



**School of Agriculture (Coordinating)
in collaboration with the School of
Chemistry**

**Joint Undergraduate Program of Studies
in English (JEUPS)
“Sustainable Agriculture and Food
Science”**

ε.

**Regulations on Studies, Internship,
Mobility, and Thesis Preparation**

February 2026

A. STUDY REGULATIONS

Excerpt from Senate Decision No. 38745/15-01-2026 of the Aristotle University of Thessaloniki (AUTH) concerning the Study Regulations of the Joint Undergraduate Program of Studies in English (JEUPS).

HELLENIC
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ARISTOTLE
UNIVERSITY
OF THESSALONIKI

SECRETARIAT OF THE SENATE

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Thessaloniki, 15-1-20206
Ref. No.: 38745



SUBJECT: Approval of the Establishment and Internal Regulations of the Joint Undergraduate Program of Studies in English (JEUPS) "Sustainable Agriculture and Food Science" by the School of Agriculture (coordinating) of the Faculty of Agriculture, Forestry and Natural Environment and the School of Chemistry of the Faculty of Sciences, Aristotle University of Thessaloniki (AUTH)

TO

The Hellenic Authority for Higher Education (HAHE)
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CC:

-School of Agriculture
-School of Chemistry
-Quality Assurance Unit of AUTH

The Senate of Aristotle University of Thessaloniki, at its meeting No. 3175/14-1-2026, taking into account:

1. The provisions of Law 3341/1925 (Government Gazette 154/A/22-6-1925) "On the establishment of a University in Thessaloniki", by which the Aristotle University of Thessaloniki was established as the "University of Thessaloniki", subsequently renamed "Aristotle University of Thessaloniki" by Article 7 of Law 3108/1954 (Government Gazette 314/A/30-12-1954).
2. The provisions of Presidential Decree 98/2013 (Government Gazette 134/A/5-6-2013, correction of error Government Gazette 140/A/11-6-2013) "Abolition of the General School, transfer of School headquarters and establishment, formation, renaming and restructuring of Faculties at Aristotle University of Thessaloniki".

3. The provisions of Articles 75–83 of Law 4727/2020 (Government Gazette 184/A/23-9-2020) “Digital Governance (Transposition into Greek Law of Directive (EU) 2016/2102 and Directive (EU) 2019/1024) – Electronic Communications (Transposition into Greek Law of Directive (EU) 2018/1972) and other provisions”.
4. The provisions of Article 16 and Chapters Z and IA of Law 4957/2022 (Government Gazette 141/A/21-7-2022) “New Horizons in Higher Education Institutions: Strengthening the quality, functionality and connection of HEIs with society and other provisions”, as amended and in force.
5. The provisions of Articles 14 and 15 of Law 3374/2005 (Government Gazette 189/A/2-8-2005) “Quality assurance in higher education. Credit transfer and accumulation system – Diploma Supplement”, as in force.
6. The provisions of Ministerial Decision No. Φ5/89656/B3/13-8-2007 (Government Gazette 1466/B/13-8-2007) “Implementation of the Credit Transfer and Accumulation System”.
7. Confirmatory Act No. 26770/24-11-2023 of the Rector of Aristotle University of Thessaloniki (Government Gazette 1287/Y.O.Δ.Δ./29-11-2023) concerning the establishment of the Administrative Council of Aristotle University of Thessaloniki.
8. Confirmatory Act No. 75140/11-6-2025 (Government Gazette 680/Y.O.Δ.Δ./12-6-2025) of the Acting Rector of Aristotle University of Thessaloniki concerning the election of Kyriakos Anastasiadis, Professor of the School of Medicine of the Faculty of Health Sciences, as Rector of Aristotle University of Thessaloniki.
9. Decision No. 77939/23-6-2025 (Government Gazette 718/Y.O.Δ.Δ./23-6-2025) of the Administrative Council of Aristotle University of Thessaloniki concerning the appointment of four (4) Vice-Rectors at Aristotle University of Thessaloniki, pursuant to paragraph 2 of Article 12 of Law 4957/2022.
10. Decision No. 79214/26-6-2025 (Government Gazette 755/Y.O.Δ.Δ./27-6-2025) of the Administrative Council of Aristotle University of Thessaloniki concerning the acceptance of the resignation of Eleftheria Thanouli, daughter of Dimitrios, Professor of the School of Cinema of the Faculty of Fine Arts, from her position as Vice-Rector of Aristotle University of Thessaloniki.
11. Decision No. 79632/27-6-2025 (Government Gazette 3336/vol. B/30-6-2025) of the Rector of Aristotle University of Thessaloniki determining the areas of responsibility of the Vice-Rectors and the powers delegated to them, pursuant to Law 4957/2022 (paragraph 3 of Article 12), and determining the order of succession of the Rector by the Vice-Rectors in cases of absence or inability to perform his duties, pursuant to Law 4957/2022 (paragraph 2 of Article 15).
12. Confirmatory Act No. 300/1-9-2025 (ΑΔΑ: 624146Ψ8XB-2KY) of the Rector of Aristotle University of Thessaloniki concerning the composition of the Senate of Aristotle University of Thessaloniki for the academic year 2025–2026, and Decree No. 7250/23-9-2025 (ΑΔΑ: 91ΞΗ46Ψ8XB-5ΨΑ) of the Rector

concerning the reconstitution of the Senate of Aristotle University of Thessaloniki for the academic year 2025–2026.

13. The recommendations of the Assemblies of the School of Agriculture (meeting no. 1043/8-1-2026) of the Faculty of Agriculture, Forestry and Natural Environment and of the School of Chemistry (meeting no. 886/9-1-2026) of the Faculty of Sciences of the Aristotle University of Thessaloniki (AUTH), concerning the establishment of the Joint Undergraduate Program of Studies (in English) (JEUPS) entitled “Sustainable Agriculture and Food Science”, together with the attached Feasibility Study, Sustainability Report, Budget Analysis based on annual student enrolment forecasts, the Special Cooperation Protocol between the collaborating Schools, and the Internal Regulations of the JEUPS.
14. The fact that the provisions of this decision do not give rise to any expenditure from the State Budget.
15. The fact that the provisions of this decision do not concern an administrative procedure subject to mandatory registration with the ΕΜΔΔ-ΜΙΤΟΣ,

B. Approval of the Internal Regulation of the Joint Undergraduate Program of Studies in English (JEUPS) entitled “Sustainable Agriculture and Food Science” of the School of Agriculture (coordinating) of the Faculty of Agriculture, Forestry and Natural Environment and the School of Chemistry of the Faculty of Sciences of the Aristotle University of Thessaloniki, as follows:

Preamble

The integrated cycle of studies comprises attendance of an Undergraduate Program of Studies (PPS) and is completed with the award of an integrated and indivisible postgraduate-level degree (Integrated Master). Successful completion of the program leads to the award of a Level seven (7) qualification, in accordance with the National and European Qualifications Framework, namely the integrated and indivisible postgraduate-level degree (Integrated Master).

The Undergraduate Studies Regulation is 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 organisation and operation of Programs of study, as well as Chapter IA of the same Law, which specifically concerns Foreign-Language Undergraduate Programs of Study.** Furthermore, it is aligned with the Regulations for the Operation of Undergraduate Programs of Aristotle University of

Thessaloniki, ensuring that the provisions herein are consistent with the University's current legislative framework.

Article 1

Subject and Aim of the JEUPS

The School of Agriculture (coordinating), in collaboration with the School of Chemistry of the Aristotle University of Thessaloniki (AUTH), organizes and operates a Joint Undergraduate Program of Studies in English (hereinafter JEUPS) of five-year duration, leading to the award of an integrated and indivisible postgraduate-level degree (Integrated Master), entitled “Sustainable Agriculture and Food Science” (in Greek: «Αειφορική Γεωργία και Επιστήμη Τροφίμων»). The degree awarded corresponds to Level 7 of the National and European Qualifications Framework, in accordance with Article 47 of Law 4763/2020 (Government Gazette Α' 254).

The subject of the Joint Undergraduate Program of Studies in English “Sustainable Agriculture and Food Science” is the provision of comprehensive and interdisciplinary education in the fields of sustainable crop and livestock production, innovative food production, and agri-food systems. The Program provides students with the necessary knowledge and skills for access to modern professions in the agri-food, agricultural, environmental, and technological sectors, as well as for any other professional or academic activity requiring a high level of scientific training in the field of Agricultural Sciences.

The aim of the Program is to provide high-level agricultural education to an international audience through systematic familiarization with the principal scientific fields of sustainable agriculture and livestock production, food science, agricultural economics, natural resource management, and agricultural engineering. The Program further aims to cultivate interdisciplinary thinking and problem-solving abilities, to develop skills for the application of innovative practices, to strengthen critical thinking and scientific depth, to promote Greek agri-food excellence internationally, and to enhance the overall international orientation of the Schools participating in the JEUPS and of the Aristotle University of Thessaloniki.

Learning Outcomes and Qualifications

Upon successful completion of the Joint Undergraduate Program of Studies in English (JEUPS) entitled “Sustainable Agriculture and Food Science,” students will have acquired:

- Comprehensive theoretical and practical knowledge in the core fields of Sustainable Agriculture (crop production, animal production, agricultural economics, natural resource management, and agricultural engineering) and Food Science.

- Skills in analysis and problem-solving within complex agri-food systems.
- Digital and computational application skills in the agri-food sector, as developed through courses such as *Informatics, Computer Programming and Optimization Methods, Digital Systems in Agriculture*, and *Earth Observation and Geoinformation for Agrifood Systems*.
- The ability to interpret and evaluate complex scientific and technological information and to synthesize new knowledge for innovative applications in the agri-food sector.
- Understanding of the social, economic, and ethical dimensions of agri-food systems through courses such as *The Sociology of Food, Governance, Bioethics and Animal Welfare in Agri-Food Systems, Agricultural Economics*, and *Agricultural Governance*, as well as the development of leadership, entrepreneurship, and social innovation skills (*Entrepreneurship and Social Innovation in the Agrifood Sector*).
- Knowledge of integrated and sustainable management of crop production and animal husbandry, as well as knowledge of food science and food technology.
- The ability to design and implement strategies for the sustainable management of natural resources and environmental protection in the agri-food sector.
- Acquisition of an appropriate level of knowledge enabling continuation of studies at doctoral level, as well as access, under specific conditions, to the professional rights of an Agronomist in Greece and abroad.

The Program provides students with the academic prerequisites for continuing their studies at doctoral level and the professional prerequisites for pursuing careers in fields requiring substantiated agricultural knowledge. The integrated and indivisible postgraduate-level degree (Integrated Master) awarded is equivalent to the five-year Integrated Master degrees granted by the Greek-language programs of Agricultural Schools of Higher Education Institutions in Greece and by corresponding foreign universities.

Article 2

Degree Awarded by the JEUPS

The Joint Undergraduate Program of Studies in English (JEUPS) of the Schools of Agriculture and Chemistry of the Aristotle University of Thessaloniki awards a degree of an integrated and indivisible postgraduate level (Integrated Master).

Successful completion of the studies corresponds to Level seven (7) of the National and European Qualifications Framework, in accordance with the provisions of Article 47 of Law 4763/2020 (Government Gazette A' 254).

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Article 4

Categories of Applicants to the JEUPS

Eligible to apply are international applicants who fall into one of the following categories:

(a) Graduates of secondary schools (lyceums) or equivalent institutions physically located abroad. Applicants who have attended with full-time study the last two (2) years of secondary education in a foreign country must submit a secondary school leaving certificate or an equivalent qualification granting access to higher education institutions in the country where the qualification was obtained.

(b) Graduates of recognized foreign schools of other European Union Member States or third countries that are legally established and operate in Greece, whose qualification grants access to higher education institutions in the country whose educational system the school follows, provided that:

(ba) neither the applicants nor their parents hold Greek citizenship; and

(bb) the applicants have attended at least the last two (2) years of secondary education with full-time study.

(c) Students of Schools of Agriculture or equivalent departments of higher education institutions abroad who hold the certification referred to in paragraph 1 of Article 314A of Law 4957/2022, in order to continue their studies at a corresponding semester and be awarded a degree from the JEUPS.

Foreign schools operating in Greece must be officially recognized as legally functioning by the competent Regional Directorate of Secondary Education.

Verification of the authenticity of the secondary school leaving certificate and the applicant's transcript may be carried out by one of the following methods:

1. Certification with an Apostille (Hague Convention), provided that the issuing country is a member of the Hague Apostille Convention.
2. Notarial certification (notarial act).
3. Authentication by the Ministry of Foreign Affairs and/or the Ministry of Education of the issuing country.
4. Submission of the certificate and/or transcript accompanied by direct notification of the issuing foreign school by the applicant. Such notification must include an official email from the foreign school enabling the Secretariat of the Program to verify the authenticity of the submitted documents.

Proof of English Language Proficiency

Applicants are required to demonstrate English language proficiency at least at Level B2, in accordance with the Common European Framework of Reference for Languages (CEFR), by one of the following means:

1. English as their native language.
2. Possession of a language certificate at a minimum level of B2 issued by a recognized examination body, in accordance with the applicable decisions of the Supreme Council for Civil Personnel Selection (ASEP) or the Ministry of Education regarding recognized language qualifications.
3. A degree from a Department of Foreign Language and Literature or a Department of Foreign Languages, Translation and Interpreting of a Greek university, or an equivalent degree from a recognized institution abroad.
4. A Bachelor's, Master's, or Doctoral degree from a recognized higher education institution abroad, provided that the program was conducted entirely in English.
5. A secondary school leaving certificate, provided that the applicant has attended at least the last two (2) years of secondary education at a school where English is the official language of instruction.
6. A license to teach a foreign language does not constitute proof of proficiency in that language, as submission of the certified qualification on the basis of which the license was issued is required, together with an official translation where necessary.

Article 5

Number of Admissions, Selection Criteria, and Required Documents

The annual number of admitted students to the Undergraduate Program of Studies in English (EUPS) is set at a maximum of forty (40) students, while the minimum number required for the Program to operate is set at fifteen (15) students. Upon recommendation of the Program Steering Committee, decision of the Senate, and publication in the Government Gazette, the minimum and maximum number of admitted students may be modified for each cycle of the Program.

The selection of admitted students is based on the applicants' curriculum vitae, following evaluation of the application file and supporting documents by the Program Steering Committee and participation of candidates in the selection process. This process includes an online oral interview conducted by members of the Committee, assessing communication skills, ability to substantiate reasoning, academic and personal preparedness, and general understanding of issues in the agri-food sector. By decision of the Program Steering Committee, as specified in the call for applications, a knowledge test in the English language may be conducted prior to the interview, in a format and subject areas determined in each call. The relevant call for applications and the required supporting documents are published on the Program's website.

Applications are submitted electronically throughout the year. Prospective students must submit their applications, together with the required supporting documents, electronically to the Secretariat of the Program. The English language knowledge test and interviews are conducted on predetermined dates set by the Program Steering Committee, while evaluation follows the chronological order of receipt of applications.

Applicants must submit the following supporting documents:

- Application form for participation in the JEUPS, available electronically on the Program's website
- Photocopy of both sides of the national identity card or passport.
- Secondary school leaving certificate (with official translation into English).
- Transcript of grades for all subjects of the final year of secondary education (with official translation into English).
- Certificate of English language proficiency at a minimum level of B2.
- Motivation Letter of up to five hundred (500) words, presenting the applicant's interest in sustainable agriculture and food science, motivation for attending the Program, and future goals.
- Brief curriculum vitae including information on studies, distinctions, volunteering, or other activities relevant to the subject area.

The above-described selection criteria and required documents may be revised following a proposal by the Program Steering Committee and approval by the Senate of AUTH.

In addition, the following optional academic criteria are positively considered during the evaluation of applications:

- Minimum overall secondary school grade: seventy percent (70%) of the maximum possible grade or equivalent.
- Possession of admission test certifications for higher education, such as:
 - International Baccalaureate (IB): at least 28/45,
 - SAT / ACT: SAT $\geq$ 1200/1600, ACT $\geq$ 25/36,
 - TSA (Thinking Skills Assessment): $\geq$ 70/100 or raw score $\geq$ 28/50.

Additional criteria may also be taken into account in the evaluation and selection of applicants, as determined and subject to revision upon recommendation of the Program Steering Committee and in accordance with the applicable legal framework.

Original documents may, if deemed necessary, be requested from the applicant to be sent by post or submitted in person to the Secretariat of the Program.

Final Selection Procedure of Candidates

The final selection of candidates for admission to the Program is carried out by the Program Steering Committee as follows: The Committee compiles a complete list of all applicants and, following the relevant review, rejects those who do not meet the minimum criteria established by law and by the Program, and invites for interview those shortlisted applicants who have submitted the required supporting documents.

Upon completion of the evaluation process — based on the application file, the interview, and the knowledge test (where applicable) — the final list of successful candidates is drawn up.

The final list of admitted candidates and any reserve (waiting-list) candidates is ratified by the Program Steering Committee. The selection procedure, announcement of results, and registration of admitted candidates must be completed by 30 September of each academic year, subject to the filling of vacant places arising from students who have voluntarily withdrawn from the Program by discontinuing their studies. Such vacancies are filled in order of priority from the reserve list compiled by the Program Steering Committee during the evaluation of applications.

Furthermore, and in addition to the above, students enrolled in Agricultural Faculties or equivalent Departments of higher education institutions abroad who hold a certificate of evaluation of study periods completed at a recognized foreign higher education institution (Article 314A(1) of Law 4957/2022, as amended by Article 128 of Law 5094/2024) may be admitted to the Joint English Undergraduate Program of Studies (JEUPS) in order to continue their studies and be awarded the corresponding degree.

The student submits an expression-of-interest application together with the required supporting documents to the Secretariat of the JEUPS, either in hard copy or electronically, through the Electronic Registration Information System of the Ministry of Education, Religious Affairs and Sports.

Filling of Vacant Positions

In the event of withdrawal or deregistration of a student, the Program Steering Committee may, by a duly reasoned decision, fill the vacant position in order to ensure the smooth operation of the Program by maintaining a stable number of students in each year of study.

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

Interested applicants are required to submit the following supporting documents:

- Copy of national identity card or passport
- Secondary School Leaving Certificate (original and official translation into English)
- Transcript of grades for all subjects of the final year of secondary education (original and official translation into English)

- Official academic transcript from the institution of origin
- Official Curriculum of the institution of origin for the purpose of academic equivalence assessment (in cases under Article 314A(1) of Law 4957/2022)
- Proof of English language proficiency in accordance with the relevant provisions of Article 4 of this Regulation
- Letter of Expression of Interest
- Curriculum Vitae

The Committee evaluates the application files and may invite candidates to an interview prior to issuing the final decision.

Appeals against the results may be submitted within five (5) working days from the notification of the results by means of a written application to the Secretariat of the JEUPS.

Registration of admitted candidates takes place following a relevant announcement by the Secretariat of the JEUPS within fifteen (15) days, upon submission of any required supporting documents. If a candidate fails to register within the prescribed deadline and to pay the required tuition fee deposit, this shall be considered as refusal to accept the offered place, which will then be offered to the next candidate on the reserve list.

It is clarified that applications and any subsequent admission apply exclusively to the academic year specified in the respective call for applications. Reservation of a study place (provisional admission) for subsequent academic semesters or years is not permitted, regardless of the reason, including, indicatively, military service or personal obligations. Candidates wishing to enroll in a later academic year must submit a new application in a subsequent admission cycle under the corresponding call.

Exceptionally, the Program Steering Committee may, by a reasoned decision, approve a deferral of the commencement of studies for one academic year, provided that serious reasons exist and are adequately documented by the candidate. The decision to grant or deny such deferral lies solely within the discretionary authority of the Committee.

Article 6

Duration and Terms of Study in the JEUPS

The duration of study in the JEUPS leading to the award of a single and indivisible postgraduate-level degree entitled **Master Integrated in Sustainable Agriculture and Food Science** (in Greek: Αειφορική Γεωργία και Επιστήμη Τροφίμων) is set at ten (10) academic semesters of full-time study.

Each semester course has a duration of thirteen (13) weeks and is delivered through lectures, laboratory exercises, assignments, etc., depending on the requirements of the course and the choice of the instructor.

All courses are conducted in person, utilizing the facilities of the School of Agriculture and the School of Chemistry of AUTH. Exceptionally, synchronous distance-learning methods may be used for teaching activities delivered by professors from foreign institutions or collaborating professors, in cases of force majeure or extraordinary circumstances where in-person instruction or the use of facilities is not feasible, as well as for the organization of advanced courses and tutorial sessions beyond the mandatory teaching hours of each course. Distance learning is conducted using ICT tools, making use of the infrastructure of the Schools of Agriculture and Chemistry and the expertise and support of the Digital Governance Unit (DGU) of AUTH.

The minimum duration of study required for the award of the degree is ten (10) academic semesters, while the maximum duration of study is defined as this period plus six (6) additional academic semesters.

Upon completion of the maximum study duration of sixteen semesters, and subject to the applicable provisions of the legislation governing Higher Education Institutions, a decision to deregister the student is issued by the competent body of the JEUPS.

After enrollment has been completed and all procedures for the formal commencement of studies have been finalized, students who have not exceeded the maximum duration of study may request suspension of studies for a period not exceeding two (2) academic years in total. The right to suspend studies may be exercised either once or in segments for a minimum duration of one (1) academic semester, but the cumulative duration may not exceed two (2) years. Student status is suspended during this period, and participation in any educational activity is not permitted. The suspension period is not counted toward the maximum duration of study. Upon resumption, students return to normal study status with all rights and obligations provided by the Program. The procedure is initiated by a written application submitted to the Secretariat of the JEUPS, accompanied by the necessary supporting documents, and is evaluated by the Program Steering Committee.

For serious health reasons concerning the student or a first-degree relative by blood, spouse, or partner with whom the student has entered into a civil partnership, an exceptional extension of the maximum duration of study may be granted for a period not exceeding one

(1) year. This extension is approved by the Program Steering Committee upon a fully justified and adequately documented request by the student and may not exceed two (2) consecutive academic semesters.

Part-time study is not offered in the JEUPS.

Matters concerning re-examination in outstanding courses or deregistration for reasons such as:

(a) insufficient academic progress of the student (documented by lack of participation in the educational process, including attendance and examinations),

(b) conduct that violates academic ethics, and

(c) a request submitted by the student,

are decided by the Program Steering Committee.

Article 7

Students' Rights and Obligations

Within the framework of the social policy of the School of Agriculture and the School of Chemistry, in cooperation with the Equal Access Unit of the Aristotle University of Thessaloniki, the full, equal, and meaningful participation of all students with disabilities or special educational needs in all educational, research, and administrative activities of the Schools in general and of the JEUPS in particular is ensured.

Access to teaching and examination facilities of the Schools of Agriculture and Chemistry is facilitated through appropriate infrastructure, such as ramps, handrails, and elevators. Students who, due to disability or learning difficulties, are unable to participate in written examinations are provided with the option of oral examination, either in person in an accessible room or remotely via a digital teleconferencing platform.

Students enroll in and participate in the JEUPS under the terms and conditions set out in this Regulation. Students of the Program enjoy all rights, benefits, and facilities provided to students of the Greek-language undergraduate program, except for the provision of free textbooks.

Students admitted to the JEUPS are required to:

1. Attend all courses of the Program, regardless of whether they are conducted in person or, exceptionally, remotely, provided that the latter has been approved by the competent Program bodies. Participation in courses, exercises, examinations, public lectures, and other educational activities is mandatory. Students are allowed absences of up to thirty percent (30%) of the total teaching hours of each course per semester. In cases of serious and justified impediment, missed hours may be made up after consultation with the instructor and approval by the Program Steering Committee.
2. Submit required assignments on time, where such assignments are prescribed for a course by the responsible instructor.
3. Declare in due time the courses from previous years in which they have not successfully completed examinations, at the beginning of each semester. Course declarations are submitted electronically via the electronic secretariat system and recorded in the student's individual academic file. Declaration of elective courses is mandatory in the final year.
4. Obtain or borrow the necessary textbooks as recommended by the instructor of each course, where deemed necessary.
5. Regularly monitor Program and Secretariat announcements by checking their email accounts.
6. Obtain an academic identity card through the competent electronic service of the Ministry of Education, Religious Affairs and Sports.
7. Pay tuition fees on time before the first and second semesters of each academic year, in accordance with the specified deadlines.
8. Settle all financial or other outstanding obligations to the Program and the University prior to graduation. Otherwise, they are not entitled to participate in the degree award ceremony.
9. In the case of scholarships with reciprocal obligations, perform the required duties, which may include supporting the educational or research activities of the Program, the library, or other needs of the Schools.

10. Respect the decisions of the Program bodies and adhere to the rules of academic ethics.

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

The same sanction may be imposed in cases of disciplinary misconduct that offend the academic community and the dignity of its members, such as sexist, racist, homophobic, or transphobic behavior, verbal or physical violence, inappropriate conduct on university premises, or any action contrary to the principles of respect, equality, and inclusion. The Committee reserves the right to refer such cases to the competent disciplinary bodies of the University or, where appropriate, to the competent legal authorities in accordance with applicable legislation.

The JEUPS provides the institution of the **Academic Advisor**. The role of the Academic Advisor is to guide students toward the successful completion of their studies and, based on their individual goals, to offer guidance and solutions to problems that may hinder academic progress. The list of Academic Advisors will be announced by the Secretariat on the JEUPS website, including contact details. All teaching staff are required to serve as Academic Advisors, and assignments are made after the enrollment of new students at the beginning of each academic year. New students are expected to contact their assigned Academic Advisor at the beginning of the winter semester of their first year. Thereafter, they are encouraged to maintain at least one contact per month with their Advisor. The Academic Advisor is committed to proposing solutions when a student faces difficulties affecting the normal progress of studies, to informing the Program Steering Committee when necessary, and to respecting personal data in accordance with the code of ethics.

Article 8

Curriculum — Course Content — Assessment of Knowledge

The Joint Interdepartmental English-taught Undergraduate Program (JEUPS) “Sustainable Agriculture and Food Science” offers an integrated, full-time curriculum of five (5) academic years, structured into ten (10) academic semesters. The Program comprises a total of fifty-five (55) courses, of which each student is required to attend and successfully complete forty-five (45) courses. These courses are selected by students during semester course registration,

allowing them to accumulate 270 ECTS credits during the first nine semesters of study. In the 10th semester, students prepare a diploma thesis worth 30 ECTS credits on a topic of their choice. The Program adopts a flexible study model with no predefined compulsory courses; all courses are elective. Each course corresponds to a workload of 6 ECTS credits, and students are required to register for five (5) courses at the beginning of each semester. These courses may be selected from the student's current semester of study as well as from previous semesters of the same academic period (Winter or Spring).

Teaching is conducted in person, with provision for digital support of educational materials and communication between students and instructors through the AUTH e-learning platform. Course attendance is mandatory, and absences exceeding thirty percent (30%) of the teaching hours of each course per semester are not permitted, unless justified by documented force majeure.

The academic year consists of two (2) semesters (Winter and Spring), each comprising thirteen (13) weeks of instruction, followed by an examination period at the end of the semester. Successful completion of the Program requires the accumulation of three hundred (300) ECTS credits.

The language of instruction for all courses is English.

The Program does not include a mandatory internship; however, advisory support and opportunities for participation in research projects are provided.

Curriculum

Code	CURRICULUM Courses	Hours/week	ECTS
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1st Semester

SAFS

SAFS 101	Calculus for agriculture and food science	5	6
SAFS 102	General Chemistry	5	6
SAFS 103	Informatics	5	6

SAFS 104	Bioethics, Governance and Animal Welfare in Agri-Food Systems	5	6
SAFS 105	The sociology of food: cultural and social dimensions of Mediterranean Gastronomy	3	6
SAFS 106	Mediterranean Biodiversity, Climate Change and Circular Economy	4	6

2nd Semester

SAFS 201	Physics applied in Agrifood sector	5	6
SAFS 202	Statistics and Biometry	5	6
SAFS 203	Sustainable Field Crop Production	5	6
SAFS 204	Living Systems and Molecular Biology	5	6
SAFS 205	Food Chemistry (Prerequisite courses: SAFS 102)	5	6
SAFS 206	Agricultural Economics	3	6

3rd Semester

SAFS 301	Agrometeorology	5	6
SAFS 302	Computer Programming and Optimization Methods	5	6
SAFS 303	Principles of Genetics	4	6
SAFS 304	Introduction to animal husbandry and farm management	5	6
SAFS 305	Food Processing and Preservation Technologies (Prerequisite courses: SAFS 205)	5	6
SAFS 306	Agricultural Governance: Policy Instruments and Sustainable Cooperative Models	5	6

4th Semester

SAFS 401	Food analysis (Prerequisite courses: SAFS 205)	5	6
SAFS 402	Soil Science	5	6

SAFS 403	General and Food Microbiology	5	6
SAFS 404	Plant Physiology (Prerequisite courses: SAFS 204)	5	6
SAFS 405	Biochemistry (Prerequisite courses: SAFS 204)	5	6
SAFS 406	Entrepreneurship and Social Innovation in the Agrifood Sector	5	6

5th Semester

SAFS 501	Digital Systems in Agriculture	5	6
SAFS 502	Food Biotechnology (Prerequisite courses: SAFS 205, 403)	5	6
SAFS 503	Plant Pathology	5	6
SAFS 504	Intelligent animal nutrition	5	6
SAFS 505	Principles of pesticides	5	6
SAFS 506	Agrifood Marketing, Consumer and Sustainability	5	6

6th Semester

SAFS 601	Viticulture	5	6
SAFS 602	Principles of modern fruit science	5	6
SAFS 603	New trends in Floriculture	5	6
SAFS 604	Water Resources and Irrigation Engineering	5	6
SAFS 605	Entomology applied in Agriculture	5	6
SAFS 606	Controlled Environment Systems (Livestock and Plants)	5	6

7th Semester

SAFS 701	Ecology	5	6
SAFS 702	Sustainable Oenology and Wine Production (Prerequisite courses: SAFS 205, 403)	5	6
SAFS 703	Food Engineering (Prerequisite courses: SAFS 305)	5	6
SAFS 704	Breeding & Plant Propagation (Prerequisite courses: SAFS 303)	5	6
SAFS 705	Physiology of reproduction of farm animals	5	6
SAFS 706	Nutrition and Metabolism with Mediterranean Diet Insights (Prerequisite courses: SAFS 205)	5	6
SAFS 707	Landscape architecture	5	6

8th Semester

SAFS 801	Vegetable crop production	5	6
SAFS 802	Apiculture and bee products	5	6
SAFS 803	Farm Management	5	6
SAFS 804	Earth Observation and Geoinformatics for Agrifood Systems	5	6
SAFS 805	Organic Agriculture (Prerequisite courses: SAFS 203)	5	6
SAFS 806	Sustainable aquaculture and fisheries	5	6
SAFS 807	Industrial Agro-Food Process Design and Economics	5	6

9th Semester

SAFS 901	Precision Agriculture and Livestock Farming (Prerequisite courses: SAFS 501, 804)	5	6
SAFS 902	Farm Accounting	5	6
SAFS 903	Digital and Predictive Food Microbiology & Quality Assurance Systems	5	6

SAFS 904	Renewable Energy Resources in Agriculture	5	6
SAFS 905	Mediterranean and Functional Foods (Prerequisite courses: SAFS 205, 305)	5	6

10th Semester

SAFS 1000	Diploma Thesis		30
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Course Content

A. COURSES

[SAFS 101] – Calculus for agriculture and food science

Real numbers and algebraic expressions. Linear and nonlinear equations. Definition and types of functions (polynomial, rational, exponential, logarithmic, trigonometric functions). Graphical representation of a function and interpretation. Applications of functions in agricultural and biological contexts. Sequences and Series of numbers. Limit and continuity of a function. Practical interpretation of limits in applied problems. Elements of Differential Calculus: Derivative of a function, rules and techniques of differentiation. Higher-order derivatives. Applications of Differential Calculus [study of a function and its graphical representation, rates of change, growth models, and optimization problems (maxima and minima)]. Applications of derivatives in agricultural and biological contexts. Elements of Integral Calculus: Indefinite integral, definite Integral, fundamental theorem of Calculus, rules and techniques of integration. Applications of Integral Calculus (area under curves, curve lengths, surfaces after rotation, accumulated quantities). Numerical integration (trapezoidal, Simpson). Applications of integrals in agricultural and biological contexts. Elements of Differential Equations: Dynamic systems, definition and order, ordinary differential equations, first-order differential equations, linear differential equations, homogeneous differential equations, separable equations. Applications of Differential Equations in agricultural and biological contexts. Elements of multivariable Calculus: Functions of two variables, surface plots, contour plots and level curves, partial derivatives. Applications of multivariable Calculus in agricultural and biological contexts. Elements of Linear Algebra: Vectors and matrices, matrix operations, determinants and systems of linear equations. Applications of matrices in agricultural data analysis. Elements of Combinatorics: Basic counting principles, permutations, permutations of all elements, combinations. Elements of Probability Theory: Random experiment, definitions of Probability, rules of Probability, conditional Probability, Bayes

Theorem. Mathematical Modeling in Agriculture (simple mathematical models, examples from crop growth, population dynamics, and resource optimization).

[SAFS 102] – General Chemistry

Module 1: Atomic Theory and Bonding: Students learn about the structure of atoms, the periodic table, chemical bonds (ionic and covalent).

Module 2: Chemical Reactions: The course covers stoichiometry, reaction rates, chemical equilibrium, and redox reactions. Ionic and acid-base equilibria, pH calculations, and buffer solutions.

Module 3: Thermodynamics and Kinetics: Foundational principles of chemical thermodynamics and kinetics are introduced, including enthalpy and free energy.

Module 4: Properties of matter: Properties of gases, liquids, and solids, solutions, intermolecular forces.

Module 5: Acids and Bases: The chemistry of acids and bases, including ionic equilibrium, is a core component.

Module 6: Coordination Chemistry: Some courses may introduce the basics of coordination compounds, which are relevant to understanding how metals function in soil and biological systems.

Module 7: Basic Analytical Chemistry: Laboratory techniques Sample preparation, Gravimetric analysis, Volumetric analysis (titrations acid-base, redox to determine the concentration of a solution), basic Instrumental methods.

Module 8: Introduction to the chemistry of biomolecules: Nomenclature of organic compounds, structure, properties of basic organic compounds focusing on the amino acids, peptides, proteins, enzymes, carbohydrates and lipids.

[SAFS 103] – Informatics

Module 1: Introduction to Informatics

- Role of informatics in agricultural science
- Basic concepts: data, information, systems
- ICT applications in agriculture

Module 2: Computer Systems and Hardware

- Components of a computer (CPU, memory, storage, I/O devices)
- Operating systems
- Peripheral devices used in agriculture (sensors, GPS receivers, mobile devices)

Module 3: Software Tools for Agricultural Tasks

- Word processing and report preparation
- Spreadsheet fundamentals (data entry, formatting, formulas)
- Presentation software for academic and professional use
- Introduction to database concepts

Module 4: Spreadsheet Analysis for Agriculture

- Functions, formulas, lookup tables
- Data sorting, filtering, and validation
- Charts and visualization techniques
- Application examples: budgeting, yield calculations, farm datasets

Module 5: Introduction to Data Management and Analysis

- Types of agricultural data
- Basic statistics using digital tools
- Data cleaning and organization

- Simple automation (macros, scripts)

Module 6: Computer Networks and the Internet

- Fundamentals of networks (LAN, WAN, protocols)
- Cloud computing and online collaboration
- Email, communication tools, and academic platforms
- Digital ethics and responsible online behaviour

Module 7: Cybersecurity and Data Protection

- Threats, malware, and safe browsing
- Password management and authentication
- Backup strategies and data recovery
- Data privacy and GDPR basics (relevant to agricultural data)

Module 8: Digital Technologies in Modern Agriculture

- Precision agriculture
- Remote sensing and imagery
- Farm Management Information Systems (FMIS)
- Internet of Things (IoT) in agriculture

Module 9: Practical Workshops and Case Studies

- Hands-on exercises with spreadsheets, GIS, online tools
- Digital solutions for farm planning and monitoring
- Small project integrating course skills

[SAFS 104] – Bioethics, Governance and Animal Welfare in Agrifood Systems

1. Bioethics in Agriculture: Ethical Governance Frameworks in Crop and Livestock Production.

2. From Farm to Markets: Civil Society, Agricultural Cooperatives and Fair Food Supply Chain.
3. 17 United Nations Sustainable Development Goals: A systems approach to Food and Agriculture.
4. Global Food Governance and Market Transformations. International Organizations and Trade Ethics (NGOs, FAO, WTO).
5. European and National Legislation (directives) on bioethics and animal welfare.
6. Applied Ethics and Bioethical Dilemmas in Contemporary Agriculture
7. Bioethics, Public Trust, and Social Acceptance of Agri-Food Systems
8. Bioethics, Sustainability and Accountability in Agricultural and Livestock Enterprises: Governance Tools for Ethical Decision-Making Managing Welfare, Technology and Stakeholder Expectations.
9. Methods of assessment welfare index by the evaluation of the ethological patterns. Integration of welfare assessments into farm management decisions to enhance productivity, animal health, and product quality.
10. Implementation of the welfare protocol especially on the intensive livestock units. Presentation of the five Freedoms axiom and the concept of the three Rs. An introduction to the various means animals uses to send signals to each other and how these signals are influenced by the environment and social context.
11. Presentation of exogenous and endogenous stimuli that affect physiological, biochemical and other functional parameters which in turn determine the welfare status of the animals (especially farm animals). Different ethological patterns among various species. Grazing behavioral pattern. Maternal behavioral pattern. Social activities and behavioral responses among males and females. Abnormal behavior and behavioral patterns under captivity (red deer - *Cervus elaphus*-, wildboar - *Sus scrofa*- and brown bear - *Ursus arctus*).
12. Communication strategies for advising farmers and stakeholders on the implementation of welfare improvements and compliance with legislation.
13. Visit to livestock and wild animals' units.

[SAFS 105] – The sociology of food: cultural and social dimensions of Mediterranean Gastronomy

The course focuses on covers the relationship between food and society, examining topics like food production, distribution, and consumption from sociological perspectives as well as the transformation of agrifood systems to be more sustainable, resilient, and equitable based on the Mediterranean gastronomy rooted in cultural and ethical practices. Key content areas include how food is shaped by social factors like class, gender, and ethnicity; the impact of globalization on food systems; especially in the Mediterranean and the symbolic, cultural, and political meanings of Med gastronomy. Course also analyze social issues related to food, such as inequality, sustainability, and the rise of social movements like fair trade, slow food and urban agriculture.

Module 1: (1st- 2nd week) Food and social structure:

How class, gender, race, ethnicity, age, and religion influence food choices and habits. The role of food in creating and reinforcing social inequalities. How food is used as a marker of identity and social status. Critical analysis of alternative food movements, such as slow food, farm-to-table, and fair trade.

Module 2: (3rd and 4th week) Food production and distribution:

The social and political dynamics of modern food systems, from farm to fork. The sociology of labor in agriculture and food processing. Issues of food security, hunger, and access, including the concept of "food deserts" and zero food miles. The impact of globalization on food systems

Module 3: (5th and 6th week) Food consumption and culture in the Mediterranean:

The symbolic meanings of food, including rituals, traditions, and celebrations.

The role of food in family and community life.

The sociology of taste and how it relates to social class.

The transformative role of agritourism and the Mediterranean gastronomy

Module 4: (7th to 11th week) EU geographical indications system (PGI, PDOs etc) food and wine- linked to the cultural gastronomy and the territory of the Mediterranean region

- *Cultural heritage:* PDO and PGI products are tied to generations of history, tradition, and specific production methods, often stemming from local and indigenous varieties.
- *Regional identity:* These designations reinforce the unique identity of Mediterranean regions by highlighting their specific products, such as Greek feta cheese or Italian Parmigiano Reggiano.
- *Link between food and place:* The systems connect food to the land, climate, and local flora and fauna, which is a cornerstone of the Mediterranean diet's philosophy. For example, the unique flavor of Greek feta is directly linked to the diverse local flora grazed by the sheep and goats.
- *Sustainable practices:* The PDO/PGI system encourages sustainable agriculture and safeguards biodiversity, as seen in initiatives promoting eco-districts and organic farming in Mediterranean regions.
- *Economic value:* By protecting these products, the EU system provides economic benefits to farmers and rural communities, while guiding consumers toward authentic goods.

Module 5: (12th -13th week) Project's presentation

[SAFS 106] Mediterranean Biodiversity, Climate Change and Circular Economy

Module 1: Biodiversity, evolution, local adaptation and conservation biology.

Module 2: Invasive, endemic and endangered species in the Mediterranean. IUCN red list of threatened species.

Module 3: The effect of climate change on living organisms – heat stress and productivity reduction.

Module4: Interactions of Mediterranean environment, ecological management and sustainability.

Module 5: Basic principles of circular economy.

Module 6: Main cultivated, farmed and cultured species in the Mediterranean – benefits and risks.

Module 7: Stress, Oxygen - Metabolism - Energetics, Homeostasis.

Module 8: Introductions and environmental risks.

Module 9: Waste and by products reuse and management.

Module 10: Mediterranean ecosystems sustainability, risks and management.

Module 11: Natura 2000 network, Ramsar Convention and protected areas regulations.

Module 12: Introduction to Mediterranean production systems.

Module 13: Project assignment.

[SAFS 201] – Physics applied in Agrifood Sector

The course provides students with an in-depth understanding of:

1. Soil Physical Phases & Structure
2. Soil Water: Suction, Potential, Movement
3. Soil Air, Gas Exchange & Soil Thermal Regime

4. Water Transport in Plants & Biophysics of Xylem
5. Light, Radiation & Photosynthetic Physics
6. Plant Mechanical Properties & Biomechanics
7. Fundamental Physicochemical Principles in Food Systems
8. Thermodynamics of Food Systems
9. Biopolymers
10. Water in Foods – Activity, Phase Transitions
11. Reaction Kinetics and Shelf-Life Prediction
12. Colloids and Interfaces in Agro-Food Systems
13. Rheology & Texture of Foods

[SAFS 202] – Statistics and Biometry

About Data:

Data, Information, Knowledge; variables; probability distributions; variability; population; sample; census and sampling surveys; sampling methods (random and non-random); sample representativeness; sample size.

Principles of Scientific Research:

Experimental studies. Correlational studies. Types of research hypothesis. Types of variables (nominal, ordinal, interval, ratio, binary with 0/1 coding, continuous, discrete).

Descriptive Statistics:

Absolute and relative frequencies; cumulative absolute and relative frequencies; variance and standard error of proportions; minimum, maximum, range, mean, median, mode; variability—variance and relative frequencies; cumulative absolute and relative frequencies; variance the mean; quartiles ($Q_1=Q_{25}$, $Q_2=Q_{50}$, $Q_3=Q_{75}$); interquartile range;

semi-interquartile range. Weighted means; harmonic and geometric means. Data transformations (log, z-scores). Coefficients of skewness and kurtosis.

Presentation of Results:

Tables with frequencies or other statistical indicators (one-way and two-way). Graphs (bar charts, line charts, box plots, histograms, scatter plots), simple and comparative.

Probability Theory:

The concept of probability; set theory; combinations, permutations, arrangements and other tools; estimation and calculation of probabilities; laws and theorems; probability algebra; probability distributions; random variables (types of variables, expectations—expected values).

Theoretical Distributions:

For discrete random variables: Bernoulli, Binomial, Poisson, Multinomial. For continuous random variables: Normal, Standard Normal, Uniform, Exponential, Lognormal.

Statistical or Empirical Distributions:

Chi-square distribution, *t*-distribution, *F*-distribution. Determination of critical/theoretical values.

Confidence Intervals:

For the mean of a population; for a population proportion; for population variability/variance. For the difference of means between two populations (3 cases: two for independent samples, one for paired samples). For the difference of two population proportions (independent samples). For the ratio of two population variances/variabilities (independent samples). Assumptions and presuppositions. Calculation of the Minimum Required Sample Size.

Hypothesis Testing (Statistical Tests):

For a population mean; for a population proportion; for population variability/variance. For the difference of means between two populations (3 cases: 2 for independent samples, 1 for paired samples). For the difference of two population proportions (2 cases: 1 for independent samples, 1 for paired or correlated samples). For the ratio of two population variances/variabilities (independent samples). Chi-square independence test, chi-square test of homogeneity, chi-square goodness-of-fit test. Assumptions and presuppositions. Type I error, Type II error, Type 0 or Type III homogeneity, chi-square go

Exploring the Association Between Two Variables:

For categorical variables: Chi-square test, contingency tables of absolute and relative frequencies, association coefficients (Cramer's V, Pearson's phi). For quantitative variables: scatter plots, correlation coefficients (Pearson, Spearman). Simple linear regression. Assumptions and presuppositions.

Analysis of Variance (ANOVA):

One-way ANOVA. Two-way ANOVA. ANOVA table. Multiple comparisons of means. Assumptions and presuppositions.

Non-parametric Tests:

Mannparametric TestWilcoxon test, KruskalKruskalest, K Assumptions and presuppositions.

Experimental Designs/Conducting Experiments:

Introduction to agricultural experimentation. Purpose of agricultural experimentation. Field experiments, greenhouse experiments, laboratory experiments. Randomization, replication, formation of experimental groups, experimental units and observation units. Methodology for establishing agricultural experiments. Introduction to analysis of variability. Statistical significance tests. Experimental error. Completely randomized design. Mean comparisons.

Randomized complete block design. Latin square design. Factorial experiments. Main effects and factor interactions. Introduction to linear correlation. Introduction to regression analysis. Data transformations. Examples and applications. Demonstration of statistical software. Practical training in designing field experiments.

[SAFS 203] – Sustainable Field Crop Production

1. Introduction (Agriculture as an art and science, agriculture and human nutrition, origin of crop plants, classification of crop plants with different criteria).
2. Structure and physiology of field crops.
3. Environment and development of plants s science, agriculture and human nutrition, origin of crop plants, classification of crop plants with different criteria) tides, pultural climate of Mediterranean and distribution of crops).
4. Environment and development of plants - soil, Weeds and biotic factors.
5. Growth, development and yield of crops.
6. Crop rotation.
7. Soil tillage.
8. Plant nutrition and fertilization.
9. Seed and seeding.
10. Cropping systems (monoculture, intercropping, conservation agriculture, sustainable agriculture)
11. Cropping systems (Integrated crop production, organic agriculture, precision agriculture, new technologies in agriculture, good agricultural practices, environmental indices, application of good agricultural practices).
12. Brief presentation of the main field crops that are important for Greece. The products and the quality of these products.
13. Brief presentation of the alternative crops such as aromatic and medicinal plants, energy crops that are important for Greece. The products and the quality of these products.

Practical classes:

1. Seed identification of field crops
2. Identification of field crops at different growth and developmental stage
3. Seed germination, seed quality characteristics that are used for seed control and

fertilization.

4. Weed identification of winter and summer species.

[SAFS 204] – Living Systems and Molecular Biology

1. Introduction to Biology.
2. Biological macromolecules (carbohydrates, lipids, proteins, nucleic acids).
3. Cell Structure and Function.
4. Energy and Metabolism.
5. Membrane Dynamics & Cell Communication.
6. Cell Cycle & Cell Division.
7. DNA Structure & Gene Expression.
8. DNA mutations, repair mechanisms, transposons and DNA polymorphisms.
9. Biotechnology & Genomics.
10. Genomic analysis, -omic technologies and bioinformatics.
11. Introduction to Evolution.
12. Diversity of Life: Microorganisms.
13. Diversity of Life: Plants.
14. Diversity of Life: Animals.
15. Molecular Cytogenetics.
16. Genetic modification & GMO organisms.
17. Genome editing technology.

Lab sessions

1. Scientific method & microscopy, Pipetting, spectrophotometry, gel electrophoresis.
2. Properties of water.
3. Enzymes and reaction rates.
4. DNA extraction & PCR.

5. Gene expression analysis (RT-qPCR or reporter assays).
6. Bacterial transformation or CRISPR-based editing.
7. Protein purification & enzyme kinetics.
8. Bioinformatics: genome annotation & sequence analysis.
9. Systems biology: network modeling in Python or MATLAB.

[SAFS 205] – Food Chemistry

1. Water in food systems (structure and properties; water activity).
2. Proteins (amino acid/protein structure; denaturation; functional properties).
3. Lipids (structure and classification; lipid oxidation mechanisms).
4. Carbohydrates (mono-, di- saccharides; sweeteners; dietary fiber; chemical reactions during processing).
5. Vitamins and Minerals (water- and fat-soluble vitamins; essential minerals and trace elements; bioavailability).
6. Colourants (chemical structure; stability during heating, pH, storage).
7. Flavourings.
8. Food additives (preservatives, stabilizers; emulsifiers).

[SAFS 206] – Agricultural Economics

Introduction to Agricultural Economics. Basic concepts and principles of economic production. structure and current trends in agriculture in Greece, the EU and globally. Agricultural production factors. Production costs, cost of manufacturing and economic results. Agricultural production and prices. Agriculture's reliance on natural resources. Agricultural markets and structure. Alternative food supply chains. Competition issues. The role of agricultural cooperatives in empowering small farmers in the agrifood supply chain.

[SAFS 301] – Agrometeorology

Structure and physical properties of the atmosphere. Thermodynamic of the atmosphere. Satellite data. Temperature, wind, hygrometric parameters, solar and terrestrial radiation.

Soil temperature. Soil heat flux. Energy balance. Precipitation. Meteorological and climatic stations and instruments. Analysis of meteorological data. Evaporation, transpiration and evapotranspiration. Climate. Climate classification. Earth's climatic regions. The climate of Greece. Microclimate. Climate impact on plants and animals. Climate change and its impact on agriculture. Bioclimatic indices (heat index, drought index). Frost protection. Prediction of crop yield by using meteorological data.

[SAFS 302] – Computer Programming and Optimization Methods

Introduction to the process of programming. Algorithms, Flowcharts and Pseudocodes. Introduction to the MATLAB programming environment. Data types and operators. Built-in Functions. Vectors, Matrices and Arrays, Input/Output Data files, Branching statements and Loops. M-files (functions, scripts). Results Plotting. Introduction to Optimization Methods. Linear Programming. Metaheuristics and evolutionary algorithms. Application examples.

[SAFS 303] – Principles of Genetics

1. Introduction to the Science of Genetics.
2. Genome and cell function. DNA replication, Transcription & Translation. Genetic code and gene expression.
3. Phenotype, Genotype, Heredity and Environment.
- 4 Prokaryotic and Eukaryotic Genome. The genetic material and its regulation in prokaryotic organisms. Elements of genetics of microorganisms (viruses, bacteria, fungi). The genetic material and its regulation in eukaryotic organisms. Elements of genetics of humans, plants and animals.
5. Chromosomal theory of heredity - chromosome composition. Types and morphology of chromosomes - karyotype determination. Cytoplasmic inheritance - mitochondrial and chloroplast DNA.
6. The importance of cell divisions (Mitosis & Meiosis) and their biological role.
7. The principles and Laws of Mendelian genetics, gene types, the action of alleles Chromosomal basis of inheritance. Sex-linked genes and Multiple alleles. Chromosome Mapping and Gene Linkage.
8. Mutations, types and role of genome, chromosome and gene mutations for organisms. Repairing Mechanisms. Molecular Cytogenetics.

9.Molecular genetics and use of basic molecular markers. The history, application and importance of PCR, Genetic databases.

10.Population genetics, Hardy-Weinberg principle, determination of allele and genotype frequencies in a population.

11.Introduction to quantitative genetics, interaction of genes with environment, heritability of complex traits.

12.Sustainability and conservation of local genetic resources, local plant varieties, indigenous animal breeds, endangered species.

[SAFS 304] –Introduction to animal husbandry and farm management

1. Introduction to animal husbandry and livestock production systems

2. Basic concepts of animal growth and productivity

3. Rational management of livestock enterprises

4. Critical control points in ruminant farming (cattle – sheep – goats)

5. Critical control points in monogastric farming (poultry – swine)

6. Livestock breeds – Ruminants

7. Livestock breeds – Monogastric

8. Recording of production traits (milk, eggs, meat)

9. Livestock farming, environment & environmental footprint

10. Conservation and management of animal genetic resources

11. Economic analysis of livestock enterprises

12. Innovation in livestock farming

13. Case Study

[SAFS 305] – Food Processing and Preservation Technologies

1. Basic principles of food processing

2. Thermal processes: pasteurisation, sterilisation, cooking, in-package and out-of-package heat treatment
3. Non-thermal (novel) technologies: High Pressure Processing (HPP), Pulsed Electric Fields (PEF), UV radiation, cold plasma
4. Chilling – freezing
5. Dehydration, drying, concentration
6. Fermentation and biopreservation
7. Chemical and physical preservation methods
8. Packaging systems: Modified Atmosphere Packaging (MAP), active packaging, smart packaging
9. Food manufacturing technologies (dairy, beverages, bakery, ready-to-eat foods),
10. Production process flowcharts

[SAFS 306] – Agricultural Governance: Policy Instruments and Sustainable Cooperative Models

The course explores how governance in the agricultural sector is shaped and implemented, with a focus on the policy instruments used by states and international organizations to regulate, support, and promote sustainable agricultural production. It also examines modern cooperative and collaborative models, investigating how collective action and participatory management can enhance resilience, innovation, and socio-economic cohesion in rural communities. Combining theoretical perspectives with practical examples and case studies, the course equips students to assess and design effective policies and sustainable cooperative structures.

[SAFS 401] – Food Analysis

The course offers an engaging and comprehensive exploration of modern food analysis, focusing on understanding and evaluating the chemical composition of foods and beverages. Students will gain hands-on experience in applying analytical techniques—including chemical, biochemical, physicochemical, and physical methods—to measure nutrients, bioactive compounds, and compounds of concern. Advanced -omics approaches, such as metabolomics, proteomics, and lipidomics, will be introduced to provide a deeper molecular-level understanding of food matrices.

Through practical laboratory exercises, students will analyze real food and beverage samples, investigating nutritional value, quality, authenticity and the presence of components of concern (contaminants, residues, allergens, and additives). Organoleptic assessment is combined with instrumental methods to provide a holistic view of food characteristics. The course also familiarizes students with relevant food legislation and standards, enabling them to evaluate whether products meet quality and authenticity regulations. Students will develop essential professional skills, including data interpretation, critical thinking, problem-solving, and scientific communication, through report writing and oral presentations. By bridging theory with practice and introducing classical and modern analytical tools, this course prepares students for careers in food science, research, quality assurance, and the food industry, while fostering creativity, innovation, and a proactive approach to food challenges.

[SAFS 402] – Soil Science

1. General principles of soil genesis and classification.
2. Soil structure and particle size distribution.
3. Soil Organic matter.
4. Soil chemical and biochemical properties
5. Clay minerals and ion exchange
6. Soil microorganisms, soil fauna.
7. Acid, saline and alkali (sodic) soils
8. Soil physical properties (soil aggregation, aeration and temperature)
9. Soil water (and irrigation water, water movement in soil)
10. Soil taxonomy
11. Soil fertility
12. Plant-soil interaction
13. Improvement of soil properties through management practices.

[SAFS 403] – General and Food Microbiology

This course introduces students to the fundamental principles of microbiology with a focus on microorganisms relevant to agriculture and food systems. It covers microbial cell biology, genetics, diversity, growth, metabolism, ecological roles, and interactions with food environments. Students will explore spoilage, pathogenic, and beneficial microorganisms, and gain foundational skills in microbial enumeration, detection, and laboratory safety.

[SAFS 404] – Plant Physiology

1. Introduction to plant physiology: Phylogenetics, plant classification.
2. Principles of cell physiology, totipotency and applications, homeostatic mechanisms.
3. Photosynthesis: The light reactions, the role of pigments.
4. Carbon reactions in photosynthesis. Photorespiration. C₃, C₄, CAM and intermediate photosynthetic cycles (alternative pathways).
5. Ecological aspects of photosynthesis.
6. Respiration.
7. Nitrogen: Metabolism and nitrogen fixation
8. Ionic relationships: Mineral nutrition
9. Water relations: Water potentials, pathways and mechanisms of water movement.
10. Signals and signal transduction.
11. Signal of sunlight, photoreceptors, Tropisms, periodisms, uptake and signal transduction, physiology of senescence.
12. Plant development: Plant hormones. Biomolecules with hormonal activity.
13. Secondary metabolites: Introductory concepts, role and metabolism.

Lab sessions

1. Estimating chlorophyll: Chlorophyll content measurement in situ using a portable chlorophyll-meter. Spectrophotometric determination of leaf chlorophyll a and b.
2. Photosynthesis I: Leaf fluorescence measurements for determining leaf quantum yield (natural conditions and in dark). Fluorescence induction curves.
3. Photosynthesis II: Carbon assimilation. Leaf carbon exchange measurements for determining net photosynthesis.
4. Water relations. Transpiration measurements through stomatal conductance monitoring.

5. Determination of leaf area index of the whole foliage in situ and of individual leaves in the laboratory-plant productivity determination.

[SAFS 405] – Biochemistry

The life on the earth. The aminoacids, the polypeptide chain and the proteins. The biological role of the proteins: the enzymes, role of the cofactors and the essential inorganic elements and the chromoproteins. Practical uses of enzymes's inhibitors. Nitrogen cycle and the aminoacids synthesis. Aminoacids precursors of other biomolecules of practical issue. RNA metabolism and the synthesis of the proteins: transcription, translation and their control. DNA metabolism: the replication. Overview on the energy metabolism: respiration and photosynthetic events of the photosynthesis (cycle of Krebs, oxidative phosphorylation, photophosphorylation). Energy metabolism of bacteria. Oxygen metabolism and the antioxidative substances. The carbohydrates: degradation under aerobic and anaerobic conditions. The synthesis of the carbohydrates by photosynthetic organisms. Structural lipids, the membranes and their role, lipid superoxidation. Lipids metabolism (biosynthesis and degradation of fatty acids).

[SAFS 406] Entrepreneurship and Social Innovation in the Agrifood Sector

The course examines how socially-oriented entrepreneurial mechanisms and innovation processes transform agrifood systems in response to sustainability imperatives, community needs, and socio-environmental challenges. It fosters an entrepreneurial mindset, enabling students to assess opportunities that create both economic and social value and to design solutions that promote inclusion, resilience, and sustainable development in the agrifood sector. The course addresses value identification in complex sociotechnical systems, with emphasis on community engagement, participatory innovation, and inclusive governance models. Students learn to develop business models that integrate social innovation principles, digital technologies, and sustainable practices. Particular attention is given to understanding the role of organizational and community-driven innovation in advancing rural and regional development. It further examines the transition from socially-oriented concepts to viable social-impact ventures, emphasizing hypothesis testing, stakeholder and community feedback, impact validation, and the alignment of social missions with market conditions and sustainability objectives. The course focuses on strategies for evaluating social-innovation pathways, designing impactful products and services, and adapting entrepreneurial solutions to environments characterized by economic, environmental, and social interdependencies. Through these components, the course strengthens

decision-making under uncertainty, deepens understanding of rural innovation ecosystems, and equips attendees with skills that support the emergence of inclusive, economically viable, resilient, and socially sustainable agrifood enterprises and cooperatives.

[SAFS 501] – Digital Systems in Agriculture

Module 1: Foundations of Digital Agriculture

- Introduction to Digital Systems in Agriculture
- Digital workflows and system architectures
- Data standards and interoperability

Module 2 – Sensors, IoT and Data Acquisition

Module 3 – Robotics, Machinery and Automation

- Aerial and ground robotic platforms
- Digital Systems in Agricultural Machinery
 - Electronic Control Units (ECUs), CAN-bus, ISOBUS
 - Sensor integration, telemetry, and machine data streams
 - Automation and guidance systems (GNSS/RTK auto-steer)
 - Variable-rate technologies and smart implements
 - Telematics, remote diagnostics, and predictive maintenance
- Automation and control systems
- Digital Controlled Environment Agriculture (CEA)
 - Environmental monitoring
 - (Micro-/) Climate regulation and automated control loops (temperature, humidity, CO₂, irrigation, lighting)

Module 4 – Data Analysis and Intelligent Systems

- Aerial and Ground Robotic Technologies in Agriculture
- Introduction to Big Data and agricultural datasets
- Machine Learning and AI tools in agricultural applications
- Digital twins for simulation and predictive modeling

- High-Performance Computing (HPC) for large-scale models, simulations and AI training

Module 5 – Platforms, Software & Decision Support

- Blockchain and Traceability
- Digital systems in post-harvest management
- Cybersecurity risks and best practices in agri-data management

Module 6 – Technology Adoption and Impact

- Key factors influencing the adoption and practical use of digital tools in agriculture
- Small-scale applications and usability, reliability, and maintainability in real field conditions
- Practical implications of digital tool deployment for farmers, operators, and agricultural consultants

[SAFS 502] – Food Biotechnology

The course offers a clear and accessible introduction to modern food biotechnology, with a primary emphasis on the use of microorganisms and, to a lesser extent, plant and animal cells for producing foods and food-related biotechnological products. Students will explore the selection, preservation, and genetic improvement of microorganisms; the cultivation of plant and animal cells; and key fermentation strategies used in food and industrial bioprocesses. The course also covers the design, operation, and control of various bioreactor systems.

Through integrated theoretical instruction and hands-on laboratory activities, students will gain familiarity with essential biotechnological tools and laboratory techniques relevant to microbial and enzymatic processes. Modern analytical approaches for cultivating, monitoring, and characterizing microbial cultures are introduced, enabling students to assess growth, metabolism, and product formation.

A strong emphasis is placed on the industrial potential of microorganisms to produce valuable bio-based products, including fermented foods, single-cell protein, mycoprotein, organic acids, polysaccharides, pigments, vitamins, microbial lipids, and other fermentation-derived compounds. Special focus is given to precision fermentation as an emerging platform for targeted, high-efficiency production of functional food components, as well as to the roles of microorganisms—such as starter cultures, probiotics- and postbiotics in developing health-promoting fermented foods.

The course also examines how agro-industrial residues and food-industry wastes can be treated, managed, and valorized through biotechnological and physicochemical processes, highlighting sustainability and circular bioeconomy principles.

By integrating scientific concepts with practical applications, the course equips students with the ability to apply cell-based technologies, analyze bioprocess data, and understand the opportunities and challenges associated with industrial production of biotechnological products. Overall, it provides a strong foundation for advanced study and careers in food biotechnology, fermentation industries, and food-related bioprocess design.

[SAFS 503] – Plant Pathology

Module 1: Introduction to Plant Pathology

Description: Concept of the disease, biotic-abiotic causes of plant diseases

Module 2: Fungi as Plant Pathogens

Description: Morphology-physiology-replication of fungi, Taxonomy of fungi.

Module 3: Prokaryotes as Plant Pathogens

Description: morphology-replication-taxonomy of prokaryotic plant pathogens

Module 4: Viruses as plant pathogens

Description: Virus morphology-Taxonomy-Diagnosis.

Module 5: Viruses as plant pathogens

Description: Infection of plants and replication/movement of viruses. Virus epidemiology and control.

Module 6: Parasitism and Disease development

Description: Parasitism and pathogenicity, Host range of pathogens, Development of disease in plants

Module 7: Parasitism and Disease development

Description: The disease cycle, relationships between disease cycles and epidemics

Module 8: Pathogenesis Mechanisms.

Description: Mechanical forces, chemical weapons, enzymes, toxins of pathogens.

Module 9: Plant Defense Mechanisms.

Description: Preexisting structural and chemical defenses, induced structural and chemical defenses, signal transduction

Module 10: Plant Disease Epidemiology

Description: The elements of an epidemic, Methods of plant disease measurement, Patterns and development of epidemics

Module 11: Environmental Effects on Plant Disease development

Description: Effect of temperature, moisture, wind, light, soil pH and soil structure

Module 12: Control of Plant Diseases

Description: Sanitary measures, cultural practices, natural methods and other plant disease management practices other than chemical control, biological control agents, mechanisms of biocontrol, plant defense mechanisms against pathogens (non-host resistance, hypersensitive response, systemic resistance, resistance genes

Module 13: Control of Plant Diseases

Description: History of chemical control, fungicide grouping based on their movement and mode of action, fungicide resistance (selection of resistance, mechanisms of resistance and resistance management), Use of Resistance Inducers in Plant Disease Management

[SAFS 504] – Intelligent animal nutrition

1. Introduction to animal nutrition and the transition to intelligent nutrition systems.
2. Nutrients, metabolism, and nutritional requirements of livestock.
3. Core concepts of smart and digitally supported animal nutrition.
4. Methods of data collection: basic sensors and nutrition-monitoring tools.
5. Intelligent feeding systems: automatic feeders, feed intake monitoring, group management.
6. Feed analysis using modern techniques (NIRS, digital quality-control tools).
7. Use of software for designing balanced and cost-effective rations.
8. Basic principles of artificial intelligence and introductory applications in nutrition.
9. Computer vision and intelligent tools for body condition and health assessment.
10. Plant bioactive compounds and intelligent nutritional strategies.
11. Sustainability, welfare, and emission reduction through intelligent nutrition.
12. Practical applications in cattle, small ruminants, pigs, and poultry.
13. Case study and development of a small, applied project in intelligent animal nutrition.

[SAFS 505] – Principles of pesticides

Module 1: History of chemical crop protection and role of pesticides

Description: Pesticide evolution, pesticides and integrated pest management principles

Module 2: Pesticides and Formulation Technology

Description: Formulation of plant protection products, determination of physicochemical properties, stability of pesticide formulation

Module 3: Label interpretation

Description: Legal use of pesticides, professional use, content of the label, requirements

Module 4: Legislation and regulations

Description: Pesticide registration in EU and Greece, the role of evaluation bodies, data requirements

Module 5: Ecotoxicology and human health

Description: Hazard/risk to humans, wildlife, and the environment

Module 6: Environmental fate of pesticides

Description: Adsorption, degradation, leaching, volatilization, run-off, spray-drift, groundwater contamination

Module 7: Low-Risk Pesticides and European Regulation

Description: Categories of low-risk pesticides, particularities of low-risk pesticides, new approach methods in pesticide risk assessment, pesticide registration in EU, problem formulation and qualitative risk assessment

Module 8: Pesticide Residues and Remediation Techniques

Description: Pesticide residues in food and feed, environmental fate of pesticides, diffused and point-source pollution, bioremediation and phytoremediation technologies, advanced instrumental analytical techniques

Module 9: Pesticide and application technology

Description: Pesticide application equipment and calibration

Module 10: Major chemical classes of insecticides and resistance management

Description: Categories of insecticides, classification, mode of action

Module 11: Major chemical classes of herbicides and resistance management

Description: Categories of herbicides, classification, mode of action

Module 12: Major chemical classes of fungicides and resistance management

Description: Categories of fungicides, classification, mode of action

Module 13: Sampling and instrumental analysis of pesticides

Description: Sampling protocols, extraction techniques, clean-up, chromatographic analytical equipment.

[SAFS 506] – Agri-food Marketing, Consumer and Sustainability

Introduction and analysis of agricultural and food markets and market structures. Strategic marketing, planning, developing marketing strategies, and the marketing mix (product, price, place, promotion). Consumer purchasing behavior and demand, and the role of sustainability, authenticity, and convenience. Sustainability and business models, analysis of the environmental impact of food production, food waste, and ESG (Environmental, Social, and Governance) strategies. Global and local marketing, the local versus global dilemma, and international marketing plans. Branding, decision-making, and strategy, brand repositioning and product positioning. Digital technologies like precision agriculture and blockchain, tools for analysis and innovation.

[SAFS 601] – Viticulture

Introduction, botanical origin, geographical distribution and systematics of the grapevine. Morphology, anatomy, physiological processes and annual cycle. Growth and development of the grape, biosynthesis and evolution of berry metabolites (sugars, organic acids, phenolic compounds, nitrogenous compounds, aroma compounds) during ripening. Harvesting. Ecology of the vine. The notion of terroir. Mass and clonal selection, and breeding. Propagation of the vine. Establishment of a vineyard. Training systems, winter pruning, summer canopy management techniques. Basic principles of grape growing. The genus *Vitis*. The main varieties and rootstocks. Basic principles of Ampelography.

[SAFS 602] – Principles of modern fruit science

Module 1: Introduction in Pomology.

Description: Recent developments in Pomology, production in Mediterranean area, parts of a fruit tree, terminology regarding flowering, fruit set etc.

Module 2: The types of fruit trees.

Description: Pomological classification of fruit trees, evergreen and deciduous fruit trees, most cultivated species in Mediterranean area.

Module 3: The influence of climatic factors on the physiology of fruit trees.

Description: Climatic factors that affect the aboveground and underground parts of the tree, extreme weather events and impact on orchards, dormancy.

Module 4: Frost and fruit tree physiology.

Description: Types of frost, critical developmental stages of tree in frost, frost protection in an orchard.

Module 5: Rootstock of fruit trees.

Description: Description, use and characteristic of rootstocks, rootstock-cultivar relation, the used rootstock in fruit trees.

Module 6: Propagation in fruit trees.

Description: Sexual, asexual or vegetative propagation, seeds, grafting, cuttings, air layering, propagation methods, *in vitro* propagation.

Module 7: Orchard establishment and pruning of fruit trees.

Description: Preparation of field, planting strategy, fruit tree training system, mechanization of production, principles of pruning, optimum pruning depending on tree age.

Module 8: Fertilization management in fruit trees.

Description: Inorganic and organic fertilizers, type of fertilizers, application methods, monitoring of fertilization, hydrofertilization, soil and leaf test.

Module 9: Irrigation and orchard soil treatment.

Description: Water-use efficiency in orchard, irrigation methods in orchard, weed management in an orchard.

Module 10: Pollination and fertilization of flowers.

Description: Pollination with insect and wind, self- and cross pollination, fertile and self-fertile cultivars, fruit set, yield.

Module 11: Fruit thinning and development.

Description: Fruit cell division and enlargement, fruit growth, types of fruit, physiological disorders, time of thinning in fruit trees, mechanical thinning.

Module 12: Harvest, fruit maturity and ripening.

Description: Determination of fruit quality at harvest, factors affecting fruit maturity and ripening, physiological and biochemical transitions from immature to mature fruit.

Module 13: Postharvest fruit management and quality.

Description: Postharvest green technology treatments, fruit and storage potential, preservation of fruit quality during cold storage, chilling injury of fruits.

[SAFS 603] – New trends in Floriculture

Statistical and economic information on floricultural production. International commerce of flower produce. Applications of supplemental and photoperiodic light, as well as carbon dioxide in floricultural cultivation. Production and trade of floricultural propagation material. Rooting systems. Micro-propagation of floricultural species. Cultivation of rose, carnation, chrysanthemum, gerbera, gypsophila, and tulip for cut flowers. Cultivation of gardenia as pot plant. General aspects of indoor and outdoor ornamental plants

Practicals: Greenhouse operation and management for floricultural crop production. Greenhouse heating, cooling and shading. Soil pasteurization. Supplemental and photoperiodic lighting, irrigation and liquid fertilization systems. Benches, floricultural equipment and instruments. Substrates and containers. Rooting systems for cuttings (intermittent mist, fog, aeroponics). Field trips to floricultural markets, greenhouses and nurseries.

[SAFS 604] – Water Resources and Irrigation Engineering

Introduction to agricultural water resources management. Methods for estimating crop water requirements, alongside the calculation of irrigation water needs, and the development of optimized irrigation scheduling strategies. Overview of on-farm irrigation systems and collective irrigation network design and optimization. Groundwater and surface water hydrology in the context of agricultural water supply. Key water quality parameters relevant to irrigation. Integration of smart farming technologies and precision irrigation practices to enhance water use efficiency. Analysis of agricultural water policies and regulatory frameworks supporting sustainable and climate-resilient water management in agriculture.

[SAFS 605] – Entomology applied in Agriculture

Module 1: Insect diversity and ecology

Description: Insect phylogeny and diversity. Role in environment and impact on humans. The role of climate change on insect ecology

Module 2: Insect structure and function

Description: Morphology, internal anatomy, physiology, adaptation to different environments

Module 3: Insect development and Life cycle

Description: Reproduction, metamorphosis, hormone regulation, diapause and adaptation to abiotic stress

Module 4: Insect behavior and sociality

Description: Insect communication, movement, foraging behavior, mating behavior

Module 5: Insect symbiosis

Description: The role of symbiotic organisms in insect adaptation, development and reproduction. The insect microbiome.

Module 6: Insect-plant interactions

Description: Plants as food of insects, plant defenses, impact of insects to plants, how herbivore insects become pests, mutualisms, pollination.

Module 7: Assessing the impact of insects on crops.

Description: Insect sampling and damage to agricultural crops. Economic Thresholds and Economic Injury Levels

Module 8: Cultural and mechanical control of insects

Description: Crop rotation, Sanitation, Trap cropping, Planting practices, Soil management, removal, physical barriers and other technological means (temperature control, radiation).

Module 9: Biological control of insect pests

Description: Biology of Insect parasitoids, predators and insect pathogens. Strategies of biological control, and agroecology.

Module 10: Conventional and green insecticides (botanicals)

Description: The mode of action of chemical and botanical insecticides, management of insecticide resistance. Botanical and other low risk insecticides.

Module 11: Semiochemicals and insect control

Description: The use of pheromones and other semiochemicals for insect monitoring and control.

Module 12: Biotechnological methods for pest control

Description: Development of resistant plant varieties, harnessing insect symbionts for pest control, Sterile Insect Technique.

Module 13: Insects of stored product pests and urban environments

Description: The impact of insects on post-harvest production and their management tactics. Insects of public health importance

Laboratory exercises: Insect taxonomy and pest control

Identification and features of major insect orders orthoptera, Hemiptera, Dermaptera, Thysanoptera, Lepidoptera, Coleoptera, Hymenoptera, Diptera. Collecting and curating insects. Demonstration of insect control tools (videos, laboratory exercises).

[SAFS 606] – Controlled Environment Systems (Livestock and Plants)

Module 1: Introduction to Controlled Environment Systems

Concepts and history of Controlled Environment Agriculture (CEA); importance in sustainable food systems.

Module 2: Environmental Parameters and Their Importance

Effects of temperature, humidity, light, and gaseous microenvironment on livestock and plant growth and productivity.

Module 3: Measurement and Monitoring Technologies

Sensors and data-logging systems; IoT applications in agriculture.

Module 4: Heating and Cooling Systems

Energy transfer, heating methods, evaporative cooling, energy efficiency.

Module 5: Ventilation and Air Flow Management

Natural and mechanical ventilation systems; air quality and welfare.

Module 6: Lighting Systems and Photobiology

Light spectrum, intensity, and duration; lighting systems for plant growth and animal performance.

Module 7: Automation and Control Strategies

Sensorspectrum, intensity, and duration; lighting systems for plariven management.

Module 8: Controlled Environment Systems for Plants

Design and operation of greenhouses, growth chambers, hydroponics, and vertical farming.

Module 9: Controlled Environment Systems for Livestock

Housing design for different species; microclimate management; thermal comfort indices; waste and manure management.

Module 10: Integration of Livestock and Plant Systems

Circular resource use; waste-to-nutrient recycling; aquaponics and biogas utilization; system interconnections.

Module 11: Sustainability and Energy Management

Renewable energy applications, environmental impact.

Module 12: Case Studies and Emerging Technologies in controlled systems

(Smart farming, automation, AI and robotics.

Module 13: Review and Project Presentations

Student presentations of group projects; synthesis of concepts; exam preparation.

[SAFS 701] – Ecology

Introduction to the Science of Ecology. Ecology and Evolution. Ecosystems and communities. Terrestrial biomes. Energy and productivity in ecosystems. Food relations, Food webs in ecosystems. Biogeochemical cycles. Greenhouse effect. Nutrient budgets in ecosystems. Adaptations of organisms to the environment. Growth and regulation of population. Demography. Intra-specific competition. Interspecific (biotic) interactions (competition, predation, mutuality, cooperation) - Homeostasis of the ecosystem. Development and evolution of the ecosystem (Succession).

[SAFS 702] – Sustainable Oenology and Wine Production

Introduction to Oenology and fundamental winemaking practices. Basic winemaking techniques (red, white, rosé, sparkling). Chemical and biochemical principles of grape processing, fermentation, and wine stabilization/aging. Climate change impacts on grape composition, fermentations and wine quality. Regulatory frameworks, OIV (International Organization of Vines) guidelines for sustainable vitiviniculture and responsible wine consumption. Reduction of SO₂ wine use of alternative strategies/use of alternatives. Circular economy and green processing: waste and by-product valorization (grape pomace, yeast lees), low-energy operations. Sustainable packaging and supply-chain considerations. Case studies: sustainable wineries, innovative production and management practices (water and energy management in wineries). Future trends in sustainable oenology: precision oenology, process monitoring tools.

[SAFS 703] – Food Engineering

Fundamentals of engineering: thermal properties of foods, forms of heat, mass and energy balances, steam properties tables. Momentum transfer: flow types, Reynolds number, flow induced friction, mechanical energy balance-Bernoulli equation. Heat transfer: heat transfer mechanisms, conduction, convection, radiation, ohmic and microwave heating, steady and unsteady heat transfer. Mass transfer: Fick law, mass transfer coefficients, diffusion equations. Momentum transfer processes/equipment. Heat transfer processes/equipment. Mass transfer processes/equipment. Mixed transfer processes/equipment. Physical separation processes/equipment. Size and shape modification processes/equipment. Flow charts in food processing. Principles of equipment design and equipment selection. Principles of energy management in the food industry.

[SAFS 704] – Breeding & Plant Propagation

1. The importance of plant breeding in Agriculture.
2. The reproductive system of plants and its importance in plant propagation and breeding.
3. Seed, Self-pollination, Cross-pollination, Asexual and Innate Reproduction, Propagating Material, Varieties.
4. The concepts of phenotype, genotype and interaction with the environment.
5. Assessment of GxE interactions and application of appropriate experimental designs.
6. Types of cultivars (pure lines, populations and hybrids).

7. Application of Improvement design and plant breeding programs.
8. Genetic basis and selection criteria. Test for combining ability and Diallelic crosses.
9. Heterosis and Male sterility for the production of new hybrids.
10. Examples in Main Crops, Horticultural and Ornamental Plants.
11. Methods of improvement, selection and evaluation. Mass selection, Pedigree & Pure line Selection processes.
12. Backcross method and evaluation of promising lines (varieties).
13. Applications of biotechnology in plant breeding.
14. Utilization of in-vitro techniques in plant breeding as a tool in the production of new varieties.
15. The achievements of Genetic engineering in plant breeding.
16. Production of transgenic plants (GMO). Genetic modification systems.
17. Expression of transgenes. Detection and Controls of genetically modified plants and their products.
18. Creation of varieties with resistance to herbicides, insects, bacteria, viruses.
19. Perspectives and concerns from the applications of biotechnology in agricultural practice.
20. Applications of Molecular Markers in plant breeding.
21. Breeding for Sustainability.
22. Organic and Participatory Breeding. Breeding for resistance to abiotic stress and Low input Farming Systems.
23. Plant Propagation & Seed production.
24. Technologies and methodologies for Hybridization, Control and Identification of Seed Germination and Viability, Certification, DUS.
25. Conservation, Biodiversity-Gene Flow. Seed Marketing. EU Legislation for PGR.

[SAFS 705] – Physiology of reproduction of farm animals

Module 1: Male and Female Reproductive System.

Description: Anatomy and Physiology of Male and Female Reproductive System.

Module 2: Oestrous Cycles.

Description: Puberty, Photoperiod, Follicular Development.

Module 3: The Role of the Nervous System in Reproduction.

Description: Hypothalamic Pituitary Axis.

Module 4: Reproductive Endocrinology.

Description: Endocrine System, Endocrine Glands.

Module 5: Hormones Involved in Reproduction.

Description: Hormones, Hormone Receptors, Endocrine Disruptors.

Module 6: Gametogenesis.

Description: Oogenesis, Spermatogenesis, Mitosis, Meiosis.

Module 7: Fertilization.

Description: Sperm Maturation, Sperm Activation, Acrosome Reaction.

Module 8: Embryonic Development.

Description: Basic Principles of Mammalian and Avian Embryonic Development.

Module 9: Reproductive Biotechnology.

Description: Basic Principles of Reproductive Biotechnology, Artificial Insemination, Embryo Transfer.

Module 10: Precision Livestock Farming in Animal Reproduction.

Description: Basic Principles of Precision Livestock Farming, Applications of Precision Livestock Farming. in Farm Animal Reproduction.

Module 11: Climate Change and Reproduction.

Description: Impact of Climate Change on Reproductive Parameters.

Module 12: Genetic Technology.

Description: Applications of Genetic Technologies in Farm Animal Reproduction, Application of genomic analyses in reproductive management schemes.

Module 13: Genetic Polymorphisms, Functional Molecular Markers.

Description: Effect of genetic polymorphisms on reproductive function, Identification of Functional Molecular Markers.

[SAFS 706] – Nutrition and Metabolism with Mediterranean Diet Insights

The course offers a structured introduction to human nutrition and metabolism with selected insights into the Mediterranean Diet as a health-promoting and sustainable dietary pattern. Key topics include:

1. Historical development of nutrition science and the emergence of dietary guidelines.
2. Structure, digestion, absorption and metabolism of macronutrients and micronutrients, including selected bioactive compounds.
3. Basic anatomy and physiology of the gastrointestinal tract, digestive processes, nutrient absorption and an introduction to the gut microbiota.
4. Food groups and dietary guidelines.
5. The role of diet in major health challenges (e.g. obesity, metabolic syndrome, non-communicable diseases) across the life course.
6. Principles, key food groups and mechanisms of action of the Mediterranean Diet, and its role within sustainable food systems and the Sustainable Development Goals.
7. Introduction to advanced nutritional assessment and biomarkers of food intake (BFIs) as tools to link food consumption, nutrition and health, including applications in personalised nutrition.
8. Examination of the mechanistic and epidemiological evidence that various food processing approaches can have on inflammatory status and nutritional value of the diet, specifically focusing on the bioactive components-phytochemicals present in selected plant-based food groups of the Mediterranean diet, known for their health benefits against metabolic disorders and chronic diseases.

[SAFS 707] – Landscape architecture

The course includes the following topics:

Module 1: Introductory lesson on Landscape Architecture: definition, studies in the Department of Agriculture, famous works of landscape architecture, sketches and scales.

Module 2: Introductory lesson on Landscape Planning.

Module 3: History of Landscape Architecture: From antiquity to the Renaissance Italian gardens.

Module 4: History of Landscape Architecture: From the French formal gardens to the present day.

Module 5: Techniques on designing landscapes; the meaning of scale, architectural drawing, basics on architectural design.

Module 6: Site analysis: Recording and documenting all the factors that create a comprehensive landscape analysis.

Module 7: (a) Basic theoretical design principles: unity, functionality, simplicity, scale. (b) Main elements of landscape composition: line, shape, texture, color, variety, repetition, balance, emphasis. (c) Basic design principles: spatial organization, spatial connection, connection of elements, space dominance, form and shape, connection of geometric forms, rhythm.

Module 8: Use of plants in landscape architecture: planting dimensions, cultivation requirements, ecological, functional, and aesthetic properties of plants.

Module 9: Topography, contour lines, slope calculation.

Module 10: Basics of irrigation, lighting and construction details.

Module 11: A brief introduction to nature based solutions, works with nature, ecological design and planning.

Module 12: A brief introduction to Landscape Planning.

Module 13: Planning and Designing Rural Landscapes.

[SAFS 801] – Vegetable crop production

Module 1: Introduction to Vegetable Crop Production.

Description: Importance and scope of vegetable production, classification of vegetable crops, opportunities and challenges in the vegetable industry.

Module 2: Soil and climate requirements

Description: Role of environmental factors (light, temperature etc.) and soil on vegetable growth and quality.

Module 3: Nursery management and crop establishment.

Description: Seed selection and seed technologies, seedlings production, transplanting techniques and schedules.

Module 4: Sustainable Vegetable Production.

Description: Organic fertilization, sustainable and climate-smart production technologies.

Module 5: Postharvest handling.

Description: Maturity indices, packaging, quality control and reduction of postharvest losses.

Module 6: Principles of greenhouse production.

Description: Protected cultivation (greenhouses, shade net houses), climate control.

Module 7: Hydroponic cultivation.

Description: Substrates, preparation of nutrient solution.

Module 8: Fertigation of vegetables.

Description: nutrient requirements, physiological disorders.

Module 9: Major leafy vegetables.

Description: Production guides for major leafy vegetables.

Module 10: Major root and tuber vegetables.

Description: Production guides for major root and tuber vegetables.

Module 11: Major bulb and stem vegetables.

Description: Production guides for major bulb and stem vegetables.

Module 12: Major fruit vegetables I.

Description: Production guides for major fruit vegetables (tomato, pepper, eggplant).

Module 13: Major fruit vegetables ii.

Description: Production guides for major fruit vegetables (cucumber, melon).

[SAFS 802] – Apiculture and bee products

Global beekeeping, elements of anatomy, morphology and biology of *Apis mellifera*, biological cycle of honey bee, bee hive, beekeeping tools, basic beekeeping manipulations, diagnosis and treatment of basic pests and diseases, nectar and pollen producing plants for beekeeping, honeybees in pollination, production and quality of bee products (honey, pollen, propolis, royal jelly), honey market.

[SAFS 803] – Farm Management

1. Introduction to Farm Management.
 - Definition, scope, and objectives.
 - Role of the farm manager in modern agriculture.
 - Types of farms and farming systems.
2. Farm Resources and Production Environment.
 - Land, labour, capital, and management.
 - Natural, technical, and economic constraints.
 - Farm data and record-keeping systems.
3. Principles of Decision-Making in Agriculture. (3weeks)
 - Decision processes and types of decisions.
 - Risk and uncertainty in agricultural production.
 - Behavioral aspects of farm decision-making.
 - Linear programming basics for farm optimization.
4. Economic Concepts Applied to Farm Management. (3 weeks)
 - Costs, revenues, and profit relationships.
 - Marginal analysis and resource allocation.
 - Economies of scale and scope.
5. Risk and Uncertainty Management. (2 weeks)
 - Types and sources of risk.
 - Tools: sensitivity analysis, scenario analysis, insurance, diversification.
 - Decision-making under uncertainty.
6. Policy and Institutional Framework.

- CAP measures affecting farm structure and decisions.
 - Environmental and rural development policies.
 - Compliance requirements and incentives.
7. Farm Sustainability and Innovation.
 - Sustainable intensification and resource efficiency.
 - Precision agriculture and digital tools in management.
 - Diversification and resilience strategies.
 8. Case studies, real data, and practical applications.

[SAFS 804] – Earth Observation and Geoinformatics for Agrifood Systems

Module 1

1. Satellites, drones, GPS and their sensors
2. Satellite remote sensing for crop mapping, yield prediction, and soil moisture
3. Drone-based support for precision farming

Practical: Copernicus data for spatial variability analysis

Practical: Creation of fertilizer prescription maps

Module 2

4. Spectroscopy for crop health, soil analysis and food quality
5. Proximal sensing sensors and apps
6. AI-driven analysis of EO and spectral data for decision support

Practical: Spectral identification of soil properties

Practical: Apps for smart farming

Module 3

7. GIS, FMIS and apps for spatial analysis
8. Geodatabases, data levels and sources
9. Spatial decision support systems for food security and policy making

Practical: GIS for spatial modeling of agricultural landscapes, environmental impacts, and food accessibility

Practical: Cloud GIS for accessing analysis ready data

Module 4

10. Integration across scales, from precision farming to regional monitoring
 11. Hands-on training with satellite images, drones, spectrometers, and GIS tools
 12. Case studies using Python and open-source tools (e.g., QGIS, SNAP, Orange)
- Project: Group projects to suggest solutions to a real-world agrifood problem using EO data in GIS.

[SAFS 805] – Organic Agriculture

1. Foundations of Organic Agriculture
2. Agroecology and Ecosystem Thinking
3. Soil Ecology & Physics
4. Soil Fertility and Organic Amendments
5. Soil and Water Management
6. Plant Physiology & Crop Requirements
7. Crop Planning and Farm Design
8. Seeds and Breeding for Organic Systems
9. Ecological Pest Management
10. Diseases and Weeds
11. Organic Certification & Standards
12. Farm Business & Economics
13. Climate, Sustainability & Future of Organic Farming
14. Farm design or organic production plan
15. Reflection on ecological, economic, and social sustainability
16. Student presentations

[SAFS 806] – Sustainable aquaculture and fisheries

Module 1: Physicochemical parameters of water suitable for aquaculture and fisheries.

Description: Factors such as temperature, pH, dissolved oxygen, salinity and the degree to which they may affect the health of aquatic populations, Characteristics of water suitable for aquaculture.

Module 2. Elements of Ichthyology and Biology of aquatic organisms.

Description: Elements of anatomy and physiology of fish and shellfish, general biology of benthic organisms, systematic classification of fish.

Module 3: Interactions of environment - aquaculture, Fisheries management and sustainability.

Description: The environmental footprint of aquaculture, genetic pollution from aquaculture and its impact on fisheries, the problem of overfishing.

Module 4: Selection of a location for an aquaculture unit - siting of aquaculture.

Description: Criteria for selecting species suitable for aquaculture.

Module 5: Aquaculture systems and methods.

Description: Production systems, Tank systems, Recirculated Aquaculture Systems (RAS), Biofloc.

Module 6: Shellfish farming.

Description: Shellfish biology, Main species farmed, Organization and techniques of shellfish farming.

Module 7: Nutritional needs of fish and shellfish.

Description: Basic principles of aquatic organism nutrition, Main production stages in Aquaculture, Elements of digestion and metabolism, Energy and diets, Basic characteristics of fish feed.

Module 8: Algae and microalgae cultivation.

Description: Basic principles of aquatic plant biology, Produced products.

Module 9: Visit to aquaculture units.

Module 10: Fisheries Biocommunities, Ecosystems and Functional role of fish.

Description: Zoning, plankton - benthos and ichthyosis, plant communities, Mediterranean fish.

Module 11: Fisheries biology and management.

Description: Legislation, fish population biology and risks, invasive species, migrations.

Module 12: Climate change, fisheries and aquaculture.

Description: Stress, Oxygen - Metabolism - Energetics, Homeostasis.

Module 13: Fish reproductive function and oyster hatchery.

Description: Development of tank systems aimed at genetic selection and genetic improvement, enhancement of fish stocks and modeling of real aquatic ecosystem conditions.

[SAFS 807] – Industrial Agro- Food Process Design and Economics

The course introduces students to the application of techno-economic feasibility studies in chemical process industries, with particular emphasis on food processing industry. It is based on a thorough feasibility study of a selected industrial plant, which varies each year, and the preparation of a detailed report that constitutes an important part of the overall course grade. The course covers the development and interpretation of methodological flow diagrams and the application of mass and energy balances for process analysis. Students learn the preliminary sizing and selection of key process equipment, as well as methods for cost estimation, economic evaluation, and assessment of project profitability. To support this, the course includes an extensive lab component where students use specialized software tools for industrial plant design and economic evaluation. The course also addresses throughput analysis, identification of bottlenecks, and strategies for process optimization. Additionally, students explore the optimization of operating conditions using techno-economic criteria and the principles of process scale-up. Finally, the course examines the determination and evaluation of quality parameters in outlet streams to ensure compliance with food quality standards and sustainable operation.

[SAFS 901] – Precision Agriculture and Livestock Farming

1. Introduction to Precision Agriculture
2. Mapping and managing spatial variability within the field

3. Precision Tillage Systems and Controlled Traffic Farming
4. Precision Seeding
5. Precision Irrigation
6. Precision Fertilization
7. Precision Crop Protection
8. Yield Monitoring and Mapping
9. Precision Post Harvest Management
10. Introduction to Precision Livestock Farming
11. Precision Livestock Farming Applications
12. Precision Livestock Farming Adoption and Sustainability
13. Precision Agriculture Adoption and Sustainability

[SAFS 902] – Farm Accounting

The course includes the following topics:

Module 1: Introduction to Farm Accounting

- Purpose and importance of accounting in farm businesses,
- Differences between farm accounting and general business accounting,
- Legal and institutional framework,

Module 2: Basic Accounting Principles

- Double-entry bookkeeping,
- Assets, liabilities, equity, Revenues, expenses, and profit concepts,
- Cash vs accrual accounting,

Module 3: Farm Records and Documentation

- Types of farm records (production, financial, inventory),
- Record-keeping systems and tools,
- Digital record-keeping and farm management software,

Module 4: Financial Statements in Agriculture

- Balance sheet: structure, valuation of assets (land, livestock, machinery),
- Income statement: farm revenues, operating expenses, depreciation,
- Cash flow statement: cash inflows/outflows, liquidity assessment,

Module 5: Valuation of Farm Assets

- Land valuation and revaluation,
- Livestock valuation (breeding, rearing, market animals),
- Machinery and equipment depreciation methods,
- Biological assets and inventories,

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Module 6: Cost Accounting in Agriculture

- Classification of costs: fixed, variable, overhead, Enterprise cost allocation,
- Cost centers and activity costing,
- Break-even analysis),

Module 7: Depreciation and Capital Management

- Depreciation methods (straight-line, declining balance, units of production), Replacement and investment decisions,
- Impact of depreciation on profitability,

Module 8: Taxation and Agricultural Policies

- Tax obligations for farmers,
- Agricultural subsidies and support schemes,
- Accounting treatment of subsidies (CAP payments, investment support,

Module 9: Farm Budgeting and Financial Planning

- Partial and whole-farm budgets,
- Annual budgeting and forecasting,
- Credit and loan management,

Module 10: Financial Indicators and Performance Analysis

- Liquidity, solvency, profitability ratios,
- Benchmarking and comparison with sector standards,
- Interpretation for decision-making,

Module 11: Integrated Farm Financial Management

- Linking accounting to farm planning,
- Decision-support tools and software,
- Case studies of real farm financial statements.

[SAFS 903] – Digital and Predictive Food Microbiology & Quality Assurance Systems

The course provides an advanced exploration of the role of microorganisms in food systems and their impact on food quality, safety, and shelf-life. It integrates cutting-edge microbiological tools, molecular and digital techniques, predictive microbiology, and the detection and assessment of chemical hazards (naturally occurring toxins, allergens, added chemicals, chemical residues) and physical hazards (e.g., glass, metal). The course emphasizes the principles and application of quality assurance and food safety management systems, including HACCP and ISO standards, covering system design, validation, verification, and auditing practices. Students will also examine Good Manufacturing Practices (GMP), Good Hygiene Practices (GHP), Good Agricultural Practices (GAP), as well as hygiene, sanitation, and environmental monitoring programs. Legislative frameworks governing food

production are addressed, with focus on legal requirements for labeling, traceability, and crisis management. Through lectures, case studies, seminars, projects and digital exercises, students will develop advanced theoretical knowledge and practical competencies to design, implement, and evaluate microbiological and multidisciplinary quality control and food safety systems across diverse sectors of the food industry.

[SAFS 904] – Renewable Energy Resources in Agriculture

1. Introduction to renewable energy in agriculture (energy demand in agriculture, challenges with fossil fuel dependency, overview of renewable energy resources).
2. Solar energy principles and technologies (photovoltaics basics, solar thermal systems, solar radiation characteristics, energy conversion efficiency, solar water pumping and irrigation, solar greenhouse heating).
3. Solar passive systems (design principles and agricultural uses, natural greenhouse heating, crop drying, ventilation, shading, thermal mass, and farm building orientation to reduce energy demand and enhance sustainability).
4. Wind energy in agriculture (wind resource assessment, turbine types and mechanics, factors influencing wind power output, wind pumps, hybrid wind-solar systems)
5. Biomass characteristics (agricultural biomasses quantity and quality characteristics and sources (crop residues, manure, agro-industrial wastes).
6. Biomass valorisation (energy content and composition, technological overview (combustion, gasification, fermentation).
7. Biogas production and utilisation in agriculture (anaerobic digestion principles, digester types, biogas upgrading and use (electricity, heat, fuel), digestate as a fertilizer).
8. Other biofuels in agriculture (bioethanol, biodiesel, biobutanol, feedstocks and conversion processes, engines and machinery compatible with biofuels).
9. Biorefineries (pretreatment, enzymatic hydrolysis, fermentation, biomass extracting high-value products, circular economy concepts).
10. Geothermal energy in agriculture (geothermal principles, greenhouse heating, soil warming for early planting, hot water and thermal storage).
11. Hydropower systems in agriculture (hydropower fundamentals, micro- and pico-hydropower, applications (milling, pumping, electricity generation).
12. Heat pumps-Group project (principles, types, efficiency, agricultural uses (greenhouse heating, milk cooling, water heating, and energy recovery), cost savings, sustainability, and integration with other renewables.
13. Review and project presentations (student presentations of group projects, synthesis of concepts, exam preparation).

[SAFS 905] – Mediterranean and Functional Foods

The course provides students with an in-depth understanding of Mediterranean and functional foods, focusing on their composition, bioactive compounds, and health-promoting properties. It covers critical topics such as aromatic and medicinal plants (e.g., thyme, *Origanum*), bee products (honey, propolis, royal jelly), and mastic gum, highlighting their functional, antimicrobial, and antioxidant properties. The production, quality assessment, and health benefits of key Mediterranean products such as Greek yogurt, Feta cheese, and olive oil will be examined. Special attention will be given to the sustainable valorization of agricultural by-products and residues, including strategies for recovering bioactive compounds and developing innovative functional foods. Students will also explore traditional and modern processing methods, authenticity and quality control issues, and the application of scientific evidence in product innovation and functional food development. The course will also include delivery systems of bioactive compounds (oleogels, hybrid gels, emulsion gels, etc.) and evaluation of the delivery efficiency through *in vitro* digestion studies.

[SAFS 1000] – Diploma Thesis

Phase 1 Topic Selection & Proposal (Weeks 1–4)

- Identify research area
- Select supervisor
- Prepare a 2–5 page proposal including:
 - background and motivation
 - objectives and hypotheses
 - methodology (experimental plan, sampling, variables, data needs)
 - timeline
- Proposal approval by supervisor/department

Phase 2 Literature Review (Weeks 4-8)

- Systematic review of academic sources
- Conceptual framework
- Identification of gaps and research justification

Phase 3 Method Development & Preparation (Weeks 8–12)

- Design experiments/surveys/models
- Obtain materials, equipment, access to farms or food labs
- Ethics and safety approvals (if required)

Phase 4 Data Collection (Weeks 12–20)

Depending on project type, this may include:

- Field trials, greenhouse experiments, lab analyses
- Soil, plant, food, or environmental measurements
- Surveys, interviews, stakeholder consultations
- Food product formulation, processing, or shelf-life testing

Phase 5 Data Analysis (Weeks 20–24)

- Statistical analysis (R, SPSS, Python, Excel)
- Modelling (crop models, LCA tools, sustainability indices)
- Interpretation and comparison with literature

Phase 6 Thesis Writing (Weeks 24–30)

Chapters:

1. Introduction
2. Literature Review
3. Materials & Methods
4. Results
5. Discussion
6. Conclusions & Recommendations
7. References
8. Appendices (data tables, questionnaires, protocols)

Phase 7 Oral Defence

- 15–30-minute presentation
- Q&A with examination committee

Teaching — Knowledge Assessment — Evaluation of Students

The Joint English Undergraduate Program of Studies (JEUPS) is delivered through the physical presence of teaching staff and students in the classrooms. By decision of the Program Committee, a weekly online teaching slot common to all JEUPS students may be established

and used for tutorials and/or seminar courses and, exceptionally, for make-up classes in cases where classrooms are not available on other days of the week. In exceptional circumstances that prevent in-person teaching, lectures may be conducted online for a limited period by a duly reasoned decision of the Program Director, strictly for the time necessary to address the extraordinary conditions that justify the temporary transition to distance learning.

Similarly, examinations are conducted in person, with the physical presence of students and examiners in School facilities, whether written or oral. Exceptionally, oral examinations may be conducted remotely, provided that the identity of the examinees is verified and best practices for online oral examinations are followed to ensure integrity. Remote written examinations are not permitted, except where explicitly required by applicable legislation. By decision of the Program Committee, written examinations may be conducted using tablets, laptops, or PCs, provided that they take place in person under invigilation in School classrooms and under a comprehensive examination protocol ensuring integrity and equal treatment of examinees.

Attendance at lectures, tutorials, and all other organized educational activities of the English-taught Undergraduate Program is compulsory. Students may be absent for up to thirty percent (30%) of the total teaching hours of each course per semester; deviations from this limit are permitted only in exceptional cases and subject to approval by the Program Committee. Regular participation in lectures, tutorials, and examinations constitutes an essential element of academic engagement and successful progress in the Program.

Before the beginning of each semester, the JEUPS Secretariat prepares and publishes the detailed timetable, taking care, as far as possible, that:

- (a) courses for each year of study are evenly distributed across the days of the week,
- (b) courses scheduled on the same day are not placed at widely separated hours, and
- (c) courses of the same semester do not overlap.

Upon completion of the tenth (10th) week of teaching in each semester, students are invited to participate in an anonymous electronic evaluation of the courses they attend and of the teaching staff, with the aim of improving the quality of studies.

Evaluation of Students

1. Students of the Joint English Undergraduate Program of Studies (JEUPS) are assessed through written or oral examinations held at the end of the semester for the courses taught during that semester. All courses are also examined during the September resit examination period.
2. In courses that include laboratory work and/or projects, the instructor is encouraged to submit two (2) grades at the end of each examination period: one corresponding to the student's performance during laboratory work (continuous assessment grade) and one corresponding to the student's performance in the final examination, written or oral (final examination grade). The final course grade results from a weighted combination of these components, as determined by the instructor.
3. Instructors shall make special arrangements for the oral examination of students with documented dyslexia prior to admission to the Program, or with severe motor or visual impairments that substantially hinder participation in written examinations, in accordance with the procedures prescribed by applicable legislation.
4. The Program Secretariat publishes in due time the detailed schedule of written examinations for each examination period. Under the responsibility of the instructors, assisted by the JEUPS Secretariat, a sufficient number of invigilators (doctoral candidates and postgraduate students) is ensured. Instructors must be present in the examination areas, supervise the proper and fair conduct of examinations, and take all necessary measures to safeguard their integrity.
5. Each examinee must verify, prior to the examination, that their name appears on the official list of eligible candidates for that course. Cheating or any attempt to compromise the examination process is strictly prohibited, as is bringing books, notes, study aids, or electronic communication devices into the examination room. Any attempt to use electronic communication devices constitutes a particularly serious violation. Examinees may not use separate scrap paper; the final page of the answer booklet may be used for rough work. Violation of these rules results in a zero grade for the examination as an internal disciplinary measure, without prejudice to any further sanctions provided by law.
6. Invigilators are required to verify the academic identity card of each examinee, ensure that the student's name and registration number are written on the answer script, sign each script, prevent communication or cheating among examinees,

monitor entrances and exits continuously—especially at the end of the examination—and ensure that no student leaves the room before thirty (30) minutes have elapsed from the distribution of the examination topics.

7. The duration of written examinations for all courses shall not exceed two (2) hours.
8. After collection, invigilators count the examination scripts received, and one invigilator certifies the total number. The scripts are then delivered to the instructor, who recounts them and confirms receipt by signature in the presence of the invigilator.
9. Instructors must submit the results of final examinations—written and/or oral—to the Program Secretariat in a single grade sheet for each course no later than twenty-five (25) days after the examination date. For oral examinations, instructors may not announce results individually to students but only collectively, in written and/or oral form, after all examinations are completed.
10. In all JEUPS courses, student performance is graded numerically on a scale from zero (0) to ten (10). Grades from zero (0) to four (4) indicate failure, while grades from five (5) to ten (10) indicate success.
11. Publication of examination results including students' names is not permitted. Results may be published only using student registration numbers.
12. Transfer of grades from one examination period to another is not allowed. Any statements written by students on their scripts requesting to be failed below a certain grade or indicating the number of courses remaining for graduation are not permitted and will be disregarded.
13. After the publication of results, instructors discuss model answers for written examinations (both practical and theoretical) with interested students during designated office hours. Students have the right to review their examination script from the current examination period and request clarification regarding its assessment. Instructors are required to upload model solutions for examination problems to the course e-learning platform.
14. The final degree classification is calculated based on the forty-five (45) courses required to obtain 270 ECTS credits, whose average grade constitutes ninety percent

(90%) of the overall degree grade. The remaining ten percent (10%) derives from the diploma thesis (30 ECTS), for a total of three hundred (300) ECTS credits.

Article 9

Scholarships

Within the framework of the Joint English Undergraduate Program of Studies (JEUPS), scholarships may be awarded to students on the basis of academic merit and objective criteria, following a decision of the Program Studies Committee. Indicatively:

- Up to three (3) scholarships per academic year may be awarded to students who distinguished themselves during the selection process, based on the overall evaluation of their qualifications (including the results of the oral interview), and who ranked among the top admitted candidates of the intake. These scholarships consist of a full waiver of tuition fees for the first academic year.
- A merit-based excellence scholarship, consisting of a fifty percent (50%) tuition fee waiver for the subsequent academic year, may be awarded to the student who achieves the highest overall grade point average across all courses of a given academic year, provided that all courses have been successfully completed within the prescribed timeframe. In the event of a tie, the scholarship may be awarded to more than one student.
- The Program Studies Committee may award prizes of excellence to students who demonstrate outstanding academic performance during their studies. Such awards may include honorary distinctions and/or monetary prizes. In particular, at the end of each academic year, a First-Year Student Prize may be awarded based on overall performance in all courses and consistency in attendance. Likewise, a Valedictorian Award may be granted to the student with the highest academic achievement throughout the entire cycle of studies.
- Upon a reasoned decision of the Program Studies Committee, full or partial tuition fee waivers may be granted to students originating from war-affected regions or those under international or subsidiary protection status, based on documented social and humanitarian criteria.
- In exceptional cases, a social support scholarship may be granted to applicants or students facing severe financial hardship, health issues, loss of a parent, or living

under conditions of emergency or prolonged crisis, following evaluation of a formal application and supporting documentation by the Program Studies Committee.

- Work-exchange (reciprocal) scholarships may also be awarded, consisting of partial tuition fee waivers in return for specified services provided by the student to support the Program. Such services may include assistance in the library, administrative support, participation in research projects, or other activities determined by the Program Studies Committee in consultation with the Secretariat and faculty members. The duration and scope of the work-exchange obligation are clearly defined at the time of award, and failure to fulfill these obligations may result in revocation of the scholarship.

The granting of the above scholarships and/or awards of excellence, the specific terms and conditions of their allocation, as well as the rights and obligations of scholarship recipients, are determined by decision of the Program Studies Committee and remain at its sole discretion, subject to the Program's financial capacity and available reserves.

Article 11

Revenues of the JEUPS — Tuition Fees — Financial Management Procedure

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Tuition Fees

For attendance in the Joint English Undergraduate Program of Studies (JEUPS), total tuition fees amount to thirty-five thousand euros (€35,000), corresponding to seven thousand euros (€7,000) per academic year. The level of tuition fees is determined and may be modified by decision of the Senate of Aristotle University of Thessaloniki (AUTH), while the method and timing of payment may be adjusted by decision of the Program Studies Committee.

Tuition fees are paid by the students themselves (or by a third natural or legal person on their behalf) to a designated bank account of the Special Account for Research Funds (SARF in Greek:ELKE) of AUTH, in ten (10) equal installments of three thousand five hundred euros (€3,500). The first installment is payable during the student's registration in the Program, and the subsequent installments are due prior to the commencement of each respective

semester. Upon payment of the tuition fees, the corresponding receipt is issued and the student is notified electronically.

Upon submission of the application, candidates are required to pay a non-refundable application processing fee of one hundred fifty euros (€150). An application shall not be considered complete and will not be forwarded for evaluation unless the fee has been paid and proof of payment has been submitted by the applicant.

Payment is made electronically, in accordance with the instructions sent upon confirmation of receipt of the application. The amount is deposited into the ELKE AUTH account and is non-refundable in the event of rejection or withdrawal of the application.

In the event of admission to the Program, candidates are required to pay an amount of one thousand euros (€1,000) as an advance on tuition fees. This amount is also deposited into the ELKE AUTH account and is non-refundable in case of withdrawal from the Program.

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Article 12

Administrative Support — Infrastructure

The **International Student Support Unit** is responsible for supporting international students of the JEUPS, in accordance with Article 212 of Law 4957/2022. The mission of the International Student Support Unit is to assist international students enrolled in first-, second-, and third-cycle study programs of the University. In particular, the Unit's responsibilities include:

1. Supporting international students with their enrolment in English-taught study programs of AUTH.
2. Assisting international students in obtaining entry visas and residence permits for study purposes and liaising with the competent public authorities on these matters.
3. Supporting the process of concluding fast-track residence permit agreements for study purposes, in accordance with Article 37 of Law 4251/2014.
4. Assisting students during their settlement in Greece.
5. Cooperating with the relevant services of AUTH for the provision of services to international students.

6. Organising Greek language courses or other foreign language courses in cooperation with the competent units of AUTH.
7. Exercising any other responsibilities defined in the University Statute that relate to the Unit's scope.

Administrative Support of the Program

The Schools of Agriculture and Chemistry of AUTH, having extensive experience in organising and implementing first-, second-, and third-cycle study programs, undertake the overall administrative and technical support of this English-taught Undergraduate Program of Studies.

Secretarial support for the Program is provided by the **Secretariat of the JEUPS**, which may be staffed by personnel from the Secretariats of the two participating Schools, constituting the main operational arm of its administration and operating under the supervision of the **Program Steering Committee**.

More specifically, the Program Secretariat:

1. Provides administrative support to the Committee and the Director of the JEUPS.
2. Handles matters related to the students' academic life cycle, from enrolment to graduation and issuance of degrees.
3. Maintains the protocol register and the physical and digital archive of the Program.
4. Manages administrative procedures concerning the Program's teaching staff (contracts, travel, etc.).
5. Cooperates with the **Special Account for Research Funds** of AUTH for the Program's financial management and related procedures.

The coordination of the JEUPS Secretariat, as well as the keeping of the Committee's minutes, may be assigned to a staff member of the Secretariat of the Greek-taught undergraduate program of the School of Agriculture or the School of Chemistry who possesses the formal qualifications required for the duties of Head of Unit, in accordance with Law 3839/2010. Such assignment is made by decision of the JEUPS Committee.

For the support of the Program's needs, the following personnel may also be employed, in accordance with Article 104 of Law 4957/2022:

1. Members of the permanent administrative staff of AUTH, with additional duties beyond their statutory obligations, following a decision of the Research Committee of the Special Account for Research Funds upon recommendation of the JEUPS Committee.
2. Additional personnel selected according to the procedure of Article 243 of Law 4957/2022.

The remuneration of all categories of personnel is covered exclusively by the Program's budget.

Technical support for the Program's operation is centrally ensured by specialised staff of the **Digital Governance Unit** of AUTH, the existing technical staff of the General Directorate of Technical Services and Computerisation of AUTH, and the technical staff of the Schools of Agriculture and Chemistry.

For the delivery of courses of the JEUPS, the existing building and technical infrastructure of AUTH is utilised.

Article 13

Form of the Degree Awarded

The Degree of the JEUPS is an official public document and is awarded to the graduates of the Program.

The Degree is issued by the Secretariat of the JEUPS. It bears the name of the **School of Agriculture** (coordinating School), the **School of Chemistry**, and the University, the emblem of AUTH, the date of completion of studies, the date of issuance of the Degree, the graduation protocol number, the title of the JEUPS, the Degree classification, the graduate's personal details, and the classification of performance: **Good, Very Good, Excellent**.

Prior to the formal conferral of the Degree, graduates may be issued a certificate confirming the successful completion of the Program.

In addition to the Degree, a **Diploma Supplement** is also awarded, in accordance with Article 15 of Law 3374/2005 and Ministerial Decision F5/89656/B3/13-8-2007 (Government Gazette 1466/B'). The Diploma Supplement is an explanatory document providing detailed information on the nature, level, content, educational framework, and legal status of the

studies successfully completed. It does not replace the official Degree certificate or the transcript issued by the University.

Article 14

Accreditation and Evaluation of the JEUPS

Following the issuance of the decision establishing the JEUPS and prior to the commencement of its operation, accreditation of the JEUPS by the **Hellenic Authority for Higher Education (HAHE)** is required, in accordance with point (c) of paragraph 1 of Article 8 of Law 4653/2020 (Government Gazette A' 12). After their establishment, JEUPS programs are subject to periodic accreditation in accordance with sub-item (bb) of item (b) of paragraph 1 of Article 8 of Law 4653/2020, within the framework of the evaluation of the academic unit to which they belong.

The JEUPS is evaluated as part of the periodic evaluation/accreditation of the relevant academic unit by the Hellenic Authority for Higher Education. In particular, the evaluation examines the overall performance of the Program, the degree to which the objectives set at its establishment have been achieved, its sustainability, the employability of graduates, its contribution to research, internal evaluation results provided by graduates, the justification for continuation of its operation, as well as other elements related to the quality of the work produced and its contribution to the national strategy for higher education.

If, during the evaluation process, the JEUPS is found not to meet the conditions for continued operation, the Program shall be concluded upon the graduation of the students already enrolled, in accordance with the decision establishing the Program.

Internal Evaluation by the Quality Assurance Unit (MODIP)

In order to ensure and enhance the quality of the JEUPS, the Quality Assurance Unit of AUTH (MODIP-AUTH) conducts periodic internal evaluations of the Program within the framework of the University's Internal Quality Assurance System and in accordance with the guidelines and directions of HAHE.

The administrative bodies and teaching staff of the Program are required to comply with all procedures prescribed by the applicable guidelines and directions of MODIP-AUTH regarding the internal and external evaluation and accreditation of study programs and academic units.

Evaluation of Teaching Staff and Courses by Students

With the sole purpose of improving the quality of studies of the JEUPS and with full assurance of anonymity, students are invited to evaluate courses and teaching staff each semester.

For reasons of uniform statistical monitoring and to enable the extraction of conclusions useful for the educational work of Schools, Departments, and the Institution as a whole, evaluation questionnaires are developed by the Quality Assurance Unit (MODIP) and may be partially adapted to reflect the specific characteristics and needs of each academic unit and/or course. The questionnaires are completed electronically.

The evaluation process is conducted under the responsibility of the Internal Evaluation Group (OMEA) of the JEUPS, which consists of four (4) faculty members from the Department of Agriculture and one (1) faculty member from the Department of Chemistry, at the rank of Professor or Associate Professor, in collaboration with MODIP-AUTH, and is implemented through the latter's Quality Management Information System. The administration and the OMEA of the JEUPS are required to undertake systematic actions to encourage student participation in the evaluation process, in accordance with the guidelines of MODIP and the relevant decisions of the Senate.

Through MODIP's Quality Management Information System, the OMEA of the JEUPS monitors the level of student participation in the evaluation process, analyzes the relevant results, and informs the governing bodies of the JEUPS and the corresponding academic unit accordingly. Evaluation questionnaires refer separately to each course taught and to each instructor.

The governing bodies of the JEUPS and the academic unit, in cooperation with the OMEA of the JEUPS, are required to examine the evaluation results, announce their findings, decide on the publication of summary evaluation outcomes when deemed necessary—and in any case after the announcement of course grades for the semester—in accordance with the applicable legislation on the protection of personal data, and undertake actions to address any issues identified or to further improve the JEUPS.

Article 15

Study Guide of the JEUPS

The JEUPS publishes a Study Guide in the English language with the purpose of informing students about the operation of the Program. It is made publicly available on a website

managed by the Program Studies Committee and is updated at regular intervals. The Study Guide includes:

1. General information as well as useful electronic resources about the Institution and the Departments participating in the JEUPS, particularly regarding administrative services or collective bodies to which students may address inquiries for the successful completion of their studies.
2. The purpose and subject of the JEUPS, as well as the qualifications acquired upon the award of the degree.
3. The academic calendar, including the dates of commencement and completion of academic semesters, examination periods, holidays, and any other obligations such as seminars, conferences, etc.
4. The curriculum, credit units (ECTS), study requirements, teaching staff, and the rights and obligations of students.
5. The official language of instruction.
6. The JEUPS Program Studies Committee.
7. Databases and other services.
8. Library services and usage, in accordance with the needs of the JEUPS courses.
9. Learning outcomes and qualifications upon graduation.
10. Institutional services provided to students.

Article 16

Transitional Provisions

Any issue arising during the operation of the JEUPS that is not covered by the applicable legislation or by the present Regulations shall be addressed by decisions of the governing bodies of the Program, through amendment of the relevant Regulations.

B. INTERNSHIP REGULATIONS

According to Article 8 of Decision No. 38745/15-01-2026 of the Senate of the Aristotle University of Thessaloniki, the Interdepartmental English-taught Undergraduate Study Program (JEUPS) does not include, in its current curriculum, a compulsory Internship as a prerequisite for the award of the degree. Nevertheless, the provision of academic guidance and advisory support to students is ensured, as well as the possibility for their participation in research projects and related activities, in accordance with the applicable legislation and the decisions of the competent bodies.

In the event that an Internship is established or activated in the future within the framework of the Program, it shall be governed—by analogy and to the extent compatible with its interdepartmental character—by the applicable Internship Regulations of the Department of Agriculture, as approved by Decision No. 1005/21.11.2024 of the Departmental Assembly, as well as by any other relevant regulatory acts of the Institution. The implementation of these Regulations to the Interdepartmental Program shall be subject to any specific provisions that may be approved by the competent interdepartmental and central governing bodies of the Institution.

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ARISTOTLE UNIVERSITY OF THESSALONIKI
FACULTY OF AGRICULTURE, FORESTRY AND NATURAL ENVIRONMENT
SCHOOL OF AGRICULTURE
SCHOOL ASSEMBLY MEETING No.: 1005/21.11.2024

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A. BENEFITS FOR STUDENTS FROM THEIR PARTICIPATION

- First contact with the professional environment and development of the necessary outward orientation.
- Familiarization with market trends and the skills required.
- Application of the knowledge acquired at the University in the field of work that interests them.
- Familiarization with the various fields of the professional sector, enabling them to choose the one that offers the greatest professional and personal benefits.

B. SCHOOL INTERNSHIP

The Internship at the School of Agriculture of the Aristotle University of Thessaloniki may be carried out through the course with code N700Y entitled “Internship”.

1. INTERNSHIP THROUGH THE COURSE WITH CODE N700Y ENTITLED “INTERNSHIP”

Basic Information

The course with code N700Y entitled “Internship” is a compulsory course in the Curriculum of the School of Agriculture of the Aristotle University of Thessaloniki. It corresponds to ten (10) ECTS credits and is offered in the 8th semester of studies. The course counts toward the degree and is graded on a “pass/fail” basis. The above provisions were established in accordance with Ministerial Decision No. Φ161/5/81671/06.09.1973, Article 4 (Government Gazette 1143/29.09.1973, Series B) and the decisions of the School Assembly No. 735/11.02.2016 and No. 796/12.07.2018.

The Internship has a duration of two (2) calendar months and corresponds to 35–40 hours per week (depending on the working schedule of the supervisor at the Host Organization). It is defined as full-time in accordance with the applicable legislation.

The duration of the Internship may be extended up to six (6) months, with remuneration provided by the Host Organization.

The Internship is conducted during specific periods determined by the School, namely the summer months of July–August. These months may change due to force majeure. In any case, the AUTH Internship Office announces the Internship periods on its website in September of each academic year.

A student may carry out an Internship outside the designated period, following an application to the Internship Committee, only if they have completed the 5th year of studies and have no outstanding academic obligations (compulsory core and specialization courses). In this case, funding must be provided by the Host Organization, and the rules of Paragraph 3.8G of the AUTH Internship Regulation must be followed, in accordance with the provisions of Laws 5128/2024 (Article 44) and 4957/2022 (Article 208).

The Internship may take place in public services, Legal Entities under Public Law, Local Government Organizations (first and second level), Legal Entities under Private Law, and private enterprises (hereinafter referred to as “Host Organizations”), under the guidance of a designated supervisor from the Host Organization and the academic supervision of a member of the teaching staff of the Study Program.

The Internship may also be conducted in Host Organizations abroad, provided that supervision of the educational process is feasible.

The Internship is carried out exclusively at the premises or service locations of the Host Organization where the trainee student is physically present. In the event of travel outside these premises within the framework of the Internship, travel and accommodation expenses are borne by the Host Organization.

The Internship Coordinator for the course is a member of the teaching or technical staff (DEP, EDIP, EEP, or ETEP) appointed by decision of the School Assembly.

In addition to the Internship Coordinator, a three-member Internship Committee and a three-member Appeals Committee have been appointed by decision of the School Assembly.

The Internship Committee appoints an Internship Supervisor for each trainee student.

Eligibility to Participate in the Course

Undergraduate students of the School who have completed the 8th semester of studies are eligible to participate, as well as students of higher semesters who did not undertake the Internship during the prescribed period. Participation is subject to the fulfilment of the minimum academic progress requirements:

1. Students must be enrolled in the 8th semester or above.
2. Students must have successfully completed at least 120 ECTS credits by the end of the winter semester examination period of the academic year in which the Internship will be carried out.

International students attending the School through the Erasmus+ Programme are not eligible to participate in the course.

Selection Criteria

The Internship course (N700Y) is compulsory and must be completed by all students.

However, if the number of positions funded by operational programmes or by the Special Account for Research Funds (ELKE) is lower than the number of student applications, the following selection criteria are applied:

The score is calculated using the formula:

$$\text{GPA} \times \text{ECTS}$$

Where:

- **GPA** = the grade point average, as recorded in the system after the completion of the winter semester examination period of the academic year in which the Internship will be conducted.
- **ECTS** = the total number of ECTS credits successfully completed by the student, as recorded in the system after the completion of the same examination period.

In the event of a tie, priority is given to the student who has successfully completed the greater number of compulsory courses.

If a tie still persists, a public draw will be conducted among the tied candidates.

Student Applications – Selection – Appeals

Student applications are submitted in a specific manner and within specified deadlines through the Information System of the AUTH Internship Office. The application procedure and deadlines are announced on the School website and/or on the Internship Office website.

The application period for student Internships is at least ten (10) calendar days.

Following the selection of students by the Internship Committee, the results are published on the School website and/or on the AUTH Internship Office website.

Students who are not selected (where justified) have the right to submit an electronic appeal (using a designated form) to the AUTH Internship Office within five (5) calendar days from the publication of the results. Appeals are examined by the competent Internship Appeals Committee.

The final list of selected students and reserve candidates who will undertake the Internship is approved by the School Assembly.

For Internships funded directly by a Host Organization, the provisions of Paragraph 3.8C of the AUTH Internship Regulation apply, in accordance with Laws 5128/2024 (Article 44) and 4957/2022 (Article 208). The selected students undertaking such Internships are also approved by the School Assembly.

Selection of Host Organization

The Internship Committee, in cooperation with the Internship Office, supports students in identifying a Host Organization for the conduct of the Internship.

The selection of the Host Organization is the sole responsibility of the student. The Internship Committee assigns the student to the Host Organization of their choice, provided that the scope of activities of the selected organization has been reviewed and deemed appropriate. Students may consult the database of Host Organizations in which School students have undertaken Internships in previous years, available at www.praktiki.agro.auth.gr , as well as seek guidance from the Internship Committee and/or the AUTH Internship Office. When selecting a Host Organization, students must take the following into consideration:

- I. The Host Organization is recommended to belong, preferably, to the private sector.
- II. During the same period, for the same subject area and under the same internship supervisor (from the Host Organization), no more than three (3) students may be placed at the same Host Organization.
- III. Universities located within the territory of Greece are not permitted to serve as Host Organizations.
- IV. Based on the activities of the Host Organization and the information stated on its official seal, the relevance of the organization to the agricultural sector must be substantiated, and the organization must be

classifiable within one of the activity categories listed in Appendix I. The student's specialization should also be taken into account, as Host Organization selections may be rejected upon recommendation of the Internship Committee (e.g., Animal Production students selecting a pastry shop in Grevena, or Plant Production students selecting a municipal water utility in Xanthi).

For ethical reasons, students are not permitted to undertake their Internship with a relative (e.g., parents, uncles/aunts, etc.).

In all cases, the registration and allocation of Internship positions for first-cycle students must be carried out through the dedicated ATLAS Information System of the Hellenic Public company "National Infrastructures for Research and Technology S.A." (GRNET S.A.). For the purposes of the General Data Protection Regulation (EU L119) and Law 4624/2019 (Government Gazette A' 137), the Ministry of Digital Governance and the Ministry of Education act as Data Controllers, while GRNET S.A. acts as the Data Processor. Every Internship position concerning first-cycle students of AUTH must be published and recorded in the ATLAS Information System.

Change of Host Organization – Interruption of Internship

In cases involving a change of Host Organization or the interruption of the Internship, the provisions set out in the Institution's Internship Regulations shall apply.

Rights and Obligations of Students

- Prior to the commencement of the Internship, the student must follow the instructions provided by the School and/or the Internship Office regarding the implementation of the Internship.
- During the Internship, the student is entitled to leave of one (1) day per month of Internship for personal, health, or educational reasons (e.g., examinations). The student may use these days of absence either individually or cumulatively during the Internship period. If the leave is to be used for personal or educational reasons, the student must notify, by email at least two (2) days in advance, the School Internship Coordinator, the assigned Institutional Internship Supervisor, the Internship Office, and the Host Organization. Failure to provide two (2) days' prior notice, and confirmation upon inspection that the student is absent from the Host Organization, will result in the absence being considered unjustified and may constitute grounds for cancellation of the Internship. In cases of health-related reasons, the student may notify the absence on the same day.
- While at the Host Organization, the student is required to comply with all safety regulations, workplace rules, and any other policies applicable to the organization's personnel. Unjustified absences or violations of workplace regulations may lead to termination of the Internship. In such cases, the student may repeat the Internship in accordance with the Institution's Internship Regulations.

- During the Internship, the student must submit a weekly email report to the Institutional Internship Supervisor, describing in detail and with appropriate scientific documentation the daily activities carried out during the preceding week.
- It is prohibited to prepare part or all of the student's Thesis at the Host Organization during the Internship period.
- The following deliverables are required for the successful completion of the Internship for each participating student:

1. **Form E3.5 (Commencement):** The Host Organization is required to submit Form E3.5 in the ERGANI Information System prior to the start of the Internship and to forward it to the AUTH Internship Office electronically (praktiki@auth.gr), by post, or through the trainee on specific dates set by the AUTH Internship Office. The Host Organization is informed electronically of the submission dates together with all details regarding the commencement of the Internship.
2. **Signed Internship Agreements:** The Host Organization must send the duly signed Internship Agreements to the AUTH Internship Office either by post or via the trainee on specific dates determined by the AUTH Internship Office. The Host Organization is notified electronically of the submission dates along with all details concerning the start of the Internship.
3. **Electronic Internship Evaluation by the Trainee:** Completed by the trainee using a dedicated form available in the AUTH Internship Office Information System after the completion of the Internship.
4. **Form E3.5 (Completion):** The Host Organization must submit Form E3.5 in the ERGANI Information System no later than four (4) working days after the completion of the Internship and send it to the AUTH Internship Office electronically (praktiki@auth.gr), by post, or via the trainee on specific dates set by the AUTH Internship Office. The Host Organization is informed electronically of these dates together with all details regarding the completion of the Internship.
5. **Electronic Internship Evaluation by the Host Organization:** Completed by the Host Organization using a dedicated form available in the AUTH Internship Office Information System after the completion of the Internship.
6. **Electronic Internship Evaluation by the Internship Supervisor:** Completed by the Institutional Internship Supervisor using a dedicated form available in the AUTH Internship Office Information System after the completion of the Internship.
7. **Internship Activity Report:** Submitted by the trainee at the end of the Internship to the Institutional Internship Supervisor and to the School Internship Secretariat, in accordance with the guidelines and specifications set by the School.

- The Internship Coordinator decides on the acceptance or rejection of the submitted documents/supporting materials. In case of rejection, the Internship Committee, upon application by the student concerned, makes a final decision regarding the duration and scope of any additional activities required or overturns the Coordinator's decision and accepts the submitted documents.
- The trainee may not participate in the graduation ceremony prior to completing the Internship, as the Internship constitutes a compulsory course of the Study Programme. However, the student may have fulfilled all other academic requirements but not yet applied for graduation.

Insurance of Students During the Internship In accordance with the applicable legislation, students undertaking an Internship are mandatorily covered by the Electronic National Social Security Fund (e-EFKA), pursuant to Article 10(1) of Law 2217/1994 (A' 83), exclusively against the risk of occupational accident. For healthcare benefits in kind, Article 15(10) of Law 3232/2004 (A' 48) applies.

Coverage through the Internship does not terminate the student's insurance as a dependent of their parents, nor does it affect any personal insurance coverage the student may already hold.

Student Remuneration Any remuneration for the Internship is provided in accordance with the applicable legislation and the Internship Regulations of the Institution.

Facilities for Students with Disabilities and Special Educational Needs In cases where students with disabilities and/or special educational needs express interest in participating in the Internship, applications shall be evaluated using the same selection criteria applied to all applicants. However, if students with disabilities meet the selection criteria but rank among the first reserve candidates, efforts will be made—by way of exception—to accommodate them through a corresponding increase in the number of available Internship positions. In parallel, the Internship Committee, in cooperation with the Internship Office, will seek an appropriate Host Organization capable of accommodating a student with disabilities.

Certificate of Internship Completion Upon completion of the Internship, each trainee receives notification from the AUTH Internship Office to collect a Certificate of Internship Completion.

2. Internship through ERASMUS+ Students selected to participate in an ERASMUS+ Internship programme who wish to have it recognized as equivalent to the Internship described above must follow the instructions provided by the Internship Coordinator regarding the recognition procedure.

ANNEX I

A. PRIMARY AGRICULTURAL SECTOR (PAS)

PAS1. Livestock Units (Animal Fattening, Feeding/Nutrition, Reproduction, Milking, etc.)

PAS2. Apiculture Units (Beekeeping)

PAS3. Nurseries (Production/Trade of Seedlings)

PAS4. Greenhouse Cultivation (Production/Trade of Vegetables and Flowers)

PAS5. Farms (Open-field Cultivation of Field Crops, Trees, Fruits and Vegetables)

PAS6. Industries/Workshops Producing Agricultural Equipment and Inputs (Agricultural Machinery, Irrigation Systems, Fertilizers, Plant Protection Products, etc.)

PAS7. Landscape Architecture Projects (Construction and Maintenance of Parks, Green Areas and Gardens, etc.)

PAS8. Multi-activity Farms (Production of Plant and Animal Products)

B. SECONDARY AGRICULTURAL SECTOR (SAS)

SAS1. Enterprises for Processing and Manufacturing of Agricultural Products (Industries Processing Animal and Plant Products, Food Manufacturing Industries)

SAS2. Fruit and Vegetable Standardization and Packaging Enterprises

C. TERTIARY AGRICULTURAL SECTOR (TAS)

TAS1. Agricultural Education

TAS2. Agricultural Research (Public Agricultural Research Institutions)

TAS3. Support Services of Public Bodies: Crop Improvement and Restructuring Plans, Organic Farming, Plant Protection, Water Management, etc.

TAS4. Agricultural, Agro-technical and Environmental Consulting Offices / Plans for Improvement and Restructuring of Animal and Plant Capital

TAS5. Quality Control Laboratories – Chemical and Microbiological Analyses (Soils, Water, Food, Feed, Plants, Agricultural Products)

TAS6. Certification Bodies (ISO and HACCP) for Processing and Manufacturing Units of Agricultural Products

TAS7. Commercial Enterprises of Agricultural Equipment and Inputs / Agricultural Applications (Plant Production)

TAS8. Commercial Enterprises of Veterinary Products / Animal Feed (Animal Production)

D. VERTICALLY INTEGRATED AGRICULTURAL SECTOR OF PRODUCTION, PROCESSING AND MARKETING OF AGRICULTURAL PRODUCTS (VIAS)

VIAS1. Private Enterprises

VIAS2. Cooperatives, Cooperative Unions, etc.

C. MOBILITY REGULATIONS

The Interdepartmental Foreign-Language Undergraduate Study Programme (IFLUSP) is subject to and applies, mutatis mutandis and in a supplementary manner, the applicable Mobility Regulations and Good Practices for student mobility, as approved by the Senate of the Aristotle University of Thessaloniki (AUTH) (Decision No. 2980/20 & 21-02-2019), as in force from time to time.

The application of the above regulatory framework to the IFLUSP is subject to any specific provisions that may be adopted by the competent inter-School and central governing bodies of the Institution, taking into account the interdepartmental character of the Programme and the need to ensure academic coherence and procedural transparency.

Furthermore, the official website of the Department of European and Educational Programmes of the Institution systematically publishes and updates information, requirements and administrative procedures relating to student mobility, thereby ensuring comprehensive information and equal access for all interested parties.

The Senate of the Aristotle University of Thessaloniki (AUTH), at its meeting No. 2980/20 & 21-02-2019, approved the adoption of good practices for the proper implementation of the ERASMUS+ Programme, which apply, mutatis mutandis, to all cycles of study at AUTH, in accordance with the applicable legislation and the regulations governing each Study Programme.

Procedures are updated and specified in line with the current guidelines of the State Scholarships Foundation (IKY) and are published accordingly by the Department of European and Educational Programmes on its website: <https://eurep.auth.gr/el/students/studies> The above-mentioned Senate Decision of AUTH provides as follows:

A) Outgoing Students

The following provisions aim to safeguard the right of mobile students to the automatic and full recognition of their period of study at a partner institution, provided that they successfully complete their academic obligations.

1. When completing the Learning Agreement for Studies, which takes place prior to the start of mobility, the ECTS Coordinator, acting as the designated representative of the relevant School in accordance with Ministerial Decision No. F.821/2318T/89676/Z1, must ensure that the workload undertaken at the Host Institution — as declared in the corresponding table of the Agreement (hereinafter “Table A”) — amounts to **30 ECTS credits per academic semester**.

For reasons of flexibility and given the heterogeneity of curricula, a deviation from this rule (either positive or negative) is permitted equivalent to the credit value of:

- one (1) course in the case of an academic trimester or semester, and
- two (2) courses in the case of mobility for a full academic year.

2. Recognition of Workload

At the same stage — namely during the completion of the Learning Agreement — the ECTS Coordinator must ensure the full recognition of the aforementioned workload by recording, in the corresponding section of the Agreement (hereinafter “Table B”), the courses and ECTS credits from which the student will be exempted upon successful completion of those listed in Table A.

This procedure must have the approval of the General Assembly (or the equivalent competent body) of the relevant School through an appropriate decision (which may be taken once and apply generally). This decision is recorded in the Application–Declaration submitted by outgoing students to the Department of European and Educational Programs.

3. Categories of Recognition

The above recognition shall be classified into three categories:

I. Compulsory Courses

Compulsory courses are those defined by the curriculum of the relevant School of Aristotle University of Thessaloniki and require substantial equivalence of content between the course offered at the Host Institution and the corresponding course at the home School.

Recognition:

Courses successfully completed abroad shall be recognized under the title of the equivalent course in the home School.

The signed consent of the course instructor is strongly recommended prior to completing the Learning Agreement.

II. Elective Courses (Specialization or General)

Elective courses (whether within or outside a specialization) are defined by the curriculum of the relevant School. Content equivalence is not required; however, the course must fall within the scientific field covered by the School or its academic units.

Recognition:

Courses successfully completed abroad may be recognized either:

- under the title used at the Host Institution, or
- under the title of a corresponding course in the home School, provided that content correspondence exists between the two courses.

The electronic administrative system supports the recognition and integration of exchange-program courses ("Exchange Program Courses") into the curriculum of each School.

Such courses may be included in the Learning Agreement:

- with their specific title (if a corresponding course exists), or
- without a specific title, simply as an "elective course" (specialization or general).

Schools are encouraged to include a sufficient number of elective courses within their curricula. This provides flexibility in recognition procedures and enriches curricula with subjects not currently offered locally but relevant to the academic field.

III. Free Elective Courses

Free elective courses do not require content equivalence nor inclusion within the scientific field of the School or its academic units.

Recognition:

Courses successfully completed abroad in this category shall be recognized under the title used at the Host Institution.

The total number of ECTS credits for free electives declared in the Learning Agreement prior to mobility must not exceed the number permitted by the home curriculum.

Such courses may also be declared without a specific title, simply as "free elective course."

It is recommended that curricula include a small number of free elective credits (e.g., 6–10 ECTS) during future revisions.

4. For courses falling within the scientific field of the relevant School (compulsory or elective), detailed examples of recognition are provided in **Annex I** (attached).

Courses that do not fall within the scientific field of the home School shall be recognized as **free elective courses**, as described above. For the recognition of credits from such courses, the alternative combinations proposed in Annex I shall apply.

It should be noted that during course selection and the preparation of the Learning Agreement, outgoing students are guided by the ECTS Coordinator to ensure that courses outside the scientific field carry a number of ECTS credits that does not exceed the limit permitted by the home curriculum for free elective courses. This will ensure their recognition upon the student's return from the Host Institution.

The inclusion of such courses in curricula may also facilitate the full recognition of the mobility period:

- 60 ECTS credits for one academic year
- 30 ECTS credits for one academic semester
- 20 ECTS credits for one academic trimester

5. In cases where discrepancies exist in the number of ECTS credits between Aristotle University of Thessaloniki and the Host Institution, the **maximum degree of flexibility** should be applied. All possible combinations of recognition should be examined after the student's return, always within the framework of the applicable curriculum regulations.

Every effort must be made to ensure recognition of all credits earned at the Host Institution.

In this process, the principle of **fair recognition**, as defined in the ECTS Users' Guide, must be taken into account. This principle allows a deviation of one (1) or two (2) credits, always in favor of the mobile student.

6. Upon the students' return, **all credits earned through successful completion of the agreed academic obligations must be recognized**.

Recognition shall follow the signed Learning Agreement (initial or amended), which is binding for both the School and Aristotle University of Thessaloniki.

At the end of their studies, students may also make use of the provision of Article 60 of the AUTH Regulations, which states that:

"A student is entitled to be examined in two additional elective courses, the grades of which will replace lower grades of other elective courses."

Under this provision, a student may request — only at the completion of their studies — that two elective courses (including courses successfully completed at the Host Institution) not be counted toward the final degree grade, provided that the required ECTS credits for graduation have been met.

7. Additional ECTS credits from free elective courses exceeding those allowed by the home School's curriculum generally indicate an inappropriate course selection in the Learning Agreement, unless the Host Institution offers no alternative course options for Erasmus students.

In such cases, ECTS Coordinators must reassess the curriculum of the partner institution. If it does not meet the necessary conditions for recognition for undergraduate mobile students, the following options may be considered:

- a) Limiting the bilateral agreement to second- and third-cycle mobility (Master's and Doctoral levels)
- b) Limiting the agreement to staff mobility only
- c) Terminating the bilateral agreement with the institution

The Department of European and Educational Programs annually invites Schools to evaluate their bilateral agreements. The availability of appropriate courses for students constitutes a major evaluation criterion and may justify the modification or termination of an agreement.

8. In light of the above, ECTS Coordinators are advised to inform students about Erasmus+ mobility opportunities from the early years of study.

Early guidance enables students to:

- plan appropriate course selections at Host Institutions
- understand the categories of courses available for recognition
- ensure they meet the required number of ECTS credits for mobility

9. The role of the ECTS Coordinator, as defined by Ministerial Decision No. F.821/2318T/89676/Z1, is of critical importance, as it ensures the proper implementation of the Erasmus+ Program at the School and, by extension, at Aristotle University of Thessaloniki.

This role is directly linked to guaranteeing the full recognition of the study period at the Host Institution.

For this reason:

- Frequent changes of ECTS Coordinator should be avoided, in order to ensure continuity and effective management of student mobility.
- It is recommended that the ECTS Coordinator be a member of the School's Curriculum Committee, due to the strong interconnection between mobility issues and curricula.
- It is also recommended that the ECTS Coordinator be a member of the School's General Assembly, so as to inform members on Erasmus matters.

These issues concern a large number of students (at least 600 per year) who rely on the expertise and guidance of the ECTS Coordinator and are entitled to full recognition of their studies abroad.

B) Incoming Students

1. It is necessary to ensure that incoming mobile students possess an adequate level of proficiency in the language of instruction, in accordance with the requirements of the relevant bilateral agreement.

The mandatory submission of a recognized language certificate is recommended (where required by the Schools), provided that this obligation is explicitly included in the annex of the bilateral agreement.

2. The Transcript of Records of incoming students must be sent to their Home Institutions no later than five (5) weeks after the end of the mobility period. Failure to comply with this obligation may constitute grounds for termination of cooperation between the two Institutions. For this reason, the ECTS Coordinator, in collaboration with the administrative staff of the Schools, must ensure the timely dispatch of the incoming students' transcripts.

Note:

The terms "student(s)" and "professor(s)" are used in a gender-neutral sense and refer to persons of all genders.

D. THESIS REGULATION

Regulation on Thesis Preparation — as approved by the Assembly of the School (No. 1031/25-9-2025)
for the preparation of theses at the School of Agriculture

Diploma Thesis (Integrated Master's Thesis)

1. The Diploma Thesis constitutes an integral component of the Programme of Studies. It is mandatory for all students and must be research-based.
Each thesis is supervised by one Supervisor and evaluated by a three-member committee

(the Supervisor and two additional faculty members) and carries 30 ECTS credits.

Supervision by a member of the category Laboratory Teaching Staff (EDIP) is also permitted, subject to the conditions specified in paragraph 13 below.

2. At the beginning of each academic year, the research interests (and possible thesis topics) of each faculty member are posted and updated according to their fields of expertise, in order to assist students in selecting a topic and Supervisor.
3. In consultation with faculty members, students submit to the Secretariat of the JEUPS the name of their proposed Supervisor from the beginning of the 8th semester until the end of the 9th semester by completing the relevant topic-assignment form.
4. The Secretariat is responsible for ensuring a fair and balanced distribution of students among faculty members (minimum and maximum number of students per faculty member), taking into account their overall workload (administrative duties, teaching responsibilities, etc.).
5. A thesis may be conducted in collaboration with faculty members from another School of AUTH, provided that the topic is demonstrably closely related to the academic field of the collaborating faculty member and that their contribution addresses aspects that cannot be covered by faculty members of the School.
6. The thesis topic is determined individually for each student, even if the broader research field is common.

For example, a shared experimental procedure may be used, but different research questions and writing approaches must be developed. Similarly, the same questionnaire or case study may be employed, provided that data analysis, interpretation, and methodological approach differ according to the specific research question.

7. The duration of thesis preparation is one academic semester and may be extended upon a documented recommendation by the Supervisor, in consultation with the student, and following approval by the Programme Committee.
8. Upon completion of the thesis, the Supervisor appoints the other two members of the three-member examination committee at least twenty (20) days prior to the thesis evaluation/presentation.
9. The thesis evaluation may take the form of a presentation (10–15 minutes) before the three-member committee, other faculty members, and students of the JEUPS.
10. For thesis writing, the student must follow the guidelines and formatting template (specifications) posted on the official website of the JEUPS.
11. Under the responsibility of the Supervisor, the student submits both a printed and an electronic copy of the thesis to the Secretariat of the JEUPS.

A Thesis Registry Book is maintained, in which each submission receives a protocol number.

Submitted theses are deposited in the School Library, making them accessible to faculty members and students both before and after examination.

12. The thesis title is submitted to the Secretariat together with the grade so that it can be recorded in the student's Transcript of Records and Diploma Supplement.
13. Members of the Laboratory Teaching Staff (EDIP) may supervise theses under the following conditions: 1) Possession of a doctoral degree, 2) The thesis topic must be directly related to the EDIP member's field of expertise 3) Documented participation in research projects, publications, conferences, or other scientific activities within the past five years related to the thesis subject 4) Responsibility for laboratory teaching and independent theoretical instruction in the course from which the thesis topic derives, 5) Positive evaluation of teaching performance by students and/or a positive assessment by the Sector or School Assembly, 6) The three-member committee must include at least two faculty members (DEP)

General guidelines for thesis preparation and writing are provided in Appendix A of this Regulation.

Appendix A: Standard Structure of the Diploma Thesis

1. The standard structure of a Diploma Thesis, following the conventions of scientific research papers, typically includes the following main sections: Title in Greek, Title in English, Abstract in Greek, Abstract in English, Introduction, Literature Review, Methodology, Research Results, Discussion, and Conclusions. Detailed guidance regarding the length, structure, and content of each section is provided below.

2. The length of the Diploma Thesis should comply with the specifications set by the Supervisor. The thesis cover page must include the following essential information: the Higher Education Institution, the Faculty, the School, and the Specialization/Division in which the thesis was conducted; the thesis title; the student's name and Student Registration Number; the name and academic rank of the Supervisor; and the date of submission. The official template required by the Coordinating School must be followed to ensure uniformity. The cover page must not contain images, photographs, diagrams, or similar elements.
3. The cover page is followed by an inner title page containing the same information, and on a separate page optional acknowledgements. Next comes the abstract, which is arguably the most important section of the thesis and the part most frequently read.
4. The Diploma Thesis must include an Abstract in English (Abstract or Summary), as well as a Table of Contents presenting in detail the chapters, sections, and subsections of the thesis together with their corresponding page numbers, fully aligned. Subsequently, and optionally — since the use of tables, figures, diagrams, etc. is not mandatory and may not be appropriate for all thesis topics — Lists of Tables, Figures, Diagrams, and Images may be included.
5. Introduction: The main body of the thesis begins with the development of its core sections. The Introduction is particularly important, as it introduces the reader to the scientific field of the thesis and briefly presents the approach adopted to address its objectives. Specifically, the Introduction should include (in the following order): a clear definition of the problem examined by the thesis; the existing knowledge related to this problem; the purpose, objectives, and necessity of the study; and a concise overview of the approach adopted, including the methodology, which will be presented in detail in a subsequent chapter. Finally, it should include a brief overview of the chapters that follow, explaining the structure of the thesis in a reader-friendly manner.
6. Literature Review: The Literature Review follows, in which the student situates the research problem within a broader theoretical framework and, by examining the relevant existing literature, presents the historical development of research on the topic and the current state of knowledge. The purpose of the literature review is to:
 - provide definitions and explain specialized terms used in the thesis
 - analyze how the research problem fits within contemporary scholarly literature
 - demonstrate the significance of the research problem
 - show that the problem has not been studied or has not been sufficiently studied
 - explain how the thesis addresses this specific problem

The selection of literature is a critical element affecting the coherence and quality of the thesis. Therefore, sources should be selected systematically and as comprehensively as possible to cover all aspects of the research problem. The extent of the literature review, its sub-sections, and its internal organization depend on the nature of the topic and are determined in consultation with the Supervisor.

7. Research – Research Methodology

This chapter provides a detailed description of the research design or experiment conducted, as well as the methods used for the experimental procedure, data collection, and data analysis, supported by appropriate scientific references from similar studies that employed these methods. Specifically, this chapter clarifies: the research or experimental process followed; a detailed description of the study setting (research area or case study) and the time frame during which the research was conducted; the conditions that made the setting suitable; the selection process; and the key characteristics of the research sample (where sampling is applied).

8. Results – Discussion

This chapter presents the research findings in detail using appropriate tables and figures derived from the conducted study. It does not merely report results but also includes substantive interpretation and discussion. Accordingly, it presents the processed results, their scientific explanation, and their relationship to previous research studies. The chapter concludes with a necessary synthesis and final commentary on the findings. This section constitutes the most essential part of the Diploma Thesis, where the student presents the entirety of their work and on the basis of which the success of the thesis is evaluated.

9. Conclusions

This chapter presents the main conclusions of the thesis, as derived from the development of the topic and the evaluation of the research results. The conclusions synthesize the findings in a clear and concise manner, providing explicit answers to the research questions stated in the Introduction. It includes the final integration of the Literature Review and the empirical component of the research. It also outlines directions for future research, discusses the limitations of the analysis and of the thesis as a whole, and highlights elements of innovation, where applicable.

10. References and Appendices

This section includes the bibliography of scientific articles, academic books, and any other sources cited in the Diploma Thesis (including grey literature, such as unpublished undergraduate, postgraduate, or doctoral theses), separated into Greek and foreign-language sources and listed alphabetically, in accordance with the APA (American Psychological Association) style (<https://apastyle.apa.org/>).

The Appendices present material that is considered useful but should not appear in the main body of the thesis (e.g., photographs, questionnaires, analytical tables, supplementary data), as it may disrupt the flow of the text.

11. General Formatting and Writing Guidelines for the Diploma Thesis

- The text must be consistent in terms of font, paragraph justification, line spacing, paragraph formatting, font size, and page dimensions (paper size and margins).
- Equations:
Equations must be written uniformly throughout the text. Font size must be consistent. Equations should be aligned to the left, with numbering aligned to the right, following the chapter numbering format (e.g., 2.1, 2.2). They should be referred to in the text as “relations,” not “equations.” After presenting a relation, each variable must be explained, for example:

$$Q = V \times A \quad (2.2)$$

where Q = discharge (m^3/s), V = flow velocity (m/s), and A = cross-sectional area (m^2).

- Figures:
Figures should be centered on the page and placed as close as possible to the relevant text. A caption must appear below the figure in the format: “Figure 3.1 ...”. All figures must be referenced in the text using the phrase “as shown in Figure 3.1”. Numbering follows the same system as equations.
- Tables:
Tables must have a consistent format. The table title should appear above the table in the format: “Table 3.1 ...”. All tables must be referenced in the text using the phrase “as presented in Table 4.1”. Numbering follows the same system as equations.
- References in Text:
Every source cited in the text must appear in the References section, and every source listed in the References must be cited in the text. Citation style:

— One author: (Dimitriou, 2004)

— Two authors: (Dimitriou & Georgiou, 2004)

— More than two authors: (Georgiou et al., 2004)

Citations should be listed chronologically from oldest to most recent (e.g., Georgiou 1997; Kotsopoulos et al. 2002; Allen et al. 2007).

- Reference List:
 - Strict alphabetical order
 - Greek-language sources first, followed by foreign-language sources
 - Author names listed as in the original publication and in nominative form
 - Examples for journals, books, conference proceedings, etc., are available from the Central Library of AUTH.
- Headings:
Headings are left-aligned as follows:
 - 1.1. INTRODUCTION
 - 1.2.3. Rainfall Height

The first-level heading is in uppercase; subsequent levels are in lowercase. Font size remains the same but headings are in bold. Leave one blank line before the heading and none after.

- Leave one blank line before and after equations, tables, and figures.
- Writing must be in the third person (e.g., “Reference evapotranspiration is calculated...” not “We calculate...”).
- Symbols must be used consistently (e.g., velocity denoted as V , not alternately v or u).
- Always proofread printed text rather than only reviewing on screen.
- Tables should appear on a single page where possible. If continued on the next page, indicate “(continued)” and repeat the title, e.g.:
Table 3.1 Rainfall ... (continued)
- Care must be taken with the numbering of equations, tables, and figures.
- Particular attention must be paid to grammar, syntax, and spelling. Errors are unacceptable, especially given modern word-processing tools. Proper syntax ensures clarity and comprehension for all readers.