

University of Thessaly – School of Technology

**Department of Forestry, Wood
Sciences & Design**



**B5. Four-year business plan of the academic unit
and the Study Program**

B5. Four-year operational plan of the academic unit and the Study Program [to present the internal organizational and functional composition of the Academic Unit, the activity units and the forecast of the key sizes (students, teaching and administrative staff, funding, infrastructure) and their correlation in a specific period of time per year in the form of the 4-year academic, administrative and financial planning of the Department].

Contents

1. The academic profile and mission of the FWSD Department	3
1.1 General	3
1.2 Vision of the Department.....	3
1.3 Values of the Department.....	3
1.4 The structure of studies	3
1.5 Postgraduate studies and research.....	4
2. Facilities and laboratory equipment of the FWSD Department.....	6
2.1 Facilities and Equipment.....	6
2.2 Laboratory equipment	8
3. Staff	9
4. Organs of the Department	10
5. Students.....	11
6. PESTEL and SWOT Analysis.....	12
6.1 PESTEL Analysis	12
6.2 SWOT Analysis.....	14
7. Budget, staff and admitted students.....	18
7.1 Department of Forestry, Wood Sciences & Design Budget.....	18
7.2 Anticipation of the evolution of the number of personnel	19
7.3 Forecast for number of admitted students.....	20

1. The academic profile and mission of the FWSD Department

1.1 General

The Department of Forestry, Wood Sciences and Design (FWSD Department) is a new prototype Department for the academic data of the country created in 2019 at the University of Thessaly (UTH) in application of Law 4589/2019. The undergraduate students of the Department follow an innovative Undergraduate Study Program (USP), lasting 5 years, which upon completion leads to the awarding of a degree in the specialty of Forester, Wood Scientist & Product Designer. Undergraduate Study Program provides vertically integrated knowledge from the sustainable management of the natural environment, to the utilization of its main products, with an emphasis on wood and its uses, but also on product design. This very hierarchical structure of knowledge is an important competitive advantage in a labor market that requires scientists with the best academic background, acquisition of valuable skills and integrated thinking.

1.2 Vision of the Department

The vision of the FWSD Department according to the 18/4-3-2020 (item 2) decision of the FWSD Assembly is: "To make the (Department) an island of excellence in the higher education of the country, with a substantial contribution to research, knowledge production and education, as well as a fundamental link of dynamic interconnection with the value chain of forests and their infrastructure, the natural environment, the wood-furniture industry and society, for sustainable development and social well-being".

1.3 Values of the Department

The 13 basic principles that govern the operation of the Department according to the 18/4-3-2020 (topic 2) decision of the FWSD Assembly are: Integrity, Respect, Cooperation, Academic freedom, Extroversion, Justice, Innovation, Excellence, Offer and connection with society, Merit, Impartiality, Transparency and Democracy and Preserving the prestige of the academic status.

1.4 The structure of studies

The Department of Forestry, Wood Sciences & Design (FWSD) offers an innovative 5-year undergraduate study program, which upon completion leads to the award of a single and indivisible master's degree (integrated master) in accordance with Law No. 233/ 29.5.2020 (item 4.7) decision of the Senate of the University of Thessaly and are expected to be approved by the Ministry of Education and Religious Affairs after the completion of the USP certification process.

The FWSD Department operates with 2 study directions (Natural Environmental Management and Wood Sciences and Design) from the 7th semester onwards. The Undergraduate Study Program provides its students, in addition to the compulsory courses, **a wide variety of elective courses aimed at providing advanced knowledge in specific subjects of forestry and the natural environment in general, the utilization of wood, furniture design and other subjects mainly based on wood, administration, organization, economy and the introduction of modern technology in organizations and businesses that find direct application in the labor market.**

The students attend a common study program in the first 3 years (6 semesters) and in the 7th semester they choose one of the 2 directions of the Department: a) Direction of Natural Environmental Management or that of b) Direction of Wood Sciences and Design.

The first 6 semesters include 6 compulsory courses per semester, common to all students. In each of the 2 directions, 4 compulsory courses are included for the semesters: 7th, 8th and 3 for the 9th semester, while in the 9th and 10th semesters the students carry out their thesis and their two-month internship (compulsory). Compulsory internship takes place in both the 6th and 8th semesters (1 month each time). Each of the 2 directions includes 5 elective courses for the semesters: 7th, 8th & 9th. During the semesters of his major, the student must attend a total of 5 courses in the 7th and 9th semesters and six (6) in the 8th semester. The student has the possibility to take his elective courses either from the direction he has declared, or from the other direction, as well as he has the right to change direction during his studies up to the 8th semester of studies.

The courses and the categories to which they belong, their distribution in semesters and their correspondence with the European Credit Transfer System (ECTS), are shown in Table 2 below. In detail the curriculum, content, objectives, learning outcomes and the teaching method of the courses are posted on the website of the Department at the link <https://fwsd.uth.gr/programm/>, in the Department's Undergraduate Studies Regulations, but also in the Department's Study Guide (https://fwsd.uth.gr/wp-content/uploads/2020/12/odigos_spoudwn20-21.pdf).

In order to obtain the degree of the FWSD Department, **it is mandatory to prepare a Research Thesis under the guidance of a Supervising Professor**, who is a member of the Department's educational staff. The Research Thesis participates in all the teaching units of the USP with 30 ECTS and is prepared according to the instructions of the "Regulations for the Preparation of Undergraduate Thesis", of the Department of Forestry, Wood Sciences and Design of the University of Thessaly (<https://fwsd.uth.gr/wp-content/uploads/2020/03/kanonismos-ptyxiakis-ergasias.pdf>).

Internship is an important part of Higher Education, as it is a way of connecting theory with practice and actively contributes both to the better utilization of the knowledge and skills acquired by students during their studies, and to the easier and more beneficial integration of graduates into the labor market. The Internship Program aims, through the placement of students in institutions, organizations and businesses, to consolidate the cooperation between the Academic Departments and the Services and the business environment. The details are referred to in the Practice Regulations of the FWSD Department (<https://fwsd.uth.gr/wp-content/uploads/2020/03/kanonismos-praktikis-askisis.pdf>).

1.5 Postgraduate studies and research

Research

The Department of Forestry, Wood Sciences and Design has set as a general research goal and priority, the further promotion of the scientifically documented contribution of forests to climate neutrality and resilience, biodiversity and sustainable development and the interconnection of the research developed in the Department with the real economy and society.

This interconnection builds on the opportunities provided by research developed in the Department of Forestry, Wood Sciences and Design to enhance and create synergies between environmental, social and economic objectives for forests and to put human economic activities on a path of sustainability. This element is also reflected in the number and type of research projects implemented/implemented by the staff of the Department (<https://fwsd.uth.gr/ereynitika/>), the published research project (<https://fwsd.uth.gr/diethni-periodika/>, <https://fwsd.uth.gr/biblia/>, <https://fwsd.uth.gr/sillogikoi-tomoi/>, <https://fwsd.uth.gr/diethni-synedria/>), the international distinctions and excellence of the Department's research potential (<https://fwsd.uth.gr/diakriseis-aristeia/>), the state-of-the-art laboratory equipment unique at the level of Southeast Europe in several cases (<https://fwsd.uth.gr/wp-content/uploads/2020/03/e3oplismos.pdf>), as well as the 7856 references to published work

of members of the Department (until 7.3.2021 according to google scholar, <https://fwsd.uth.gr/anagnorisi-ergou-anafores/>).

The Department of Forestry, Wood Sciences and Design and its members develop collaborations with a very large number of other Universities, research centers, organizations and businesses in Greece and abroad in the context of implementing research projects, providing services and fulfilling their social role. It is worth noting that a significant number of graduates of the two former TEI Departments that form the basis for the creation of the new Department work in companies and organizations of the external element which demonstrates the extroversion and recognition of the research, the quality of education and the knowledge provided by the Department.

Finally, in the Department of Forestry, Wood Sciences and Design, there is also the research "Institute of wood - furniture and wooden packaging" (Government Gazette 4589/29-1-2019, vol. A'), within the framework of the University Research Innovation and Development Center " IASON" of UTH with objectives: a) the conduct of basic and applied research, b) the utilization of research results for the benefit of Greek society, c) the contribution to the specialization of young scientists, d) the provision of services to public and private bodies, e) education and internship, f) mediation between the public and private sectors for the development of research units in companies.

The Department of Forestry, Wood Sciences and Design, successfully operates two (2) Master's Degree Programs (MSc), as well as a Doctoral Degree Program. More specifically:

A. MSc in Advanced Design, Technology & Management of Wooden Products (<http://msc-wood.fwsd.uth.gr/>), has three (3) specializations: a) Product Design, b) Technology and Construction and c) Management and Marketing. The Msc, which was re-established in accordance with Official Gazette 2903/19.7.2018 t'B, is successfully operated by academic year 2015-2016 at the former TEI Department of Design and Technology of Wood and Furniture with its original title "Advanced Methods of Manufacturing Wood Products" and is the only master's degree that operates in Greek Higher Education and specializes in the subjects of: Wooden constructions, innovative materials, modern methods design, CAD-CAM systems, intelligent systems, marketing, costing, organization, innovation and entrepreneurship in the field of wood and furniture, gaining impressions and recognition from the first years of its operation.

B. Msc in Multifunctional Management of Natural Ecosystems and Bio-economy (<http://msc-forest.fwsd.uth.gr/>) was established by Official Gazette 3685/3-9-2020, section B'. The subjects of the Master's Program entitled: "Multifunctional Management of Natural Ecosystems and Bio-economy", are an upgraded continuation of the subjects of the Department of Forestry, Wood Sciences & Design and specifically those that have been determined in accordance with decision no. 215/17.5.2019 of the Senate of the University of Thessaly and are: Forestry and Wood Sciences and Design and especially the direction of Natural Environmental Management. Based on the developments and requirements of the market, of science in general, but also of the National Strategy for Forests (Y.A. 170195/758, Official Gazette 5351/B/28-11-2018) the subjects covered by the due to MSc are those that are internationally recognized and refer to a) Multifunctional Management of Forest Ecosystems, and b) Bioeconomy.

Doctoral Studies

The Department of Forestry, Wood Sciences and Design, the first of the new Departments of the University of Thessaly, is organizing a Doctoral Studies program, starting in 2019 (Government Gazette 4259/20-11-2019, vol. B'). According to the Doctoral Studies Regulations of the Department (<https://fwsd.uth.gr/wp->

content/uploads/2020/03/FEK_Kanonismou_didaktorikwn_spoudwn_DEXYS.pdf): The structure, organization, operation and evaluation of the Doctoral Studies Program of the Department of Forestry, Wood Sciences and Design (FWSD) of the University of Thessaly (UTH) is governed by the current legislation (law 4485/2017) and by the provisions of the general Regulations of Postgraduate Studies of UTH. **According to winter semester of 2021 in the Department of Forestry, Wood Sciences and Design, 12 PhD Candidates are studying.**

Postdoctoral Studies

In the Department of Forestry, Wood Sciences & Design, it provides scientists with a doctorate degree, the possibility of conducting postdoctoral research in areas that fall within the research interests and subject areas of the Department, in accordance with the applicable legislation, the written provisions and the applicable Postdoctoral Research Regulations at the University of Thessaly (Government Gazette 2992/20.7.2020, part B) https://www.uth.gr/sites/default/files/contents/2020/FEK_2992_METADIDAKTORIKI%20EREYNA_320952_128.pdf.

2. Facilities and laboratory equipment of the FWSD Department

2.1 Facilities and Equipment

The FWSD Department has excellent infrastructure and modern building facilities. Specifically, it is housed in **three** buildings in which there are: 3 auditoriums, 20 workshop and teaching rooms, 45 offices and auxiliary spaces. The total area of the covered areas is 6,000 sq.m., spread over an area of 48 acres.

The campus of UTH of Karditsa has fully staffed supporting infrastructures such as:

- Student residences for 100 students, (Responsible 1 administrative employee Administrative)
- Modern library, (2 permanent employee librarians)
- Student club (Responsible 1 administrative employee Administrative)
- ELKE office (2 Administrative staff)
- Internship Office (1 Finance employee with a fixed-term contract)
- Institute of wood - furniture and wooden packaging
- Other infrastructure

In total, the above infrastructures are supported by seven (7) permanent employees with Fixed Term Contracts.

The FWSD Department has excellent infrastructure and building facilities at the Karditsa campus, i.e. (<https://fwsd.uth.gr/egkatastaseis-2/>):

- 3 Auditoriums (1 in Building C and 2 in Building A), with a total capacity of 750 seats,
- 20 laboratory and teaching rooms, in all three buildings with a total capacity of 600 seats,
- 45 offices for faculty members, administrative staff, associates,
- the total area of the Department's facilities amounts to 6000 sq.m., spread over an area of 48 acres.
- There is a branch of the Department of Central Library Branch Operations and Publications Support in Karditsa (more details on the relevant website of the University of Thessaly: <http://www.lib.uth.gr/LWS/el/ls/loc.asp#link7a>). In the campus library there are ten (10) titles of foreign-language magazines and four (4) titles of Greek-language magazines and a total of 120 volumes. Subscriptions for Greek-language journals have been started since 1991 and for foreign languages since 1994 until 2018. Also, there is a sufficient number of publications related to the subjects of the FWSD Department, which publications cover the needs of teaching and research.
- operates a student club to feed more than 500 students. The application is submitted

electronically on the UTH platform <https://merimna.uth.gr>. More details on the relevant website of the University of Thessaly: <https://www.uth.gr/zoi/foititiki-merimna/sitisi>,

- operates an internship office, to serve the students of the Department,
- there is health care for all students of the Department. More details on the relevant website of the University of Thessaly: <https://www.uth.gr/zoi/foititiki-merimna/ygeionomiki-perithalpsi>.
- student accommodation at the Karditsa Campus is ensured in 104 beds. The criterion for the selection and accommodation of the students is their financial and family situation. Health reasons as well as other parameters affecting the family's financial situation are also considered. For more information, those interested can contact the Independent Boarding and Housing Department in Karditsa. More details on the relevant website of the University of Thessaly: <https://www.uth.gr/zoi/foititiki-merimna/stegasi-foititon>

2.2 Laboratory equipment

The Department has the following nine (9) research laboratories for research/scientific purposes and to support courses in the study programs (undergraduate, postgraduate), as well as doctoral and postdoctoral research:

1. Wood Science & Technology Laboratory (ΦΕΚ Αρ. 4928/Τ. Β'/09-11-2020)
2. Laboratory of Technology & Quality Control of Furniture & Wood (ΦΕΚ Αρ. 4931/Τ. Β'/09-11-2020)
3. Product Design Laboratory & Industrial Production (ΦΕΚ Αρ. 5053/Τ.Β'/13.11.2020)
4. Laboratory of Forest Economics, Marketing, Innovation & Entrepreneurship (ΦΕΚ Αρ. 4931/Τ.Β'/09-11-2020)
5. Laboratory of Applied Informatics & Digital Technologies (ΦΕΚ Αρ. 596/Τ.Β'/11-02-2021)
6. Laboratory of Pasture Farming & Management Laboratory of Protected Areas (ΦΕΚ Αρ. 4993/Τ.Β'/12.11.2020)
7. Wildlife Management Laboratory (ΦΕΚ Αρ. 4928/Τ.Β'/09-11-2020)
8. Laboratory of Forest Botany & Silviculture
9. Forest Road Laboratory & Forestry Workshop (ΦΕΚ Αρ. 4928/Τ.Β'/09-11-2020)

The laboratory and research equipment are exemplary, thus ensuring the perfect transfer of cutting-edge knowledge to the subjects treated by the Department. The Department's equipment is also offered in the Master's Programs and is very modern, worth more than €4,500,000 and includes:

- quality control (QC) multi-device for frames (wooden windows and doors), loading device for ready-made frames, tests for water permeability, water tightness, wind resistance, etc.
- certified device for CE tests (worth €300,000),
- modern device for testing strength in wood and composite materials (worth €80,000),
- robotic arm, furniture inspection tests and automatic processing (worth €80,000),
- modern individual absorption device (worth €60,000),
- Xenon climate chamber, accelerated aging tests (worth €50,000),
- 3D 3D printer – testing and prototyping objects (worth €35,000),
- 3D Laser Scanner, CNC machine tool, articulated arms design in CAD,
- as well as a device for creating objects from Vacuum Casting technology plastic and finally
- the equipment of the CAD and IT Applications laboratory of the Department includes a DELL server 2950, Xerox Workcentre 7545 color multi-function machines, HP DesignJet T1200 44-inch plotter, as well as 60 workstations equipped with PCs with Intel I7 processors, 8-16GB RAM, SSD HD, and 21-inch screens (total value €70,000).

Details of the Department's laboratory equipment are also available at the link <https://fwsd.uth.gr/wp-content/uploads/2020/03/e3oplismos.pdf> located on the website of the FWSD Department.



Part of the laboratory equipment of the FWSD Department

3. Staff

The administrative and other staff of the FWSD Department consists of:

- 1 permanent Administrative - Accounting employee (Head of the Secretariat of the FWSD Department)
- 1 administrative-accounting department employee with a fixed-term contract (Department Secretariat)
- 3 Laboratory Teaching members to support the work of the Department's Laboratories and teaching
- 3 Laboratory Technical members to support the work of the Department's Laboratories

All the knowledge subjects of the Department are treated by 25 faculty members, Laboratory Teaching members, Laboratory Technical Members and Scientific Associates (PD 407/1980). Of these, 16 teachers are faculty members. It is planned to announce the position of a member of the EIB.

Teaching and research staff of the Department per Academic Year

	PROFESSORS	ASSOCIATE PROFESSORS	ASSISTANT PROFESSORS	LABORATORY TEACHING STAFF	LABORATORY TECHNICAL STAFF	COWORKERS	TOTAL
2019 - 2020	7	2	3	3	4	4	23
2020 - 2021	10	1	6	4	3	4	28
2021 - 2022	10	2	4	3	3	3	25

Also, the Department employs two (2) administrative employees in Secretarial support.

4. Organs of the Department

The organs of the Department are the Assembly of the Department, the President of the Department and the Deputy President of the Department. The Department operates a Secretariat, which operates in accordance with case a of par. 2 of article 54 of Law 4178/2013 and provides administrative and secretarial support to its educational and research work.

At the top of the organizational chart is the Department Assembly and the Department President. Next is the Deputy President and Internal Evaluation Team. The Secretariat of the Department administratively supports the entire work of the Department. Then the organizational chart of the Department presents the four (4) study cycles in detail. The first study cycle includes the Internship, the Qualifying Examinations Committee, the Undergraduate Curriculum Committee, the Committee to Avoid Harassment Issues and others.

5. Students

The admitted students of the Department of Forestry, Wood Sciences and Design, the last 3 acad. years of its operation, according to the official figures of the Ministry of Education were:

<u>Academic Year 2019-2020</u>	<u>Academic Year 2020-2021</u>	<u>Academic Year 2021-2022</u>
1. ΓΕΛ 2019: 188	1.ΓΕΛ ΝΕΟ 2020: 170	1.ΓΕΛ ΝΕΟ 2021: 185
2. ΓΕΛ 10% 2017: 8	2.ΓΕΛ ΠΑΛΑΙΟ 2020: 18	2.ΓΕΛ 10% 2019: 8
3. ΓΕΛ 10% 2018: 13	3.ΓΕΛ 10% 2018: 8	3.ΓΕΛ ΝΕΟ 10% 2020: 11
4. ΕΠΑΛ 2019: 12	4.ΓΕΛ 10% 2019: 13	4.ΓΕΛ ΠΑΛΑΙΟ 10% 2020: 2
5. ΕΠΑΛ 10%: 2	5.ΕΠΑΛ 2020: 25	5.ΕΠΑΛ 2021: 25
6. Foreign Students: 4	6.ΕΠΑΛ 10% 2018: 1	6.ΕΠΑΛ 10% 2019: 1
Total: 227	7.ΕΠΑΛ 10% 2019: 1	7.ΕΠΑΛ 10% 2020: 1
	8.Foreign Students: 3	8.Foreign Students: 7
	Total: 239	Total: 240

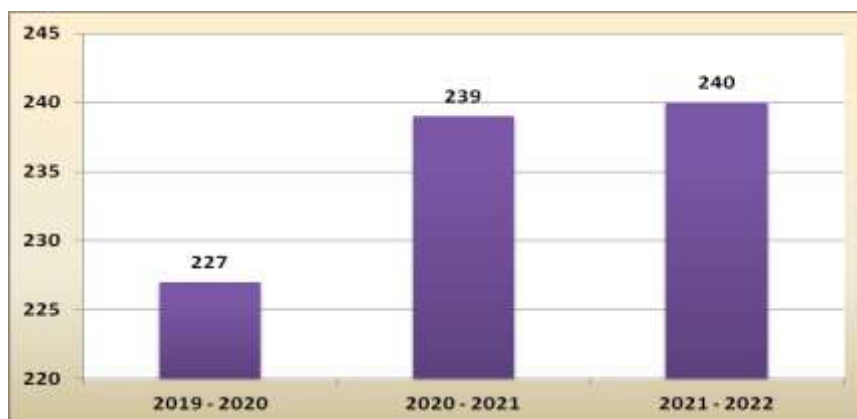
The above data show the consistent preference of the candidates in the Department of Forestry, Wood Sciences and Design and the monitoring of the PPS that it offers based on its physiognomy, its subject, its goals, its structure and organization, the intended learning outcomes and the professional employment prospects of its graduates in a diversified and demanding labor market. It is worth noting that for the acad. year 2021-2022 – first year of application of the E.B.E. – the Department of Forestry, Wood Sciences and Design, succeeded in filling all the offered positions set by the Ministry of Education. Based on the above figures, it is estimated that the admissions to the Department will range at the same levels from 220-240 new students.

According to Official Gazette 2549/25.06.2020, Issue B', the respective University Departments with the right to transfer from/to the Department of Forestry, Wood Sciences and Design, for the academic. Year 2020 - 2021 are the:

- Forestry and Natural Environment Management of the Agricultural University of Athens based in Karpenissi
- Forestry and Natural Environment of the International University of Greece based in Drama

but which were chosen from a very small number of candidates.

Number of students of the FWSD Department per Academic Year



The number of admitted students per year is expected to stabilize in the coming years due to the EBE (with a coefficient of 0.8) and to cover all the offered places. There is the possibility to increase the percentage of students who complete their studies within five years or at the latest in n+2 years. This can be achieved by encouraging students to make use of all learning resources, strengthening the institution of the Study Advisor and organizing educational activities to strengthen students' interest in completing their studies on time. It is also proposed to create a database of graduates and to contribute to the development of the community of future graduates of the Department. The cooperation with the student associations of the former TEI of Thessaly and the communication with the graduates of these Departments can also contribute to this.

The development of the education model of the FWSD Department, in the next four years, is necessary (a) to aim at increasing the satisfaction of the involved agencies and to be documented through quality management and the friendly cooperation with the students' association of the FWSD Department as well as with the graduates of the Departments from the former TEI of Thessaly and (b) to be flexible and adapt to the needs of the local and national society.

6. PESTEL and SWOT Analysis

6.1 PESTEL Analysis

This analysis usually includes the following components, which in the context of the FWSD Department are described as follows:

Political component

- **Change of educational policy:** A very common phenomenon in the Greek reality is the attempt to change the educational policy by the administration of the respective Ministry of Education. The result of this is that there is a continuous instability in the education system, with direct effects on the strategic planning of university departments.
- **Public funding:** The amount of public higher education funding noted in the state budget is often based on political philosophies rather than technologically rational criteria.
- **Number of undergraduate students:** Each Government imposes an increase in the number of undergraduate students in Universities without following rational criteria (e.g., infrastructure in public universities, number of students admitted to universities¹, ratio of teachers/ students or the corresponding transfer of students' credits for the cases of their transfers from other Universities).

Economic component

- **Economic Recession and Pandemic:** The effects of the recent economic recession observed in the country for many years affects decision-making both at the macro-economic level (e.g., funding of Higher Education) and at the micro-economic level (e.g., family budget). Also, the negative effects of the COVID-19 pandemic significantly affected the smooth conduct of the educational activity of the FWSD Department and the UTH as a whole, however, the Department and its staff responded and adapted very quickly to the new requirements (distance learning, health protocols, staff vaccination, etc.).
- **Student budget:** The student budget mainly depends on the family income. This is a problem, as the limited budget often affects the student's choices regarding the subject of study he/she wants to follow and his/her choice regarding the distance from the family's home to the University he/she wants to enter. Also due to financial problems faced by several potential graduate students, they request their admission with financial criteria activating exemptions or reduction of their tuition fees which can jeopardize the financing and operation of the MSc offered by the department.
- **Job market:** For many students, the ultimate goal of higher education is to find a well-paying post-graduation job that matches their interests. However, considering that the labor market in Greece is not strong and promising, compared to the labor markets of other member states of the European Union, many students tend to turn to other countries because they may have better

chances of employment after obtaining a degree, they gain experience of the international labor market and potentially better paid career prospects. The prospects of the graduates of the FWSD Department in the labor market are judged to be positive - very positive as there is a very high demand from private sector businesses in the wood and furniture sectors in Greece, Cyprus and other countries, as well as in employment in organizations and businesses in the subjects of Forest Management and the natural environment. A positive catalytic role is expected to be played by securing the professional rights of FWSD graduates in the next stage.

Social component

- **Willingness to study:** Education is one of the basic values of the Greek family and is considered a key "vehicle" for social advancement. Higher education is considered an important tool for success in the modern world.
- **Professional titles:** After the granting of the right to award equal professional titles by Private Colleges, citizens' interest in these colleges may increase, considering that admission to these private educational institutions will be easier than it is to universities. Also, professional certifications (such as CFA and ACCA) that are increasingly recognized by big business may further reduce people's interest in graduate studies.

Technological component

- **Online Alternatives:** The quality of online education resources is improving rapidly and in many cases is free. This prompts many high school graduates to skip further education to pursue online learning, which dramatically affects the traditional higher education sector in Europe. The COVID-19 pandemic is also playing a catalytic role in online education. The Departments should adapt in the best possible way and improve the provided online services and training solutions.
- **Augmented learning:** New technologies augment the educational process in various ways such as providing online lectures/support material for information/knowledge in targeted areas of interest to students/stakeholders.
- **Sharing economy:** Due to the rapid improvement of technology capabilities (e.g., Applications) many physical and intellectual resources are shared among the various functions and activities of universities.
- **New and emerging technologies:** There is a rapid development of new technologies and technological applications for industrial and other use, such as industry 4.0, 3D printing, augmented reality technologies VR, Internet of Things (IoT), CAD-CAM systems, technologies remote sensing using drones, sensors, etc. The FWSD Department bases its differentiation on the full utilization of technologies and their inclusion in its curriculum, as a central core of the studies provided.

Legal component

- **Intellectual property:** An increase in access to "open source" cases, software and/or content, may cause changes in the law regarding intellectual property rights.
- **Diversity:** The continuous mobility of staff and students between the universities of Greece and other countries is considered in the formulation of the relevant legislation regarding labor law and the law on discrimination and respect for diversity.
- **Employment rules:** Legislation must ensure that the employment rules of university workers are not affected by changing technology. The professional rights of the graduates should also be guaranteed.

Environmental component

- **Environmental factors:** Climate, climate change, pollution and availability of renewable goods are some of the factors that make up the environmental component. These factors become the cause of changes both in the activities of companies and organizations as well as in legislation and must be monitored through the research and educational activities of the Universities. The above are the core of the Undergraduate Study Program (USP) of the FWSD Department fully responding to this component.

- **Circular economy and Bioeconomy:** The circular economy aims to improve the effectiveness and efficiency of resources in businesses and organizations over a longer period of time, through reacting, rethinking, reducing, reusing, repairing, refurbishing, rebuilding, expedient, recycling, recovering. On the other hand, the Bioeconomy as an environmental strategy and priority focuses on de-dependence on mineral resources and the development of bio-based products, food and bio-energy. Therefore, the study programs should keep up with the relevant developments. The above is the core of the USP of the FWSD Department fully responding to this component.

6.2SWOT Analysis

Based on what was analyzed above, but also based on the analysis in Appendix B.4 Feasibility and sustainability studies for the establishment and operation of the new academic unit and the new USP, the following SWOT analysis table of the FWSD Department, as well as the factors that affect the studies and research in the scientific field of the PPS, the investigation of the institutional, economic, developmental, social, technological and environmental parameters that operate in the external environment of the Department, as well as the possibilities, abilities, that operate in its internal environment.

SWOT analysis affecting the studies in the USP of Forestry, Wood Sciences and Design based on the strategy of the University of Thessaly.

STRENGTHS	OPPORTUNITIES
The modern, dynamic and targeted content of the USP.	The opportunities it provides for professional rehabilitation and development, both in the private and self-employed sectors, as well as in the public sector.
The only one in Greece that combines Forestry, wood science and technology and the design of finished products, covering the entire value chain of forest production.	The dynamics presented by the content of the USP based on the European and national policy for the promotion of the Green Deal of the EU, the green economy and bioeconomy, sustainability and the objectives of sustainable development.
The only USP in Thessaly and the UTH with corresponding content.	The rapid development of scientific knowledge, research and technological and other innovations around the content of the WFP at an international level, such development is reinforced by the response to global problems (climate change, desertification, etc.). At the level of the Region of Thessaly, the FWSD Department is the only Department that aligns itself with the goals set at the regional level for an equal utilization of the natural environment and technological innovation. In UTH opportunities for interdepartmental and by extension interdisciplinary collaborations in research and education are created (e.g. prospects for joint MSc, PhDs, and research proposals..)
The very positive attitude of new incoming students towards studies at the Department. 100% of the offered places in the nationwide exams of 2021 were filled with the implementation of the EBE, as well as of 2020 and 2019.	The positive perspective presented by the Department in order to become a pioneer and establish itself in the consciousness of the candidates, but also of the academic map of the country in relation to other similar Departments and USP, a fact reflected by the dimension the Department has taken in the national press.
The high scientific interest presented by the course contents, based on the survey of incoming students.	The very positive treatment of the Administration of the Faculty of UTH of the said USP and the Department in all matters concerning its operation. The knowledge and skills that the student will acquire on modern objects that the market requires, thus increasing the chances to quickly find a good professional perspective.
The interdisciplinary approach to the academic subject of the USP, which is supported by the academic subjects and specialties of the Faculty members of the Department.	The promoted changes in Higher education in the direction of innovative USP and the redefinition of Departments and subjects that are in progress. The Department's USP is an example and academic model of integration of both the sciences and the practical application of the sustainable utilization of natural resources that satisfy the needs of a modern society.
The ability to provide high-level education and research through the self-financing of education to a large extent from research programs and studies that are/have been implemented.	The increasing international and national flow of research funding in subjects and fields relevant to the content of the USP, especially in the context of tackling climate change (e.g. tackling catastrophic fires, adopting environmentally friendly practices in the agri-food sector, bioeconomy),

<p>The existence and the possibility of developing synergies and collaborations with other USP, Institutions and Departments in Greece and abroad in matters of research, teaching and interconnection with the labor market. The Department's innovative, targeted USP is a model for Southern Europe and a magnet for collaborations at all levels.</p>	<p>The existence of a need in the labor market for specialized executives and researchers in matters of management/protection/exploitation of forests and the natural environment, technology and production/exploitation of wood products, design of wood-based products, efficient use of resources and protection of the natural environment and the promotion of a sustainable development model. The rich natural environment and wood production are important dynamic and valuable elements of the national economy.</p>
<p>The existence of fully equipped and institutionalized laboratories with state-of-the-art equipment in their research subjects. In many cases unique on an international level.</p>	<p>The prospect of strengthening the environmental policies of the country and the EU. in matters of sustainable forest management, sustainable development and tackling climate change. Policies that enhance the professional outlook of the Department's graduates. The innovative research carried out by the statutory laboratories, which is enhanced by their advanced equipment, is expected to contribute (a) to solving problems in matters of sustainable utilization of forests, sustainable development and tackling climate change, (b) to the professional perspective of the graduates of the Department and (c) in the perspective of strengthening environmental policies.</p>
<p>Teaching and research using innovative methods and techniques both in the exploitation of the natural environment and in woodworking.</p>	<p>The great demand for expertise from wood and furniture market executives, but also the great needs of the Forestry Service in order to fill its vacant organizational positions. The Department's graduates equally cover the needs of both the public and private sectors.</p>
<p>The high interconnection with the production, economy and society of both Greece and Cyprus.</p>	<p>The perspective of its further development by adapting to the international developments of the knowledge subjects treated by the Department.</p>
<p>The large degree of staffing of the Department at a high level by faculty members of all levels, Laboratory Teaching members, Laboratory Technical members, and other staff.</p>	<p>The prospect of finding additional resources through the implementation of research projects, sponsorships, funding of studies and projects, etc. Providing state to the art knowledge.</p>
<p>The provision of internships in companies, agencies and forests, as a necessary condition for receiving a degree.</p>	<p>The strategic targeting of UTH for its evolution into a Green University, which improves the position of the Department and the USP in the academic map of the University.</p>
<p>The existence of mature proposals for the awarding of professional rights to graduates, the provision of an integrated master's title and a program of pedagogical competence that will frame the USP.</p>	<p>The acceptance and recognition of the Department by the local communities of Karditsa and Thessaly, but also by professionals in the sector throughout Greece and Cyprus. The Department's acceptance at the District level is highlighted by the multitude of proposals for granting municipal facilities and forest land for the internship of the Department's students.</p>
<p>The implementation of the Special Study Program for Pedagogical and Teaching Training Certification</p>	<p>It offers graduates of the Department the possibility of employment in education.</p>
<p>State-of-the-art facilities and building infrastructure, both for education and student care.</p>	<p>Providing a full base of support to the students of the Department so that they become more receptive to the learning process.</p>
<p>The location of the Department: (a) in a city such as Karditsa in the center of Greece, close to mountainous areas of unique beauty and importance and (b) in an Institution with the international prestige of UTH.</p>	<p>a) The geographical location of Karditsa significantly facilitates the educational process in terms of direct access to the Department's academic subjects (b) The international prestige of the Foundation gives important prospects to</p>

	the professors in terms of research and international recognitions and graduates
The framing of the USP by two MSc, doctoral and postdoctoral studies	This fact provides undergraduate students with the escalation of their academic prospects within the Department.
The renowned and high-level educational and research staff that surrounds the USP.	Opportunities are created for undergraduate students to participate in advanced educational projects and research programs.
The complete compliance of the USP with the needs and requirements of the labor market for its graduates, both in Greece and abroad.	Significant professional employment opportunities for graduates of the Department in both the private and public sectors.
WEAKNESSES	THREATS
The constant need for staff support, especially faculty members, Laboratory Teaching members and administrative staff.	The limitations set based on the general socio-economic situation of the country and the resources available for Higher Education to further strengthen the USP. Failure to fulfill this need deprives the teaching and research course of the Department of its supporting basis.
The deficiencies presented in some of the Department's new laboratories in modern equipment.	The future changes of the legal framework for the organization and operation of higher education and the academic map of the country, which may hinder the development course of the Department.
The limited funding from the regular budget of UTH as a result of the overall financing of higher education in the country.	Stalling of the Department's development path, as despite the contribution of self-financed research programs, the contribution of regular budget funds is fundamental.
Relatively small funding of the Department to largely cover its needs for the maintenance of its infrastructure, the supply of laboratory equipment and the maintenance of the existing.	The serious arrhythmias created in the academic life of the Department bring obstacles to the smooth development of the Department.

7. Budget, staff and admitted students

7.1 Department of Forestry, Wood Sciences & Design Budget

The table below is completed in order to plan the cost of the target strategies and corresponding actions. The funding sources to which the respective costs of the actions can be allocated are the regular budget, the public investment program, the ESPA, own resources and other funding sources that can be utilized by the Department of Forestry, Wood Sciences & Planning, through the actions of University of Thessaly. The amount that is completed concerns the entire four-year period 2022-2025.

Priority (Code)	Target (Code)	Action (Code)	Funding forecast for the period 2022-2025
1. Upgrading the quality of Higher Education and promoting equal access	1.1 University of Thessaly equipment upgrade	1.1.1 Supply of equipment/laboratory consumables to meet the needs of Acad. Departments/Laboratories/Services of the FWSD Department	€500,000
	1.2 Upgrading the operation of electronic and regional libraries	1.2.1 Enrichment of scientific journals/books	€50,000
	1.4. Educational and cultural activities beyond studies	1.4.1 Social Cultural Development of the FWSD Department	€20,000
	1.5. Improving the quality, efficiency of Higher Education.	1.5.1. Recruitment of educational staff of the FWSD Department	€200,000
2. Strengthening student care	2.1 Tuition support grants	2.1.1 Student Meals and Accommodation for University of Thessaly students	€80,000
3. Upgrading and maintenance of educational infrastructure while addressing the fragmentation of human and material resources through the creation of economies of scale in Universities and improvement of their management systems	3.1 Student Accommodation/Acad. Departments of the University of Thessaly	3.1.1 Construction of building facilities for the FWSD Department	€300,000
	3.2. Upgrading e-University services, data, software and user support, as well as ensuring their interoperability.	3.2.1 Supply of software/licenses for ICT upgrade in academic and administrative work	€50,000
		3.2.2 Supply of Network and telecommunications equipment	€30,000
	3.4 Upgrading of central and regional building infrastructure and other infrastructure/equipment	3.4.1 Infrastructure projects/ Maintenance of building facilities and	€300,000

		environment/others permanent facilities of the FWSD Department	
	3.5. Organization and operation of shared laboratory facilities	3.5.1 Operation of University Forests of the FWSD Department	€200,000
	4.2. Connecting studies with the labor market and the economy	4.2.1. Development of special actions for degree students and graduates with the aim of better access to the labor market (practice)	€20,000
4. Improving access to lifelong learning, upgrading skills and competences and linking education and training to the labor market.			
TOTAL			€1,750,000

7.2 Anticipation of the evolution of the number of personnel

In the following tables, the number of faculty members, Laboratory Teaching members, Laboratory Technical members, EEP and Administrative staff of the Department of Forestry, Wood Sciences & Design, per year, is filled in, indicating in separate columns the number of those who have or are going to retire in the following years, as well as the filling of new positions until the year 2024.

YEAR	Faculty Members			Laboratory Teaching Members	Laboratory Technical Members	Administrative Staff
	Serving Members	Termination of service	New positions in recruitment process	Serving Members	Serving Members	Serving Members
2021	16	0	1	3	3	2
2022*	17	0	1	3	4	3
2023*	18	0	1	4	5	4
2024*	19	1	1	4	5	4
2025*	19	0	1	4	5	4

* Forecast.

7.3 Forecast for number of admitted students

In the table below, the total of those admitted, those registered in the Department of Forestry, Wood Sciences & Design in the 1st year for the academic year 2019-2021, while for the years 2021-22 to 2024-25 the provision for the admitted students of these years is completed.

<u>CATEGORIES</u>	<u>2019- 2020</u>	<u>2020- 2021</u>	<u>2021- 2022</u>	<u>2022- 2023</u>	<u>2023- 2024</u>	<u>2024- 2025</u>
1.ΓΕΛ ΝΕΟ	188	170	185	185	185	185
2.ΓΕΛ ΠΑΛΑΙΟ		18	8	8	8	8
3.ΓΕΛ 10% (N-2)	8	8	11	11	11	11
4.ΓΕΛ 10% (N-1)	13	13	2	2	2	2
5.ΕΠΑΛ	12	25	25	25	25	25
6.ΕΠΑΛ 10% (N-2)	2	1	1	1	1	1
7.ΕΠΑΛ 10% (N-1)		1	1	1	1	1
8.Foreign Students	4	3	7	7	7	7
TOTAL	227	239	240	240	240	240