environmental factors. Respiration, anabolism, and catabolism. Introduction to signal transduction. Plant regulators. Seed dormancy and germination. Introduction to abiotic stress.

FNE32 – Forest Soil Science

Soil as a medium for forest vegetation growth. Biological properties of forest soils, organic matter - forest floor - soil organisms. Nutrient recycling in forest-soil ecosystems. Forest soils and the hydrological cycle. Effects of clear-cutting and thinning, grazing, agricultural cultivation, and wildfires on forest soils. Forest nursery soils. Soils provide plants with the elements they need, mainly in the form of dissolved inorganic ions or inorganic nutrients. Nutrients include both metals, such as calcium, potassium, iron, and copper, and non-metals, such as nitrogen, sulfur, phosphorus, and boron. The plant takes up these nutrients from the soil solution and incorporates most of them into thousands of different organic compounds, which constitute plant tissues. The general chapters of the course are: (a) Organisms and ecology of the soil; (b) Soil organic matter; (c) Nitrogen and sulfur in soils; (d) Phosphorus and potassium in soils; (e) Calcium, magnesium and micronutrients; (f) Nutrient management practices; (g) Soil erosion and its control.

FNE33 – Forest Protection from Biotic Factors

Non-infectious diseases of forests. Taxonomy and ecology of fungi. Control of forest diseases. Diseases of forest trees. Wood decay. Morphology and taxonomy of insects. Ecology and control of forest insects. Insects of forest trees. Wood insects.

FNE34 – Forest Road Construction

General knowledge on design, construction, upgrade, and maintenance of roads in nature, the environmental forest road construction vehicles, and their historical development. Road classification, general aspects for the study and laying out of roads. Subject, purpose, historical development, and separation of forest road construction, classification of forest roads. Data for the study and the laying out of forest roads. Laying out, processing, and drawing up the forest road surveying. Report of general recognition, preliminary or recognition study, final study, indirect and direct layout. Construction of forest roads, infrastructure construction, study of soil natural properties, soil mechanical, soil technical problems and research. Soil classification, surface preparation for road construction, excavations, rock removal, soil transport, surface formation and construction of embankments, drainage works. Construction of technical works (ditches, drains, bridges, support walls, etc.). Construction of forest road surface structure, earthen roads, forest roads with stabilized surface and surface stabilization methods. Calculation of road pavement

thickness, flexible pavements from concrete. Calculation and construction of technical projects. Knowledge of soil mechanics for erosion, landslides and precipitation of slopes, protection of slopes with biological mechanics methods, phytotechnical correction of stability, covering and draining of constructions and selection of methods and construction materials. Maintenance of forest roads and the effects on the environment by the construction of forest roads.

FNE35 – Forest Botany II (Trees and Shrubs – Geobotany)

Morphological traits, general description, biological/ecological requirements, geographic expansion of forest trees and shrubs. Indicative list of tree and shrub taxa to be studied: (Gymnosperms) *Abies*, *Pseudotsuga*, *Tsuga*, *Picea*, *Larix*, *Cedrus*, *Pinus*, *Sequoia*, *Sequoiadendron*, *Taxodium*, *Cupressus*, *Chamaecyparis*, *Thuja*, *Juniperus*, *Taxus*. (Angiosperms) *Liriodendron*, *Laurus*, *Clematis*, *Berberis*, *Fagus*, *Castanea*, *Quercus*, *Alnus*, *Betula*, *Carpinus*, *Ostrya*, *Coryllus*, *Liquidambar*, *Platanus*, *Ulmus*, *Zelkova*, *Celtis*, *Juglans*, *Ribes*, *Rubus*, *Rosa*, *Pyrus*, *Malus*, *Sorbus*, *Amelanchier*, *Cotoneaster*, *Pyracantha*, *Crataegus*, *Prunus*, *Cercis*, *Ceratonia*, *Anagyris*, *Laburnum*, *Podocytisus*, *Calicotome*, *Spartium*, *Adenocarpus*, *Robinia*, *Colutea*, *Medicago*, *Anthyllis*, *Coronilla*, *Myrtus*, *Eucalyptus*, *Rhus*, *Cotinus*, *Pistacia*, *Aesculus*, *Acer*, *Cornus*, *Ilex*, *Evonymus*, *Paliurus*, *Rhamnus*, *Frangula*, *Buxus*, *Cistus*, *Salix*, *Populus*, *Tilia*, *Erica*, *Bruckenthalia*, *Arbutus*, *Styrax*, *Nerium*, *Sambucus*, *Viburnum*, *Lonicera*, *Fraxinus*, *Ligustrum*, *Olea*, *Phillyrea*, *Vitex*.

FNE41 – Wildlife Biology

Characteristics and taxonomy of wildlife species. Ecological concepts, energy flow, food relationships and webs. The value of wildlife. Spatial and temporal variation of communities. Characteristics, availability and management principles of wildlife habitats. Dispersion, dispersal, daily and seasonal movements and migration of wildlife species. Home-range size and features. Breeding strategies and reproductive rates. Mortality patterns and causes. Density-dependent and density independent mortality and reproduction. Laboratory exercises in the morphology, systematics, biology and species identification of the main terrestrial vertebrates (mammals, birds, reptiles and amphibians).

FNE42 – Forest Biometrics and Mensuration

Introduction to Dendrometry. Measurement and observation errors. Types of measurement and observation errors. Accuracy, precision, and bias. Measurement of forest products. Measurement of trees. Measurement of length. Measurement of diameters. Measuring instruments for diameters. Diameter measurement procedure. Measurement errors of diameters. Calculation of basal area. Methods of calculating the tree's basal area. Study of the form of logs and trees. Quotient form. Form factor. Form height. Taper. Form point. Measurement of volume. Volume measurement errors; Measurement of standing trees. Methods and instruments for measuring standing trees (Bitterlich's relascope, Blume-Leiss altitude, Suunto gradient, Pressler incremental drill). Volume tables. Measurement of forest; methods of estimation of diameter. Distributions. Methods for estimating basal area and height; methods for estimating the form characteristics; methods for estimating volume and biomass. The bias of the allometric equation. Additionality in biomass equations. Reference to age determination, wood quality and site grade determination. Measurement and determination of the incremental elements of the tree and clusters through the tree and cluster increment. Methods for estimating diameter, basal area, and volume increment. Determination of volume increment with the relascope. Sampling designs. Basic knowledge about forest inventories.

FNE43 – Inland Water Applied Ichthyology

Physical-chemical characteristics and properties of inland waters and their importance for fish, such as temperature, light, turbidity, oxygen, pH, nitrogen, phosphorus, salinity, heavy metals, organic compounds, etc. About fish in general. External and internal morphology (anatomy) of fish and elements of fish physiology. Description of biological systems such as respiratory, digestive, circulatory, endocrine, and reproductive. Description and function of the swim bladder, coloration of fish, sensory organs of fish (Vision, Hearing, Smell, Taste). Fish reproduction and fecundity, control of spawning time and age, sex differentiation. Fish fecundity and egg size, changes of fecundity with age and size of fish. Reproductive maturation and spawning. Types and strategies of fish reproduction, gonadal development and maturation, Incubation, and embryonic development. Geographical distribution and migrations of fish. Zoogeographical distribution of fish, Migrations, Ichthyological zones of running waters. Age and growth of fish. Fish age, terminology, Age determination from various anatomical elements (scales, otoliths, etc.). Accuracy of age calculation check. Fish growth, length-weight relationships, condition factor, specific growth rate. Food and feeding habits of fish, food analysis methods of stomach contents, such as Arithmetic, Volumetric, 'Frequency of occurrence' method, etc. Fish stock estimation methods. Fish mortality and survival. Fish catches and marking of fish. Fishery management of inland waters. Characteristics of fish habitats, differences between streams and lakes. Classification and morphology of rivers and lakes. Fishery upgrading strategies, upgrading of fish living conditions, and breeding places. Sustainable management of lake ecosystems, eutrophication. Climate change and inland water ecosystems (rivers, lakes, lagoons). Fishery legislation of inland waters. General aquaculture methods as extensive, semi-intensive and intensive, in inland waters (lakes, ponds, wetlands, lagoons, etc.). Aquaculture of trout, salmon, carp, sturgeons, grey mullets.

FNE44 – Forest Economics

The course covers fundamental aspects of Forest Economics and Economic Science. It begins with the Principles of Economic Theory, emphasizing the principle of economic efficiency. Core concepts of the economics of forest production are introduced, including production, factors of production, inputs and outputs, as well as the specific characteristics of forest production. The course examines in depth land, capital, and labor in forestry. It also focuses on the concept of the enterprise, with emphasis on forest enterprises as economic units and activities. Key topics include the organization and management of forest enterprises. Forest production cost accounting is extensively analyzed, covering types of expenditures, depreciation, capital interest, and various costing methods (by Cost Center and by Cost Carrier). Emphasis is placed on depreciation, operating-cost analysis of forest enterprises, and costing of products in forest operations and forest-based industries. The course introduces break-even analysis. The concepts of revenue and profit are explored, along with the production decision rule. The laws of supply and demand for forest products are explained, and market structures are examined. Basic concepts of multifunctional forestry are presented, highlighting efficient use of forest resources across the entire value chain. Students gain knowledge of economic mathematics (compound interest, discounting, capitalization) and apply investment-evaluation criteria. They are introduced to forest valuation and the estimation of the economically optimal rotation age using the Faustmann model, along with sensitivity analysis through variation of key parameters (interest rate, timber price, taxation, etc.). The course also addresses contemporary issues such as the economics of climate change, the bioeconomy, ecological innovation and entrepreneurship, preparing students to understand the impact of these factors on forest production and management. Students will also

apply the above knowledge during the field practicum at Pertouli University Forest, which is included in the course content.

FNE45 – Wood Chemistry and Chemical Products (Bioenergy and Biofuels)

The course mainly deals with the following: The chemical composition and chemical analysis of wood components (cellulose, hemicelluloses, lignin, extracts, ash/minerals). The Occurrence and Origin, Biosynthesis, Characteristics, Properties, their Role and Importance for the tree and wood as a material, Biological functions, ways of Isolation, Chemical and Supramolecular structure, and chemical Reactions of wood components. Variability in the chemical composition of wood (horizontal, vertical, in the form of a cell wall, etc.) and chemical composition of bark. The chemical properties and chemical behavior of wood are examined (introduction of reagents into the mass of wood, swelling-shrinkage using chemical substances, degradation of wood with chemical substances, thermal degradation, combustion, biological degradation, chemical depolymerization/deterioration factors). Wood modification and protection techniques: the modification of wood (thermal modification, chemical modification, acetylation, surface modification, modification by impregnation, modification with nanoformulations/nanoparticles, fire-retardants, etc.), in order to improve its properties and reduce the drawbacks of wood as a construction material. Production of chemical wood products and extracts, chemical cellulose derivatives, Pulping, Handling of pulp after pulping, pulp production methods, paper, paper types and properties, production techniques of other polymers, chemical cellulose. Methods of production of chemicals, cellulose products, hemicelluloses, lignin and extracts. Wood as a fuel material, characteristics, advantages and disadvantages of its use, methods of energy production utilizing wood and forest biomass as a feedstock, biochar, biofuels (pyrolysis, carbonization, liquefaction, gasification, etc.).

FNE51 – Forest Genetics

Forest Genetics – Basic concepts, Potential, Perspectives, History and Significance - Global scope and importance of natural and managed forests - Concepts and sources of variation in forests – Phenotypic sources of diversity - Genetic sources of diversity – History of forest genetics. Molecular Basis of Heredity – Organization of the Genome, Structure and Regulation of Genes, Gamete Formation – The DNA Molecule – Cellular Organization of Genomes – The Central Dogma and the Genetic Code – Regulation of Gene Expression. Mendelian Genetics, Statistical Tests for Mendelian Inheritance, Transmission Genetics – Chromosomes, Recombination and Linkage – Extensions of Mendel's Laws. Mitosis, meiosis, and cell division. Genetic Markers – Morphological, Biochemical, and Molecular Markers – uses and characteristics of genetic markers. Population Genetics – Gene frequencies, quantification of the genetic composition of populations, genotype and genotype frequencies, Hardy-Weinberg Law, crossover systems, Inbreeding and its effect on genotypic frequencies, Evolutionary forces that change allele frequencies. Quantitative Genetics – Nature and Study of Polygenic Traits, Parent and Offspring Phenotype Patterns – Clonal Value and Breeding Value, Heritability Estimation in Forest Species and Heritability Estimation in Forest Tree Populations. Polygenic traits, Heritability and Genetic Correlations, Genotype x Environment Interaction in Forest Trees, estimation of genetic parameters, Crossbreeding designs, experimental designs and data analysis, interpretation of parameters.

FNE52 – Wildlife Ecology, Conservation, and Management

History and goals of wildlife management. Decision analysis, feasible options and failures in wildlife management. Methods of estimating population parameters, estimation of abundance,

growth rates, reproduction, mortality, dispersion, food habits and genetic structure. Experimental design and sampling techniques. Wildlife management techniques, capture, marking, radiotelemetry, blood sampling, artificial nest-sites. Characteristics of animal community. Conservation of endangered species. Causes of species and population extinction. Minimum viable population size and population viability analysis. Estimation of maximum sustainable yield in game species populations. Causes and prevention of damage by vertebrate pest species. Conservation of biodiversity and management of animal communities. Criteria for establishing protected areas. Processes of protected area degradation. Conservation, management, and restoration of wildlife- ' habitats within protected areas. Human impacts (pollution, global warming, roads, wind farms, electrocution, invasive species, etc.) on wildlife and their mitigation measures.

FNE53 – General Silviculture (Forest Ecology)

Definition of forest and analysis of forest bio-community. Values and functions of forest ecosystems. Types of forests, their range and geographical distribution on earth, their characteristics and ecological values. Benefits and ecosystem services of forests. Effect of forests on the environment. Autoecology (relationships of forest species with environmental factors, ecology of forest species). Forest and solar radiation and energy, energy balance, solar illumination and forest species, temperature, Humidity, Soil fertility. Requirements of forest species in light, moisture, nutrients and temperature. Limiting factors for forest growth (water deficiency, heat, frosts). Formation of forest timberlines. Water uptake by trees, the role of roots. Forest and atmospheric air, carbon dioxide and oxygen, climate change. Effect of forest and stand tending on water economy. Forest and physiographic factors. Effect of the forest on the animal community. Synecology (ecosystem structure and function of forest ecosystems). Energy flows, biomass production and accumulation. Diversity of forest ecosystems. Organisms living in forests. Function of forest ecosystems (food chains, food webs, food pyramids). Flow of biomass, energy, nutrients and necromass. Rules for extracting biomass from forest ecosystems. Stability, balance and self-regulation (homeostasis) of forest ecosystems. Species survival strategies and interactions, intra-population relationships. Dynamics and succession of forest ecosystems, early and late-successional ecosystems, final ecosystems. Ecology of growth (effect of environmental factors on the growth of forest trees). Flowering, ripening, seed dispersal and propagation, seed germination. Formation and types of root system, root architecture and classification, rate of growth in height and diameter of forest trees. Tree stem growth and formation. Aging of forest trees.

FNE54 – Wood Technology

Wood improvement treatments: Drying (importance, natural - artificial drying, equipment, techniques, drying defects and treatments), Impregnation (Impregnants, impregnation methods, success factors, properties of impregnated wood), Bonding (bonding fundamentals, adhesives, bonding agents, natural wood adhesion, autogenous bonding), Disinfection of wood (heat treatment, fumigation, other methods), Mechanical treatment (sawing, chipping, surface treatments). Thermal modification, shaping-densification (bending, impregnation densification, mechanical densification, hydro-thermo-mechanical densification, hybrid methods, surface densification, bulk densification). Production technologies, properties and uses of industrial wood products: Engineered products (sawn timber, posts, piles), Composite products based on wood veneers, wood chips, wood fibers (plywood, LVL, glued laminated timber, particleboard, fibreboard, OSB) and other composite products.

FNE55 – Wildland Fire Ecology and Rehabilitation

Forest fires and the environment. Ecology and forest fires. Forest fuels. Meteorological conditions and forest fires. Fire danger rating. Fire prevention. Prescribed burning. Chemicals, tools, and machinery used in fire control. Fire control in practice.

FNE61 – Genetic Improvement of Forest Tree Species

Introduction - Breeding objectives and programs. Variation of species, populations, stands – research methods, Variation within populations – quantifying genetic variation, genetic diversity in forest trees, factors promoting genetic diversity within populations, mating systems in forest trees, spatial and temporal genetic structure within populations, practical implications of within population diversity, Geographic Variation – Races, Clines and Ecotypes, Provenances – terminology and meaning of the term in genetic improvement. Provenance research, Evolutionary genetics – divergence, speciation, hybridization. Tree Improvement Programs, Scope and structure of tree improvement programs, Breeding cycle, Genetic gain and economic value of tree improvement programs, Base populations – Species, hybrids, Seed sources and Breeding Zones. Phenotypic mass selection – direct and indirect selection, selection for multiple traits. Methods of genetic gain estimation. Genetic testing – types, objectives and functions of genetic tests, Mating designs, Field designs, Test implementation. Data Analysis - Mixed Models, Variance Components and Breeding Values, Selection indices, Spatial variation and spatial analysis in genetic trials. Methods for meeting immediate needs for improved seed, Seed Orchards (clonal and seedling SOs), Family Forestry, Clonal Forestry, Genetic diversity considerations in deployment options. Genomics – discovery and functional analysis of genes (structural, functional, comparative genomics, Bioinformatics and databases), Concepts of Marker-Assisted Selection (MAS), Indirect selection based on markers linked to QTLs, Direct selection based on genes coding for target traits, Marker-assisted Breeding, Genetic Engineering – target traits for genetic engineering, direct and indirect gene transfer methods, Regeneration and Transformation, Applications of genetic engineering in forest trees, transgene expression and stability, Commercialization, Regulation and Biosafety. Epigenetics, epigenetic regulation of adaptive and production traits, role of epigenetics on phenotypic plasticity and adaptation under stress.

FNE62 – Applied Silviculture

Trends and historical evolution of Silviculture worldwide. Modern approaches and traditional Silviculture. Scientific terminology of characteristics and distinction of forests. Stand knowledge (distinction of forest stands according to their establishment method, structure and composition), pure and mixed stands, silvicultural management unit. Characteristics of natural undisturbed forest. Even-aged stands, uneven-aged stands, all-aged stands, advantages and disadvantages. Seed origin forests (high forests), coppice forest, intermediate types. Types of cuttings, clear-cutting, single-tree, shade, forest edge, regeneration cutting, fruiting type. Natural forest regeneration, under canopy, gap regeneration, in post-forest environments. Basic methods and techniques of natural regeneration. Regeneration with shady successional fellings, regeneration with forest edge fellings, regeneration in clusters. Determining the general and special regeneration time, regeneration centers, ways of expanding and combining them. Regeneration of the entire stand. Artificial establishment of forests. Stages of forest development. Cultivation (Tending) of the forest, general principles, cultivation measures. Cultivation of newly established stands, thickets, mature stands, pruning, cultivation of secondary stands. Tending of all-aged stands. Conversion of coppice forests to high forest. The current state of forests and the driving

factors that led to it. Rehabilitation of degraded forests, ennobling thinning. Single-tree selection practice in the field.

FNE63 – Wildland Fire Suppression and Management

Tactics and methods of aerial and ground means for forest fire suppression. Use of portable tools, fire-fighting vehicles, airplanes, and helicopters. Methods of arrangement and combination of fire-fighting forces with respect to their number and type, according to fire environment (vegetation, topography, meteorology) and fire behavior. Organization of forest fire-fighting institutions according to modern models (ICS-Incident Command System). Methodology of forest fire prevention plans.

FNE64 – Geographic Information Systems – Geospatial Analysis

Introduction to Geographic Information Systems (GIS). Basic spatial analysis concepts. Geographic data formats and structure (definitions, advantages/disadvantages of managing and converting between different data types). Collection, sources, and import of spatial data in a GIS environment (analysis of different collection techniques for obtaining primary and secondary data, ways of importing into GIS). Global Positioning Satellite System. Geodetic reference systems and cartographic projections (basic concepts of the geometry of the Earth's sphere, spatial coordinate systems, description and properties of major cartographic projections, projection transformations). Geographical databases (basic concepts of databases, GIS systems and management, data and table associations, creation of topology in a geodatabase). Spatial analysis of vector data (analysis of the conversion of data into meaningful spatial information, basic spatial operations for vector data models, performing spatial queries, pre-analysis procedures). Processing and analysis of mosaic data (management of elevation models and extraction of relief information, zonal statistics). Spatial modeling – Spatial interpolation (types of models, deterministic and stochastic models, concepts and methods of spatial interpolation in continuous surface distributions). Introduction to Cartography – Basic principles of map composition. Searching geospatial data on the internet. Modern trends in the field of GIS. GIS applications in forestry (presentation of important applications of GIS in ecological tasks and multi-purpose forestry, e.g., geodata in forest inventory, fire planning). GIS in environmental management decision-making and the protection and development of the natural environment. GIS for monitoring and mapping the impacts of climate change. The practical training is carried out using specialized GIS software and, in particular, the free and open-source software QGIS.

FNE65 – Mountain Hydronymics

Flow in torrents (discharge determination, flood routing, water intakes, flood damages, runoff dynamics). Natural and man-made production of sediment (erosion, landslides, rockfalls, weathering, siltation, sand extraction, solid waste). Torrential phenomena and production mechanisms. Determination of the produced volume of materials and degradation. Consequences. Sediment transport (suspended load transport, bed-load transport, mass transport). Determination of discharges and corresponding loads. Deposits and mass-balance of transported materials. Debris-flow and hyperconcentrated flow, debris torrents, estimation of debris loads, consequences. Landslides, rockfalls, and soil creep, deformations of terrain (causes, modes of movement, volume estimations, consequences). Sediments (stratigraphy, lithometry) and mobile beds (transport bodies, behavior). Morphological evolution of channels (fixed points, fans, cones, mouths and deltas, bends, meanders), channel and torrent-zone equilibrium (compensation slope of equilibrium, wandering). Sedimentation in lakes, seas, harbors, rivers, reservoirs, artificial

channels, consequences and morphological evolution. Wetlands and their management from a geomorphological perspective. Regulation of torrential streams, principles, systems of regulation and utilization of water and sediment, flood protection in the mountainous and lowland areas of streams. Torrent types. Control systems for material-production sources and torrential material-production phenomena (erosion, weathering, landslides, rockfalls) and control of bed-load transport. Hydrological management systems of drainage basins and their vegetation, control of flood peaks and runoff (groundwater aquifer recharge), water storage and utilization within the torrential environment. Systems for preventing and controlling landslides, collapses (rock avalanches) and soil creep, drainage of ground, prevention and retention of debris flows and debris-torrents, flood-protection storage of water and water intakes, and selective sand extraction. Study and construction of bed-stabilization dams, sediment-retention and control dams, and water-storage dams (of concrete and geotechnical materials), as well as check dams for selective retention, flood-peak control, landslide-prevention, or multi-purpose use; levees and parallel walls; slope-shaping projections; channel works, embankments, excavations, riprap, stone linings and rockfill of channels; auxiliary works, etc.

FNE71 – Rangeland Science

Classification and types of rangelands, Concept of rangeland ecosystem, Structure and function of rangeland ecosystems, Productivity of rangeland ecosystem: methods for measuring primary production, Effects of grazing on morphogenesis and physiology of rangeland plants, Mechanisms of their resistance to grazing, Effects of grazing on rangeland composition and production, Introduction to Rangeland Ecosystem Management, Rangeland Inventory (Objectives of the inventory, Spatial inventory methods of rangeland vegetation, Mapping types and subtypes of rangeland vegetation and effects of grazing), Multiple Use of rangeland ecosystems and ecosystem services, Determination of quantitative parameters (Vegetation Cover, Composition of Vegetation, Forage Production) and qualitative parameters (Palatability, Nutritive value, Intake, Digestibility) of rangelands vegetation, Forage Utilization Percentage determination, "indicator areas", Proper use of grassland ecosystems (definition, indicators of overgrazing, indicators of proper use of grasslands and shrublands), Monthly animal unit and the equivalent AUM, Grazing capacity and Methods of its determination, Rangeland condition and health, Interactions of domestic animals and game animals in rangelands. Pastures and supplementary pastures, Fodder and forage crops, Planning the improvement of rangelands (overused, underused, Reasons for rangeland degradation, The importance of proper grazing and grazing season, Planning, process, conditions and economic effects of implementing grazing systems, Modification of vegetation, Control of undesirable plant species (Mechanical Control, Chemical, Biological, Prescribed fire), Sowing of desirable plant species and Fertilization, Restoration of disturbed rangeland ecosystems, Grazing management plans development.

FNE72 – Forest Management Planning

Introduction to Forest Ecosystem Management: Historical development of Forest Management Science. Definition of forest management science. Management of multiple ecosystem functions. Sustainable management indicators. Adaptive forest management. Integrated management of natural resources. Participatory processes. Forest management and legislative framework. Forest management plans and guidelines. *Data collection and management:* Forest management maps. Field data. Other data (climate, historical, soil data, etc.). *Forest Management Tools:* Basic principles of timber stock management in even-aged stands. Yield tables, Individual-based models. Basic principles of timber stock management in uneven-aged stands. Diameter-

distribution models. *Forest Management Methods*: The normal forest. Forest-block-based management methods. The stand-based management method. Methods of uneven-aged forest management. *Optimal Decision Making*: Optimal management decision making techniques. Linear Programming. Goal planning. Hook-and-Jeeves algorithm. Heuristic Optimization Methods (Genetic Algorithms, Tabu search, Simulated annealing). *Drafting a forest management plan*: Data collection (field trip to the university forest of Taxiarchis), Data analysis, Allowable cut computation, Drafting the forest management plan (planning section).

FNE73 – Remote Sensing of Environment

Introduction to Environmental Remote Sensing and Aerial Photography (definitions and introductory concepts of remote sensing science, historical background, multi-spectral and hyperspectral satellite earth observation systems, types of imagers). Fundamentals of radiation and characteristics of the electromagnetic spectrum (radiation laws, parts of the electromagnetic spectrum, path of radiation, atmospheric effects, interaction of radiation with atmosphere and objects, categories of radiation scattering, spectral identity of objects). Digital image characteristics (spatial, temporal, spectral, and radiometric resolution, pseudo-color imaging, spectral channel combinations for selected applications). Methods, techniques, systems, and software for digital preprocessing and analysis of satellite data (introduction to open-source image processing software, basic techniques for processing and analysis of optical remote sensing data). Digital image classification (principles of satellite image interpretation, objects' spectral signatures, supervised and unsupervised classification, introduction to the basic principles of machine learning and pattern recognition, clustering algorithms, the most important contemporary classifiers). Effect of the biological and physical characteristics of objects on digital analysis. Sampling and accuracy estimation (the concepts of precision and accuracy, sampling methods and design, the error matrix, and statistical measures of accuracy of the generated thematic map). Introduction to the basic principles of non-multispectral remote sensing systems (thermal, hyperspectral, active microwave and LiDAR systems). Applications of remote sensing in monitoring, management, protection, and development of natural ecosystems and the environment (presentation of important applications of satellite remote sensing in natural resource monitoring and forestry, the European Copernicus Programme, current trends in the use of satellite data and products for long-term monitoring of the environment, applications using time series data, modern web-based tools). Remote sensing application in monitoring the impacts of climate change via mapping changes and trends, in burned areas mapping, and in post-fire vegetation monitoring. The practical training is carried out using specialized open-source software and modern programming languages.

FNE74 – Harvesting of Forest Products

Preparation of the harvest: Forest management plan, transport network, equipment, personnel, buildings, harvesting season. Work methods. Harvesting plan. *Wood harvesting tools*: Axes, saws (hand saws), wedges, hooks, log rotators, hammers, forest tape measures. Chainsaw. Peelers. Harvesting machines (harvester, forwarder, skidder). Draft and load animals. *Harvesting tasks*: Felling. Felling direction and technique. Tree processing: debranching, bucking, measuring and debarking logs. Splitting firewood. Wood extraction. Log yards. Management of logging residues. *Forestry workforce*: Forestry work. Training of forest workers. Accidents. Practical measures in the forest. Personal Protective Equipment (parts and use). *Mechanization of forest operations*: Advantages and disadvantages. Application of mechanical means, especially in Greece. *Financial aspects*: *Harvesting expenses*: i) wages of forest workers, ii) expenses for purchasing and using tools, animals, and machinery, iii) administration and management expenses, iv) expenses for

buildings and forest roads. Cost calculation. Time studies. Time study methods. Selection of forest workers. Data collection sheets. Expenses for the employment of tools, animals, and machinery. Importance of time studies. Calculation of cost per unit of production. *Organization of harvesting operations*: Silvicultural targets. Terrain attributes. Forest personnel. Problems of Greek forest workers. *Harvesting of Non-Wood Forest Products*: Resin production (harvesting methods, consequences of resin production, factors affecting tree growth). Christmas trees (production, cultivation). The importance of NWFPs at the local and global level.

FNE75 – Forest and Environmental Policy

Historical development of environmental and forest policies. Principles and configuration of environmental and forest policy, criteria, means, and decision-making in forest policy. Natural resource usage and environmental protection. Correlation between forests and people. The aims of Forest Policy, their evaluation, and the suitable tools for efficient decision making towards their achievement are studied thoroughly. More specifically, the course examines the basics and principles of Forest Policy, the relation of Forest Policy with the natural environment, and mostly the relation between forests and people. Terms such as forest ownership, forest faith, and forest insurance are clarified, while the legislative framework of forest cooperatives is analyzed. The social role of forestry and the organization of forest law are distinctly mentioned.

FNE81 – Nature Conservation, Landscape Planning, and Urban Greening

Introduction to Nature Protection. Current trends in the field of nature protection. Value of biodiversity, risks and need to protect it. Nature protection approaches and methods. Categories of protected natural areas. Protected species of flora and fauna at international level. Nature protection in Europe, historical development and current situation. NATURA 2000 network, European directives 92/43 (directive on habitats and species) and 79/409 (directive on avian fauna). Management of protected areas. Analysis of natural landscape, management of natural landscape. Vegetation in landscape planning, Trees in landscaping. Design and shape of artificial landscape. Silvicultural treatments in recreational forests and aesthetic forests. Characteristics and benefits of road-edge vegetation. Human activities and landscape. Analysis of ecological and environmental impacts on the landscape, the environment and humans. Environmental impact studies. Historical analysis of Urban Silviculture (trees in cities, urban and peri-urban green areas), ecological and environmental problems of residential areas. Urban green categories. Beneficial effects of urban trees and green spaces. Microclimate improvement, oxygen enrichment, CO₂ sequestration, decontamination, health and mental impact, noise reduction, aesthetic improvement of the urban landscape, environmental engineering uses. Living conditions of trees in the city. Physiological tree damages from environmental factors. Criteria for species selection (growth rate, lifespan, dimensions at maturity, site requirements, type of root system, crown shape, pollution resistance, response to pruning, phenology, functional properties, crown density and solar retention rate, special species characteristics (e.g., thorns, poisonous fruits, etc.). Treatments to improve urban tree growth conditions. Monitoring of tree and shrub species behavior in urban environment.

FNE82 – Agroforestry: Climate and Ecosystem Services

Introduction to agroforestry and basic principles, Historical development and traditional agroforestry systems, Categories of agroforestry systems, The role of trees in agroforestry, Interaction of crops-trees-animals, Climate change and impacts on production, Agroforestry as a means of mitigating climate change, Carbon sequestration and storage by trees, Soil protection and

erosion control, Microclimate improvement and plant stress reduction, Water conservation and better management, Enhancement of biodiversity and ecological interactions, Ecosystem services: regulatory, supporting, productive, Production of multiple products (food, timber, animal feed), Design and siting of agroforestry systems, Criteria for selecting appropriate tree species and crops, Examples of applications in Mediterranean and Greek regions, Contribution of agroforestry to sustainable development.

FNE83 – Reforestation, Forest Nurseries and Ecological Restoration

Purpose of reforestation. Basic principles of reforestation. Selection, collection, and control of seed material. Selection of stands for seed collection. Methods of collecting, handling, and preserving seeds. Establishment and management of sowing or planting of native forest species. Selection of tree species for reforestation, ecological selection, and selection depending on the purpose. Native and exotic tree species. Methods of soil and land preparation for reforestation. Methods of artificial establishment of forests, stand establishment by seeding, stand establishment by planting. Planting distance and seedling distribution. Planting methods and techniques, rules of successful planting. Care measures for transplanted seedlings, irrigation, weed removal, protection. Monitoring reforestation success. Seedling production in forest nurseries. Selection of nursery establishment location. Forest nursery design. Production of bare root seedlings. Soil preparation, seeding, irrigation system in forest nurseries. Care and protection of seedlings. Methods to improve the quality of produced seedlings, root cutting, transplanting, and hardening of seedlings. Extraction, packaging, and transport of seedlings. Control and screening of seedlings. Preservation of plant material. Production of containerized seedlings. Types of plant pots, filling materials (substrates). Production of vegetative saplings. Seedling quality indicators. Fertilization of nurseries. Technical requirements for reforestation plans. Monitoring reforestation success. Reforestation to restore degraded forests and disturbed areas. Reforestation focused on mitigating climate change. Identification of the causes of forest ecological degradation. Development of ecological assessment indicators for degraded forests and diagnosis of restoration needs. Design and implementation of specific silvicultural interventions, methods, and practices aimed at ecological restoration. Natural restoration methods. Artificial restoration methods. Approaches to address specific silvicultural challenges, including regeneration protection, cultivation, and restoration (e.g., invasive species, recurring wildfires, etc.). Post-fire regeneration. Selection of parameters for monitoring restoration and development of monitoring protocols.

FNE84 – Forest Recreation

Introduction. Recreation, quality of life. Social, economic, and land planning characteristics of forest recreation. Supply and demand for forest recreation areas. Social and economic impact of forest recreation. Methods for evaluating the economic value of recreation areas. Land planning for forest recreation areas. Management of recreation areas. Forest recreation and other uses of natural resources. Recreation perspectives. Forest tourism. Contribution of forest tourism to regional development. Recreation in urban and national parks.

FNE85 – Conservation of Forest Genetic Resources

Threats to genetic variation, Strategies for the conservation of genetic variation, In situ conservation of forest genetic resources – methods and techniques, Ex situ conservation of forest genetic resources – methods and techniques, Size - number - location of populations selected for gene conservation, Genetic Monitoring, Criteria and indicators for the conservation of forest genetic resources, Genetic techniques and their application in conservation and management of forest

genetic resources, Forest Genetic Resources in the international context: processes, agreements and programs, Impact of forest management and tree breeding on genetic diversity, Appropriate methods for the collection, control and storing of forest genetic material representing the species/populations variation, Genetic aspects linked to the production and use of forest reproductive material.

Teaching - Knowledge assessment - Student evaluation

The EUPS is taught with the physical presence of lecturers and students in the classrooms. By decision of the Program Steering Committee, a weekly online education zone may be established, common to all students of the EUPS students, which will be used for tutorials and/or seminars and, on in exceptional cases, for make-up classes in cases where classrooms are not available for this purpose on other days of the week. In exceptional cases of emergency circumstances that prevent in person teaching, it may be decided, by a specially justified decision of the Head of the School and the EUPS Director, lectures may be conducted online for a limited period of time, which is necessary in order to address the emergency circumstances that justify the transition to distance learning in the short-term.

Similarly, examinations are conducted with students and examiners physically present in the School's classrooms, whether they are written or oral. As an exception, only oral examinations may be conducted remotely, provided that the identity of the examinees is verified and best practices for conducting oral examinations via the internet are followed to ensure their integrity. Remote written examinations are not permitted, except in cases and under conditions that are mandatory under applicable law. By decision of the Program Steering Committee, written examinations may be conducted using tablets, laptops, or PCs, provided that they are conducted in the presence and under the supervision of the examinees in the School's classrooms, under the guarantees of a comprehensive plan for the conduct of these examinations, which will ensure their integrity and the equal treatment of examinees.

Attendance at lectures, tutorials, and any other organized educational activity of the Undergraduate Program of Studies in English of the School of Forestry and Natural Environment is mandatory. Students may be absent for up to thirty percent (30%) of the total teaching hours of each course per semester, while deviations from this limit are allowed only in exceptional cases, upon approval by the Program Steering Committee. Regular attendance at lectures, tutorials, and exams is considered an essential element of academic excellence for the successful completion of the Programme.

Before the start of each semester, the Secretariat of the EUPS prepares and publishes the detailed timetable for the semester, taking care to ensure that, as far as possible, mandatory courses (a) are distributed evenly throughout the week, (b) are not scheduled at times that are too far apart on the same day on which they happen to be taught, and (c) do not coincide with the teaching of other courses in the same semester.

At the end of the tenth (10th) week of teaching each semester, students are invited to participate in an anonymous online evaluation of the courses taught to them, as well as of the lecturers, for the purpose of improving their level of studies.

Student evaluation

1. Students at the School's EUPS are assessed by written or oral examinations, which are held at the end of the semester for the courses taught in the same semester. All courses are examined during the repeat examination period in September. Participation in an oral exam

excludes the student from participating in the written exams for the same course during the same exam period.

2. Lecturers take special care for the oral examination of students with dyslexia, serious mobility problems, or visual impairments that substantially hinder their participation in written examinations, as proven prior to their admission to the Programme, in accordance with the procedure laid down in the provisions in force.

3. The Secretariat of the EUPS publishes the detailed schedule of written examinations for each upcoming examination period in a timely manner. The lecturers, assisted by the Secretariat of the EUPS, is responsible for ensuring that there is a sufficient number of invigilators from among doctoral candidates and postgraduate students. Lecturers must be present at all times in the examination rooms, supervise the smooth and impartial conduct of the examinations, and take the necessary measures for these purposes.

4. Before taking the exam, each examinee must check that their name is listed in the Secretariat's computerized list of those eligible to take the exam for that particular course. Candidates are prohibited from copying or falsifying in any other way the results of the examination process, as well as from bringing books, aids, notes, or electronic means of communication into the examination rooms. Any attempt to use electronic means of communication during the examination process is considered a particularly aggravating circumstance against the examinee. Furthermore, examinees are prohibited from using a separate sheet of paper as a draft. For this purpose, they are allowed to use the last page of their written paper. In the event of a violation of these terms, the written paper will be marked as zero as an internal measure to ensure the integrity of the examination process, without prejudice to any other penalty that may be imposed under the provisions in force.

5. The designated invigilators must check the academic ID card proving the student's status and certifying the identity of the examinee, verify that the student's full name and special registration number are written on their paper, initial each paper, supervise the examinees so that they do not copy or talk to each other, constantly monitor the entrances and exits of the room, especially at the end of the examination time and when the papers are handed in, and ensure that no examinee leaves or departs from the examination room before thirty minutes (30') have elapsed since the distribution of the examination papers. The invigilators shall ensure that no fewer than two students remain in the examination room.

6. The written examination for each course lasts a maximum of two (2) hours for all courses.

7. After the papers have been handed in, the invigilators count the papers they have received and one of them certifies the number of papers received. The papers are then handed over to the lecturer, who counts them and certifies the number of papers received by signing in front of the invigilator.

8. Lecturers are required to submit the results of the final written and/or oral examinations to the Secretariat of the EUPS, written and/or oral, in a single grade sheet for each course, no later than fifteen (15) days after the date of each exam. In the case of oral examinations, the lecturer is not allowed to announce the results of the examination to the students who have been examined, but only collectively for all those examined, in writing and/or orally, at the end.

9. In all EUPS courses, the result of the student's knowledge assessment is expressed numerically with grades from zero (0) to ten (10). In the grade book, failure is marked with grades from zero (0) to four (4) and success with grades from five (5) to ten (10).

10. The publication of exam results with the names of the examinees is not permitted in any way, except by listing their Special Registration Number (SRN).

11. It is not permitted to transfer a student's grade from one examination period to the next. Clauses that may be included in the examinees' written work and concern their desire to be expelled if they are assessed with a grade lower than the desired one, or references to how many courses one owes in order to obtain a degree, are not permitted and, if included, they will not be taken into account.

12. The answers to the written exam questions, both practical and theoretical, are discussed after the results are released by the lecturers with the students concerned at specially designated times, and examinees have the right to see their written exam—for the current examination period—and request explanations on how it was evaluated.

13. For the calculation of the degree grade and the composition of the courses listed on it, the forty (40) mandatory courses required to accumulate two hundred and forty (240) ECTS are taken into account.

Article 9

Scholarships

Within the framework of the Undergraduate Program of Studies in English of the School of Forestry and Natural Environment of the Aristotle University of Thessaloniki, scholarships may be awarded to students based on academic and objective criteria and following a decision by the Program Steering Committee. For example:

- Up to two (2) scholarships per academic year may be awarded to students who distinguish themselves during the selection process, based on an overall assessment of their qualifications (including the results of the oral interview), and ranked among the top admitted students in the cycle. These scholarships consist of full exemption from tuition fees for the first academic year.

- A scholarship of excellence, exempting the student from paying fifty percent (50%) of the tuition fees for the following academic year, may be awarded to the student who achieves the highest average grade in all courses each year, provided that they have successfully completed all courses within the prescribed time. In the event of a tie, the scholarship may be awarded to more than one student.

- The Program Steering Committee may award prizes for excellence to students who demonstrate outstanding performance during their studies. The awards may be accompanied by an honorary distinction or a cash prize. In particular, at the end of each academic year, an award may be given to the top first-year student, based on their overall performance in all courses and their consistency in attendance. Similarly, an award for the best graduate may be given to the student with the highest academic performance during their studies.

- In exceptional cases, a social scholarship may be awarded to candidates or students of the Programme who face serious financial difficulties, health issues, loss of a parent, or are living in a state of emergency or long-term crisis, following examination of the relevant application and accompanying supporting documents by the Program Steering Committee.

- There is also the possibility of granting work-study scholarships, which consist of exemption from paying part of the tuition fees, with the student being required to offer specific work in support of the Programme. This work may include library assistance, administrative support, assistance with research projects, or other activities to be determined by the Program Steering Committee, in consultation with the Secretariat of the EUPS and faculty members. The

duration and content of the work-study scholarship are clearly specified at the time of award, and failure to comply with the obligations may result in its revocation.

The awarding of the above-mentioned scholarships and/or excellence awards, the specific conditions for awarding them, and the obligations and rights of the scholarship recipients are determined by decision of the Program Steering Committee and are at its sole discretion based on the financial capabilities of the Programme and its cash reserves.

Article 10

Teaching Staff of the EUPS

The teaching work of the Undergraduate Program of Studies in English (EUPS) is assigned by a decision of the Program Steering Committee to lecturers with expertise relevant to the subject matter of the teaching work assigned to them. By decision of the Program Steering Committee, the teaching of the courses of the Programme for the next academic year is assigned on the basis of the teaching staff that will be available during that year, taking into account retirements at the end of the current year and educational leaves for the following year. In particular, the following may be employed as teaching staff of the EUPS:

1. members of the Teaching and Research Staff (TRS) of the School of Forestry and Natural Environment or other Departments of the Aristotle University of Thessaloniki or other Higher Education Institutions (HEIs) with additional employment beyond their legal obligations as defined in Article 155 of Law 4957/2022,

2. Emeritus Professors or retired members of the teaching staff of the School of Forestry and Natural Environment or other departments of Aristotle University of Thessaloniki or other HEIs,

3. members of Laboratory Teaching Staff and Laboratory Teaching Staff of HEIs, who hold a doctoral degree and have teaching experience, as well as sufficient scientific, writing or research activity,

4. appointed lecturers,

5. visiting professors and visiting researchers,

6. contract researchers,

7. researchers and specialist operational scientists at the research centres referred to in Article 13A of Law 4310/2014 (A' 258) or other research organizations in Greece and abroad, who hold a doctoral degree and have teaching experience and sufficient scientific, writing, or research activity,

8. postdoctoral researchers and young scientists who hold at least a doctoral degree and have specialized knowledge or relevant experience in the subject area of the EUPS,

9. collaborating professors.

The teaching assignments for the EUPS are decided by the Program Steering Committee, following a recommendation by the Director, who works with the Directors of the Departments of the School of Forestry and Natural Environment for this purpose. The decision of the Program Steering Committee ensures that the teaching—and educational activities in general—assigned to faculty members of the School of Forestry and Natural Environment within the framework of the EUPS, in no way affect their other educational, research, and administrative obligations to the Department and the Greek Undergraduate Programme. The decision of the Program Steering Committee of the School of Forestry and Natural Environment on the assignment of teaching duties is issued no later than the beginning of each academic semester and must include the lecturers of the EUPS, the courses, educational activities, and total teaching hours assigned to each lecturer in

accordance with the curriculum for each academic semester, as well as the total cost of their remuneration, if remuneration is provided for, and is communicated without delay to the Special Account for Research Funds (SARF) of the Aristotle University of Thessaloniki. All categories of teaching staff are remunerated exclusively from the resources of the EUPS, provided that their remuneration is provided for. The amount of remuneration per category of teaching staff is determined by a decision of the Program Steering Committee and in accordance with the rules governing the SARF of the Aristotle University of Thessaloniki, regarding contracts for the remuneration of the Institution's staff, external collaborators, the performance of additional teaching work, and the total number of teaching hours assigned in each case.

The obligations of the lecturers include, among other things, the description of the course or lectures, the method of examination of the course, as well as the communication with students necessary for the academic purposes of the programme.

Lecturers are required to adhere to the weekly teaching schedule in accordance with the course timetable, as drawn up and determined by the Committee, and to follow the examination and assessment conditions as described in this Regulation.

Article 11

EUPS Revenue - Tuition Fees - Financial Management Procedure

The resources of the EUPS of the School of Forestry and Natural Environment of Aristotle University of Thessaloniki may come from:

1. tuition fees,
2. donations, sponsorships, and financial support of any kind,
3. bequests,
4. resources from research projects or programmes, especially those of the European Union,
5. AUTH's own resources, the amount of which may not exceed five percent (5%) of the total budget of the EUPS, and
6. any other legal cause.

Tuition fees

Tuition fees for studying at the EUPS amount to a total of twenty-eight thousand euros (€28,000), seven thousand euros (€7,000) per academic year. The amount of tuition fees is set and amended by a decision of the Senate of the Aristotle University of Thessaloniki, while the method and time of payment may be adjusted by a decision of the Program Steering Committee.

Tuition fees are paid by the students themselves (or by a third party or legal entity on their behalf) into a designated bank account of the SARF AUTH, in eight (8) equal instalments of three thousand five hundred euros (€3,500): The first instalment is due during the student's enrolment in the Programme, and the subsequent instalments are due before the start of each semester. After payment of the tuition fees, the corresponding receipt is issued, and the student is notified electronically.

When submitting their application, candidates must pay the amount of one hundred and fifty euros (€150) as a file management fee. The application is not considered complete and is not forwarded for evaluation unless the corresponding amount has been paid and the relevant proof of transaction has been sent by the candidate.

Payment is made electronically, according to the instructions sent with the confirmation of receipt of the application. The amount is deposited with the SARF AUTH and is not refundable in case of rejection or withdrawal of the application.

If accepted into the Programme, candidates are required to pay an additional amount of one thousand three hundred and fifty euros (€1,350) as a deposit for tuition fees. This amount is also paid to the SARF AUTH and is non-refundable in case of withdrawal from the programme.

Financial Management Procedure

The resources of the EUPS of the School of Forestry and Natural Environment are managed by the Program Steering Committee through the Special Account for Research Funds (SARF) of the Aristotle University of Thessaloniki. These funds are allocated on a priority basis to cover the operational needs of the EUPS and, if there are cash reserves, they may be used to cover other educational and development needs of the School of Forestry and Natural Environment. By decision of AUTH's Administrative Council, following a recommendation by the Research Committee of the SARF, the overheads for the SARF AUTH is determined (percentage of the fees).

The operating expenses of the EUPS also include the remuneration of lecturers and visiting professors. The amount of remuneration per category of teaching staff is determined by the Program Steering Committee, in accordance with the Remuneration Regulation of the SARF of the Aristotle University of Thessaloniki and up to the maximum permitted limit per teaching hour. The Committee may decide on a sliding scale of remuneration, depending on the number of students admitted per academic year.

Furthermore, the operating expenses of the Programme also include travel expenses incurred for the organization and operation of the EUPS and approved by its Program Steering Committee. Travel expenses are borne by the budget of the EUPS and are paid to those traveling after the submission of the relevant supporting documents, in accordance with Article 248 of Law 4957/2022 and subsequent relevant amendments.

The resources of the EUPS are allocated as follows:

α. An amount corresponding to ten percent (10%) of the total revenue from tuition fees is retained by the SARF for the financial management of the Programme. AUTH's Administrative Council decides whether the remaining amount, after deduction of the amount retained by the SARF, is transferred to the regular budget or made available for the creation of projects/programs through the SARF AUTH with the aim of covering, as a priority, the needs of the Greek Undergraduate Programme of the School of Forestry and Natural Environment, which operates without tuition fees, as well as covering the research, educational, and operational needs of the AUTH. The income of the EUPS of paragraphs b) to d) of Article 11 is subject to overheads for SARF, which applies to income from corresponding sources of funding.

β. The remaining amount of the total revenue of the EUPS is available to cover the operating expenses of the EUPS

Article 12

Administrative Support - Material and Technical Infrastructure

The International Student Support Unit is responsible for supporting international students of the EUPS, based on Article 212 of Law 4957/2022. The mission of the International Student Support Unit is to support international students enrolled in the first, second, and third

cycle programmes at the University. Specifically, the responsibilities of the International Student Support Unit are:

1. Supporting foreign students in enrolling in foreign-language study programmes at Aristotle University of Thessaloniki.
2. Supporting foreign students in obtaining entry visas and residence permits in Greece for study purposes and communicating with the relevant public authorities on these issues
3. Supporting the process of concluding contracts for the rapid issuance of residence permits for study purposes, in accordance with Article 37 of Law 4251/2014 (A' 80).
4. Supporting students during their settlement in Greece
5. Cooperation with the relevant departments of Aristotle University of Thessaloniki to assist foreign students
6. Arranging Greek language courses or other foreign language courses in cooperation with the relevant departments of Aristotle University of Thessaloniki
7. Exercising any other responsibility specified in the University Statute and related to the subject matter of the International Student Support Unit.

Administrative support for the programme.

The School of Forestry and Natural Environment of the Aristotle University of Thessaloniki, with its long experience in organizing and implementing first, second, and third cycle study programmes, is responsible for the overall administrative and technical support of this Undergraduate Program of Studies in English. The secretarial support for the Programme is provided by the Secretariat of the EUPS, which may be staffed by personnel from the Secretariat of the School of Forestry and Natural Environment, constituting a key operational arm of its administration and operating under the supervision of the Program Steering Committee.

More specifically, the Secretariat of the EUPS:

1. Provides administrative support to the Program Steering Committee and the Director of the EUPS
2. Handles matters relating to the educational life cycle of students, from enrolment to graduation and the issuance of their degrees
3. Maintains the Programme's protocol, printed and digital archives
4. Handles administrative procedures relating to the Programme's teaching staff (contracts, travel, etc.)
5. Cooperates with the Special Account for Research Funds of the Aristotle University of Thessaloniki for the financial management of the Programme and the support of related procedures.

The **coordination of the Secretariat** of the EUPS, as well as the keeping of the minutes of the Program Steering Committee, is undertaken by a member of the Secretariat of the Greek Undergraduate Programme, who has the formal qualifications to perform the duties of Head, in accordance with Article 1 of Law 3839/2010. The relevant assignment is made by a decision of EUPS's Program Steering Committee.

In this context, in order to support the needs of the Programme, the following may be employed, in accordance with Article 104 of Law 4957/2022:

1. Members of the regular administrative staff of the Aristotle University of Thessaloniki, with additional employment beyond their legal obligations, following a decision by the Research Committee of the Special Account for Research Funds, upon recommendation by the Program Steering Committee.

2. additional staff, selected in accordance with the procedure of Article 243 of Law 4957/2022.

The cost of remuneration for all categories of staff shall be borne exclusively by the Programme budget.

Technical support for the operation of the programme is provided centrally by specialized staff of the Digital Governance Unit of the Aristotle University of Thessaloniki, the existing technical staff of the General Directorate of Technical Services and Computerisation of the Aristotle University of Thessaloniki, and the technical staff of the School of Forestry and Natural Environment.

The existing building and material infrastructure of the Department of Aristotle University of Thessaloniki is used for the implementation of the EUPS courses.

Article 13

Type of Degree Awarded

The degree awarded by EUPS of the School of Forestry and Natural Environment is a public document and is awarded to graduates of the programme.

The degree is issued by the School's Secretariat. It bears the name of the School of Forestry and Natural Environment and the Institution, the emblem of the Aristotle University of Thessaloniki, the date of completion of studies, the date of issue of the degree, the graduation protocol number, the title of the EUPS, the degree grade, the student's details, and the evaluation rating: Good (5.00–6.49), Very Good (6.50–8.49), Excellent (8.50–10.00).

Graduates may be awarded a certificate of successful attendance and completion of the Programme prior to graduation.

In addition to the degree, a Diploma Supplement is also awarded, in accordance with Article 15 of Law 3374/2005 and Ministerial Decision Φ5/89656/B3/13-8-2007 (Government Gazette 1466/B'). The Diploma Supplement is an explanatory document that provides detailed information on the nature, level, content, educational context, and legal status of the studies successfully completed. It does not replace the official degree or the detailed transcript issued by the Institution.

Article 14

Certification - Evaluation of EUPS

Following the issuance of the decision to establish the EUPS and prior to its commencement of operation, the EUPS must be certified by the Hellenic Authority for Higher Education (HAHE), in accordance with paragraph c) of Article 8(1) of Law 4653/2020 (A' 12). After its establishment, the EUPS is periodically certified, in accordance with subparagraph bb) of paragraph b) of Article 8(1) of Law 4653/2020, as part of the evaluation of the academic unit to which they belong.

The EUPS is evaluated in the context of the periodic evaluation/certification of the academic unit by the HAHE. In particular, the overall assessment of the work carried out at the EUPS is evaluated, the degree to which the objectives set at its establishment have been achieved, its sustainability, the absorption of graduates into the labour market, the degree of its contribution to research, its internal evaluation by graduates, the advisability of extending its operation, as well as other information relating to the quality of the work produced and its contribution to the national strategy for higher education.

If, during the evaluation stage, the EUPS is deemed not to meet the conditions for continuing its operation, its operation shall be terminated upon the graduation of the students already enrolled, in accordance with the decision establishing it.

Internal Evaluation of MODIP

In order to ensure and improve the quality of the EUPS, the Quality Assurance Unit of the Aristotle University of Thessaloniki (MODIP-AUTH) conducts periodic internal evaluations of the EUPS within the framework of the Institution's Internal Quality Assurance System and in accordance with the instructions and guidelines of HAHE.

The obligations of the programme's administrative bodies and lecturers include all procedures provided for in the relevant instructions and guidelines of MODIP-AUTH for the internal and external evaluation and certification of study programmes and academic units.

Evaluation of lecturers and courses by students

With the sole purpose of improving the level of studies at the EUPS and with absolute assurance of their anonymity, students are invited to evaluate the courses and lecturers each semester.

For reasons of uniformity in the collection of statistical data and the ability to extract information that can be used for the educational work of the Schools, Departments, and the Institution as a whole, the evaluation questionnaires are prepared by MODIP and may vary slightly, based on the specific characteristics and needs of each academic unit and/or each course. They are completed electronically.

The evaluation is conducted under the responsibility of the Internal Evaluation Group (IEG) of the School of Forestry and Natural Environment, in collaboration with the MODIP-AUTH, and is carried out through the latter's Quality Management Information System. The School's Administration and IEG are required to take systematic actions to encourage student participation in the evaluation, in accordance with the guidelines of the MODIP and the relevant decisions of the Senate.

The IEG of the School of Forestry and Natural Environment monitors, through MODIP's Quality Management Information System, the degree of student participation in the evaluation process, analyses the relevant results, and informs the administrative bodies of the EUPS and the corresponding academic unit. The evaluation questionnaires concern the course taught and the lecturer separately.

The administrative bodies of the EUPS and the academic unit, in collaboration with the corresponding IEG of the School of Forestry and Natural Environment, are required to study the results of the evaluation, announce their findings, decide on the publication of the summary results of the evaluation, when deemed necessary and in any case after the announcement of the semester course grades, in accordance with the applicable legislation on the protection of personal data, and take action to address any problems or improve the EUPS

Article 15

EUPS Study Guide

The EUPS publishes a Study Guide in English to inform students about its operation. It is published on the website of the School of Forestry and Natural Environment, the Programme, and is updated regularly. The Study Guide includes:

1. General information and useful electronic information about the Institution and the School, in particular about administrative services or collective bodies that undergraduate students can contact for the successful completion of their studies.

2. The purpose and subject matter of the EUPS as well as the qualifications acquired after the award of the degree.

3. The academic calendar, which includes the start and end dates of academic semesters, exam periods, holidays, and any other obligations such as seminars, conferences, etc.

4. The course program, credit units, terms of study, teaching staff, and the rights and obligations of students.

5. The language of the programme.

6. The EUPS Program Steering Committee.

7. Databases and other services.

8. Use of the Library, depending on the needs of the EUPS courses.

9. Learning outcomes and qualifications after graduation.

10. Services provided by the Institution to students.

Article 16

Transitional provisions

Any issue arising during the operation of the EUPS that is not covered by the relevant legislation or this Regulation shall be dealt with by decisions of the Programme's administrative bodies, with an amendment of the relevant Regulation.