ARISTOTLE UNIVERSITY OF THESSALONIKI

FACULTY OF NATURAL SCIENCES

SCHOOL OF INFORMATICS

STUDY GUIDE

POSTGRADUATE PROGRAM OF STUDIES

"ARTIFICIAL INTELLIGENCE"

ACADEMIC YEAR

2022–2023

THESSALONIKI 2023

The study guide was prepared by Associate Professor Grigorios Tsoumakas, Assistant Professor Dimitrios Vrakas, Associate Professor Nikolaos Nikolaidis, and Professor Anastasios Tefas. The Secretariat staff also collaborated in gathering information: Ms. M. Milosi, Mr. Sp. Gkoutzamanis, Ms. Eir. Trikka, Ms. G. Theochari, Ms. Asim. Kournotou.

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1. FOREWORD

The School of Informatics of the Aristotle University of Thessaloniki (AUTH) is the newest school of the Faculty of Natural Sciences (FNS), and first admitted students in the academic year 1992–93. Its establishment marked a milestone in the history of the FNS and AUTH, with a particularly significant impact on the scientific life and technological development of the city of Thessaloniki.

The School of Informatics admits students each year with a high entry score in the national examinations and a high percentage of honors graduates from secondary education. The efforts of the teaching and research staff (faculty members) of the school over all these years, from its founding to the present, have made it one of the best schools in the country, according to its external evaluation by external evaluators, both for the quality of studies and for its research activity. The Evaluation and Accreditation Council of the National Authority for Higher Education (ETHAAE), based on the Report of the External Evaluation and Accreditation Committee, decided (ref. no. 23242/16-7-2021) to accredit the Undergraduate Program of Studies (UPS) of the School of Informatics of AUTH, which fully complies with the principles of the ETHAAE Quality Standard for UPS and the Quality Assurance Principles of the European Higher Education Area (ESG 2015), for study level 6 of the National and European Qualifications Framework. The accreditation is valid for four years, from 13-07-2021 to 12-07-2025.

Today, the school is considered established and distinguished both nationally and internationally. Its outstanding reputation is due to the distinctions and awards it has achieved, the research and writing activity of its members, the funded programs it coordinates or participates in, but mainly the high-quality training it offers and the professional recognition of its graduates. The School of Informatics, AUTH is consistently featured in international university ranking lists in the fields of Computer Science and/or Computer Engineering. For the current academic year it is ranked 401–500 in the Times Higher Education global ranking, 251–300 in the Quacquarelli Symonds ranking, 49th in the CWTS Leiden ranking (using the PP-10% criterion, i.e., the percentage of publications in the top 10% internationally), and 326th in the US News ranking.

The postgraduate program of studies (program) “Artificial Intelligence” aims to create highly specialized senior staff in cutting-edge areas of Informatics, and specifically in the field of Artificial Intelligence, and to upgrade research in this particular area, so that its graduates can successfully fill announced positions in the Private and Public Sector and staff Research and Higher Education Institutions.

The goals of the program are fulfilled through attendance of organized postgraduate courses and the preparation of a Master’s Thesis (hereinafter ‘Master’s Thesis’) in accordance with international academic standards that guarantee high-level training and specialization in subjects of Artificial Intelligence.

As Chair of the School of Informatics of AUTH and on behalf of all the teaching, research, and administrative staff of the school, I would like to congratulate and welcome all first-year students for their successful admission to an excellent school and wish the entire academic community of the school a good academic year 2022–2023, with health and progress.

Ioannis Stamelos

Chair of the School of Informatics

2. SUBJECT AREA OF THE PROGRAM “ARTIFICIAL INTELLIGENCE”

The subject area of the program is Artificial Intelligence. Artificial Intelligence is the science that deals with intelligent agents, i.e., systems (hardware and software) that perceive their environment and act within it, trying to increase the probability of achieving their goals. The goal of Artificial Intelligence is the creation of artificial systems (machines) that mimic the cognitive functions of the human brain, such as Learning and Problem Solving.

The purpose of the program is the advancement of knowledge, the development of research, as well as the satisfaction of the educational, research, social, cultural, and developmental needs of the country in Artificial Intelligence, the training of high-level scientists capable of contributing to the field of Artificial Intelligence, as well as the production and transmission of knowledge, know-how, methodologies, tools, and research results in this scientific area.

The learning outcomes and qualifications of those who successfully complete the program are as follows:

Knowledge: 1. Distinguish the basic concepts and algorithms involved in the basic processes of an intelligent system, such as perception, learning, knowledge representation, inference, action planning, and interaction with other intelligent systems. 2. Explain the principles and techniques of interaction of an autonomous intelligent system with its environment, such as language technology and computer vision. 3. Assess the ethical and philosophical implications of Artificial Intelligence in society.

Skills: 1. Discover innovative artificial intelligence techniques. 2. Develop intelligent (autonomous) systems. 3. Apply artificial intelligence techniques to real problems.

3. THE FACULTY OF NATURAL SCIENCES

The Faculty of Natural Sciences (FNS) is the continuation of the Faculty of Physics and Mathematics, which was founded together with AUTH in 1925, began operating in the academic year 1927–28, and was dissolved in 1982. Today the FNS includes the following 6 schools, which award unified degrees:

1. School of Biology
2. School of Geology
3. School of Mathematics
4. School of Informatics
5. School of Physics
6. School of Chemistry

DEANSHIP OF THE FNS

DEAN

Prof. Ch. Charalampous – School of Mathematics

MEMBERS

Prof. M. Giagkou – Chair, School of Biology

Assoc. Prof. K. Vouvalidis – Chair, School of Geology

Assoc. Prof. R.D. Malikiossis – Chair, School of Mathematics

Prof. I. Stamelos – Chair, School of Informatics

Prof. A. Ioannidou – Chair, School of Physics

Prof. Th. Karapantsios – Chair, School of Chemistry

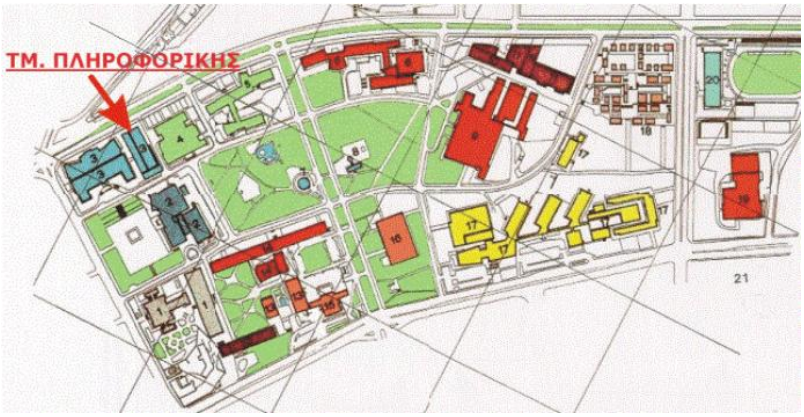
SECRETARY

E. Raftopoulou

4. THE SCHOOL OF INFORMATICS

The School of Informatics was established as a school of the FNS by Presidential Decree PD 200/91 (Government Gazette 78/30.5.91) and has been admitting students since the academic year 92–93. Since the academic year 95–96 it has been autonomous and is governed by the School Assembly (SA).

The School of Informatics is housed in the premises of the Faculty of Natural Sciences as shown in the following diagram of AUTH. Additionally, it maintains spaces in Kalamaria (16 Ethnikis Antistaseos St., map: http://tinyurl.com/csd-auth-east) for hosting laboratories, classrooms, faculty member offices, and administrative staff.



Map legend:

7. Faculty of Philosophy
8. School of Chemistry
9. Faculty of Natural Sciences
10. Schools of Agriculture and Forestry & Natural Environment
11. School of Veterinary Medicine
12. School of Medicine
13. Meteorological Station
14. Observatory
15. AHEPA University Hospital
16. School of Dentistry
17. AHEPA University Hospital
18. Faculty of Theology
19. Administration Building
20. Faculty of Law, Political and Economic Sciences
21. Ceremony Hall
22. Central Library – Student Reading Room
23. Polytechnic School
24. TEFAA, Pedagogy School, School of Fine Arts
25. Student Club
26. University Gymnasium
27. University of Macedonia.

By Rectoral Act No. 3146/23-10-2017 (Government Gazette 3950/10-11-2017, Issue B), three divisions were established in the school. Each division serves educational and research needs in specific subject areas.

A. Division of Knowledge, Data and Web Technologies

Director: Professor Athena Vakali

Subject Areas:

- Logic Programming Systems and Intelligent Systems
- Knowledge Systems
- Machine Learning and Knowledge Discovery
- Operating Systems and World Wide Web
- Programming Techniques for Problem Solving
- Artificial Intelligence
- Semantic Web
- Digital Social Networks
- Data Structures
- Databases
- Algorithms and Computational Complexity
- Data Mining
- Information Retrieval
- Big Data Management and Analysis
- Massively Parallel and Distributed Data Processing
- Informetrics

Division members belong to two laboratories:

Data Science and Web Laboratory (DataLab)

Director: Professor Athena Vakali

Members:

1. Anastasios Gounaris (Associate Professor)
2. Apostolos Papadopoulos (Associate Professor)
3. Georgios Christodoulou (Associate Professor)

Website: https://datalab.csd.auth.gr/

Intelligent Systems Laboratory (Intelligent Systems Labs)

Director: Professor Ioannis Vlahavas

Members:

1. Nikolaos Vassiliadis (Professor)
2. Dimitrios Vrakas (Assistant Professor)
3. Georgios Meditskos (Assistant Professor)
4. Grigorios Tsoumakas (Associate Professor)

Website: https://intelligence.csd.auth.gr/

B. Division of Software, Hardware, and Foundations

Director: Associate Professor Panagiotis Katsaros

Subject Areas:

- Software Technology
- Software Reliability and Security
- Information and Communication Technologies in Education
- Internet Technologies in Education
- Music Informatics
- Human-Computer Interaction

- Open Technologies
- Embedded Systems
- Statistics and Information Systems
- Electronic Physics and Microelectronics
- Computer Architecture
- Applied Mathematical Analysis
- Information Theory – Theoretical Cryptography
- Operations Research
- Optimization
- Numerical Linear Algebra

Division members belong to two laboratories:

Software and Interactive Technologies Laboratory (SWITCH)

Director: Professor Ioannis Stamelos

Members:

1. Christos Katsanos (Assistant Professor)
2. Panagiotis Katsaros (Associate Professor)
3. Dionysios Politis (Assistant Professor)
4. Ioannis Stamelos (Professor)
5. Thrasyvoulos Tsiatsos (Associate Professor)

Website: http://switch.csd.auth.gr/

Laboratory of Statistics, Applied Mathematics and Electronic Physics (SAMEP Lab)

Director: Professor Nikolaos Konofaos

Members:

1. Eleftherios Angelis (Professor)
2. Konstantinos Draziotis (Assistant Professor)
3. Georgios Keramidas (Assistant Professor)
4. Nikolaos Tsitsas (Associate Professor)

Website: http://samep.csd.auth.gr/

C. Division of Communication Networks and Information Analysis

Director: Associate Professor Petros Nikopolitidis

Subject Areas:

- Computer Communication Systems
- Distributed Systems
- Optical Communication Systems
- Optical Communications
- Wireless Networks
- Communication Networks
- Optical Networks
- Nanonetworks
- Expert Systems – Artificial Intelligence
- Digital Signal Processing
- Computer Graphics – Digital Image Synthesis

- Computational Intelligence – Deep Reinforcement Learning
- Digital Signal Processing with Applications in Biomedicine – Bioinformatics
- Robotic Perception
- Virtual/Augmented Reality
- Large-Scale Information/Network Analysis

Division members belong to two laboratories:

Artificial Intelligence and Information Analysis Laboratory (AIIA Lab)

Director: Professor Ioannis Pitas

Members:

1. Konstantinos Kotropoulos (Professor)
2. Nikolaos Laskaris (Associate Professor)
3. Nikolaos Nikolaidis (Associate Professor)
4. Anastasios Tefas (Professor)
5. Christos Ouzounis (Professor)

Website: http://www.aiia.csd.auth.gr

Networks and Communication Systems Laboratory (NetCom Lab)

Director: Professor Georgios Papadimitriou

Members:

1. Amalia Miliou (Professor)
2. Petros Nikopolitidis (Associate Professor)
3. Nikolaos Pleros (Associate Professor)

Website: http://netcom.csd.auth.gr/

5. SCHOOL STAFF

ORGANIZATION OF THE SCHOOL OF INFORMATICS

CHAIR: Professor Ioannis Stamelos **VICE-CHAIR:** Professor Georgios Papadimitriou **SECRETARY:** Maria Milosi

PROFESSORS:

- Angelis Eleftherios
- Vlahavas Ioannis
- Vakali Athena
- Vassiliadis Nikolaos
- Dimitriadis Stavros
- Konofaos Nikolaos
- Ouzounis Christos
- Papadimitriou Georgios
- Pitas Ioannis
- Stamelos Ioannis
- Tefas Anastasios

ASSOCIATE PROFESSORS:

- Gounaris Anastasios
- Katsaros Panagiotis
- Laskaris Nikolaos

- Nikopolitidis Petros
- Nikolaidis Nikolaos
- Papadopoulos Apostolos
- Pleros Nikolaos
- Tsiatsos Thrasyvoulos
- Tsitsas Nikolaos
- Tsoumakas Grigorios
- Christodoulou Georgios

ASSISTANT PROFESSORS:

- Vrakas Dimitrios
- Draziotis Konstantinos
- Katsanos Christos
- Keramidas Georgios
- Meditskos Georgios
- Politis Dionysios

FORMER FACULTY MEMBERS:

- Lazos Konstantinos (Professor Emeritus)
- Manolopoulos Ioannis (Professor Emeritus)
- Mpleris Georgios†
- Tsoukalas Ioannis (Professor Emeritus)
- Linardis Panagiotis
- Chatalis Miltiades
- Atreas Nikolaos
- Nanopoulos Alexandros
- Pomportsis Andreas†
- Tsichlas Konstantinos
- Karanikas Konstantinos
- Karatza Eleni (Professor Emerita)

SECRETARIAT:

- Milosi Maria (Head)
- Gkoutzamanis Spyros
- Kakolyrri Anna
- Trikka Eirini

SECRETARIAT FOR FACULTY MEMBERS:

- Theochari Georgia

ALUMNI WEB PORTAL:

The alumni web portal of the School of Informatics of AUTH operates at http://grads.csd.auth.gr/, with the aim of maintaining contact between the school and its students after graduation.

6. GENERAL MATTERS OF POSTGRADUATE STUDIES

1. The academic year begins on September 1st of the current year and ends on August 31st of the following year. The educational work of each academic year is structured into two semesters. Each semester includes at least 13 full weeks of educational activities.
2. The winter semester begins in the last week of September and ends in early the last ten days of January. The first examination period of the winter semester follows. The spring semester begins in mid-February and ends at the end of May. The first examination period of the spring semester

follows. The exact dates are determined by the Senate of the Institution and are stated in the academic calendar of the Institution (https://www.auth.gr/academic_calendar/).

3. If for any reason the number of weeks of educational activities that took place in a course is less than thirteen, the course is considered not to have been taught and is not examined in the final examination period.
4. Extension of the duration of a semester is permitted only in exceptional cases in order to complete the required minimum number of weeks of educational activities. Each extension cannot exceed two weeks and is decided by the Rector, following a proposal by the faculty deanship and the relevant recommendation of the school.
5. The student enrolls in the program at the beginning of each semester on dates set by the University and declares the courses they choose on dates set by the Coordinating Committee of the Postgraduate Program of Studies (CCPPS).
6. Students who demonstrably work at least 20 hours per week may enroll as part-time students, upon their application, which is approved by the faculty deanship following a recommendation by the school. The specific conditions and procedure for the application of this provision will be defined in the Institutional Regulations.
7. Examinations are conducted exclusively after the end of the winter and spring semesters for the courses taught in those semesters respectively. In all cases, a student may only be examined in courses they have declared at the beginning of the 2 semesters. Special consideration is given for oral examination of students with proven dyslexia prior to their admission to the program.
8. Courses, apart from the two examination periods, are suspended during official holidays as defined by the academic calendar of the Institution. Holidays include the periods from Christmas Eve to the day after Epiphany, from Holy Thursday of Cheesefare Week (February 23, 2023) to the day after Clean Monday (February 28, 2023), and from Holy Monday (April 10, 2023) to Thomas Sunday (April 23, 2023). No courses or examinations are held on weekends and on the following holidays and anniversaries: Saint Demetrius Day (October 26), National Holiday of October 28, Anniversary of the Polytechnic Uprising (November 17), The Three Hierarchs (January 30), Annunciation (March 25), May Day (May 1), Whit Monday (June 5, 2023). Lectures are also not held on the day of student elections.
9. Teaching work is distributed in semester courses. Teaching work includes: a) independent teaching of a course, b) independent teaching of specialized advanced courses in small groups of students, c) laboratory exercises and general practical training of students, d) supervision of assignments or theses, and e) organization of seminars or other similar educational activities aimed at consolidating and advancing students' knowledge.
10. The curriculum contains the titles of compulsory and elective courses, their content, the weekly teaching hours (including all forms of teaching work), and the temporal sequence or interdependence of courses. In accordance with the National Qualifications Framework for Higher Education, the curriculum aims at the acquisition of learning outcomes and qualifications gained from the entire program of studies, as well as from each individual course, educational activity, or practical training included in it, the credit units, and the level of qualifications acquired, in correspondence with those of the National Qualifications Framework, the European Qualifications Framework for Lifelong Learning, and the Qualifications Framework of the European Higher Education Area.
11. Teaching work is supplemented by corresponding teaching texts, i.e., printed or electronic books (including open-access e-books) as well as printed or electronic academic notes, which comprehensively correspond to the subject matter of a course and cover all or the major part of its syllabus and content, as defined in the undergraduate studies regulations.
12. Every instructor is obliged to distribute to all students enrolled in the course, during the first week of classes, a detailed study outline that includes the structure of the course content, relevant bibliography, other documentation, and related information.

13. The grade of the student in each course is determined by the instructor and may be based on any combination of written examinations, oral examinations, assignments, or laboratory exercises.
14. Each semester course contributes a number of ECTS credit units compatible with the European Credit Transfer System (ECTS). ECTS credit units are a numerical value assigned to each course to describe the workload required by the student to complete it. One ECTS unit corresponds to 30 hours of workload. One semester of study corresponds to 30 ECTS, while a full academic year corresponds to 60 ECTS.
15. Students have the right to suspend their studies. The procedure to be followed is described in the Regulations of the Postgraduate Program of Studies (Article 6).
16. From the websites http://www.csd.auth.gr/, https://ai.csd.auth.gr/ and https://elearning.auth.gr/, students can find information on various topics concerning the courses of the curriculum (syllabus, lecture schedule, assignments and labs, lecture slides, etc.). Announcements and information about the School of Informatics can also be found on the school's and program's Facebook pages (https://www.facebook.com/csdauthgr/ and https://www.facebook.com/AI.AUTH respectively).
17. Each semester, before the start of the examination period, students have the right and obligation to evaluate courses and instructors with the aim of improving the quality of studies. More information is available on the website of the Quality Assurance Unit (MODIP-AUTH http://qa.auth.gr) and on the school's website.
18. In the event of a disciplinary offense (such as copying during examinations, use of electronic devices, plagiarism in assignments, etc.), sanctions are imposed by the School Assembly (ranging from a written reprimand to exclusion from participating in examinations for subsequent semesters).

7. STUDY REGULATIONS

The Postgraduate Program of Studies entitled "Artificial Intelligence", which leads to the award of a Master's Degree, has been organized and operated autonomously since the academic year 2018–19 by the School of Informatics of the Aristotle University of Thessaloniki (AUTH).

The Study Regulations of the program determine the operation of the program in accordance with current legislation, and contain the following articles:

- Article 1. Subject and Purpose of the program
- Article 2. Title Awarded by the program
- Article 3. Bodies of the program
- Article 4. Categories of Candidates in the program
- Article 5. Number of Admissions, Criteria and Selection Process
- Article 6. Duration and Conditions of Study
- Article 7. Rights and Obligations of Students
- Article 8. Curriculum – Knowledge Assessment
- Article 9. Scholarships
- Article 10. Teaching Staff
- Article 11. program Revenue – Financial Management Procedure
- Article 12. Administrative Support – Infrastructure
- Article 13. Graduation Ceremony
- Article 14. Form of the Master's Degree Awarded
- Article 15. Plagiarism
- Article 16. program Accreditation and Evaluation
- Article 17. Study Guide
- Article 18. Transitional Provisions

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

The ECTS system was developed within the framework of the ERASMUS program (European Community Action Scheme for the Mobility of University Students) to facilitate the processes of academic recognition of studies abroad by assessing and/or transferring the work of participating students (credit transfer) among cooperating institutions. ECTS is based on the principle of mutual trust among participating institutions.

ECTS credit units reflect the amount of work required by each course in relation to the total required student workload for the completion of a full academic year of study at the institution (i.e., attendance of lectures, practical training, seminars, tutorials, labs, library and home study, examinations, or other assessment activities). According to ECTS, 60 credit units represent the workload of an academic year of study, 30 credit units represent the workload of an academic semester, and 20 credit units represent the workload of a term. One ECTS credit unit corresponds to 30 hours of workload under Greek legislation.

ECTS units are credited for each course, whether compulsory or elective, as well as for studies, practical training, and theses, insofar as these form part of the school's curriculum. Credit units are awarded when the course/practical training/thesis has been completed and all required examinations have been passed successfully.

Further information is provided by the faculty members responsible for the ERASMUS program in the School of Informatics, P. Katsaros (katsaros@csd.auth.gr) and G. Tsoumakas (greg@csd.auth.gr), as well as by the European Educational Programs Section (EEPS).

8. OTHER PROGRAMS OF THE SCHOOL OF INFORMATICS – DOCTORAL STUDIES

Autonomous Postgraduate Programs of Studies

The School of Informatics has been offering 4 other autonomous postgraduate programs of studies since the academic year 2018–2019.

Program of Studies "Digital Media – Computational Intelligence" | Director: Professor Ouzounis Christos | Website: https://dmci.csd.auth.gr/en/

Program of Studies "Data Science and World Wide Web" | Director: Associate Professor Gounaris Anastasios | Website: https://dws.csd.auth.gr/en/

Program of Studies "Interactive Systems Technologies" | Director: Professor Konofaos Nikolaos | Website: https://ihst.csd.auth.gr/en/

Program of Studies "Communication Networks and Systems Security" | Director: Professor Miliou Amalia | Website: https://cnss.csd.auth.gr/en/

Contact details: School of Informatics Secretariat, Aristotle University of Thessaloniki, 541 24, Thessaloniki | E-mail: pms_info@csd.auth.gr | Tel: 2310998930, 2310998709 | Fax: 2310998310

Inter-School Postgraduate Programs of Studies

The School of Informatics participates in three Inter-School Postgraduate Programs of Studies (ISPPS):

(a) ISPPS "Business Administration and Information Systems" (in collaboration with the School of Economics of AUTH). Director: Professor Nikolaos Vassiliadis | Website: http://deps.csd.auth.gr/ | E-mail: deps_info@csd.auth.gr | Tel: 2310998709

(b) ISPPS "Medical Informatics" (PRO.ME.S.I.P.) (in collaboration with the School of Medicine, AUTH and the School of Electrical and Computer Engineering, AUTH). Director: Professor Antonios Aletras | Website: http://promesip.med.auth.gr/ | E-mail: promesip@med.auth.gr | Tel: 2310999272

(c) ISPPS “Biomedical Engineering” (in collaboration with the following schools of AUTH: Biology, Electrical and Computer Engineering, Medicine, Mechanical Engineering, Chemical Engineering). Website: http://bme.web.auth.gr | E-mail: bme@auth.gr

Doctoral Studies

The possibility of undertaking doctoral studies for the award of a Doctorate in Informatics is available. The Doctoral Studies program operates as a 3rd cycle program in accordance with its internal regulations (Decision 12875, Government Gazette, Issue 2, No. 3359, August 10, 2018). Website: https://www.csd.auth.gr/el/studies/doctoral-studies

9. OTHER REGULATIONS

In addition to the internal regulations, there are more specific regulations for:

- Complaints Management
- Academic Advisors
- Ethics and Research
- Studies, Practical Training, Mobility, Thesis Preparation

10. USEFUL AUTH SERVICES FOR STUDENTS – DATABASES – LIBRARIES

The school makes use of central AUTH services, such as:

Quality Management System (QMS) / MODIP (https://qa.auth.gr): The e-Study Guide and the CVs of school members are available in Greek and English. Course and instructor evaluations are also conducted on a semester basis. Furthermore, through the Electronic Secretariat and MODIP systems, the school and the program can monitor student progress, academic statistics, and other educational activity information.

Students of the program also have access to the AUTH Electronic Secretariat services (https://sis.auth.gr/), through which students can view their courses and grades and submit their course declaration electronically.

AUTH provides an extensive wireless network (https://it.auth.gr/el/netAccess/Wifi). The service provides free wireless access from AUTH premises to both AUTH members and visitors, and coverage has been steadily increasing in recent years through a series of implemented projects.

Students of the program also have access to all services provided by the Institution, including:

- The Institutional Repository of Scientific Works of AUTH (IKEE) (http://ikee.lib.auth.gr/), where they can find the research output of the teaching and research staff of AUTH.
- The daily mobile application myAuth (https://it.auth.gr/el/myAuth) for current courses, grades, schedule, classrooms, and course announcements.
- The AUTH Course and Classroom Schedule (https://classschedule.auth.gr/), the central information application serving students, offering personalized information on the course schedule and the classrooms where classes are held.

Student Benefits

The school, and by extension the program, makes use of the facilities and various amenities offered by the Institution to its students (https://www.auth.gr/services/), such as:

- Award of social welfare scholarships and interest-free educational loans
- Student housing allowance
- Meal provision at the University Student Club
- Accommodation in Student Residences

- Medical, pharmaceutical, and hospital care
- Free internet access, reduced-fare transport cards, etc.

Financial benefits also include:

- Provision of free textbooks to all students (UPS)
- Right of access to university libraries, Libraries, and online Libraries

Administrative benefits include deferment of military service due to studies.

Postgraduate students enjoy all the privileges of student welfare arising from current legislation.

Institutional Support Structures

Additionally, various structures and services operate at AUTH to support students, which are also available to postgraduate students, such as:

- Office for the Support of Students from Vulnerable Social Groups
- Counseling and Psychological Support Center
- Career and Study Liaison Office
- Accessibility Office for Persons with Disabilities
- Internship Office
- Student Ombudsman
- European Educational Programs Section
- International Relations Section
- Scholarships and Bequests
- University Gymnasium
- University Camp
- Electronic services via special institutional applications and mobile phone
- Cultural and social groups at institutional and school level
- Volunteer Coordination and Student Activities Office

The following Committees have been established and operate to support the students of the institution:

- Interdisciplinary Committee for Drug Prevention Proposals
- Social Welfare, Psychological Support, and Student Observatory Committee
- Health Committee
- Accessibility Committee
- Gender Equality Committee

The support structures and services for students are supported by specialized high-level scientific and administrative staff.

11. CURRICULUM AND INSTRUCTORS

The basic elements of the detailed Curriculum of the program are as follows:

- Specializations: None – this is a unified program.
- Language of instruction: Greek
- Credit units per course: 7.5 ECTS
- Credit units for thesis: 30 ECTS
- Total credit units of the program: (8 × 7.5) + 30 = 90 ECTS
- The workload for each full-time postgraduate student during one academic year is assessed at sixty (60) credit units, and during one academic semester at thirty (30) credit units (ECTS).

Important details:

- Student pass grades in postgraduate courses are on a scale of 0–10 with half-unit precision. A passing grade is six (6) for both postgraduate courses and any undergraduate courses, as well as for the master's thesis.
- The student is required to attend and be examined in eight (8) courses: the 4 compulsory courses of the first semester and the 4 elective courses of the second semester. They are also required to prepare their master's thesis in the third (or subsequent) semester of their choice, provided they have successfully completed the examination of the 8 courses.

1st SEMESTER

Code	Title	Hours	ECTS	Type	Instructors
AI101	Machine Learning	3	7.5	C	Ioannis Vlahavas
AI102	Semantic Web	3	7.5	C	Nikolaos Vassiliadis
AI103	Intelligent Systems Programming	3	7.5	C	Dimitrios Vrakas
AI104	Advanced Computer Vision	3	7.5	C	Ioannis Pitas
AI105	Computational Intelligence – Statistical Learning	3	7.5	C	Anastasios Tefas
AI106	Biosignal Analysis – Neuroinformatics	3	7.5	C	Nikolaos Laskaris
AI107	Games and Artificial Intelligence	3	7.5	C	Nikolaos Nikolaidis

2nd SEMESTER

Code	Title	Hours	ECTS	Type	Instructors
AI201	Language Technology	3	7.5	E	Konstantinos Kotropoulos
AI202	Advanced Topics in Machine Learning	3	7.5	E	Grigorios Tsoumakas
AI203	Intelligent Agent Systems	3	7.5	E	Nikolaos Vassiliadis
AI204	Deep Learning and Multimedia Data Analysis	3	7.5	E	Anastasios Tefas

AI205	Philosophy and Artificial Intelligence	3	7.5	E	Christos Ouzounis
AI206	Planning, Scheduling and Constraint Solving	3	7.5	E	Dimitrios Vrakas
AI207	Perception of Autonomous Systems	3	7.5	E	Ioannis Pitas
AI208	Knowledge Graphs and Ontology Engineering	3	7.5	E	Georgios Meditskos

3rd SEMESTER: MASTER'S THESIS

For the preparation of the Master's Thesis, there are special provisions in the internal regulations. (C = Compulsory, E = Elective)

12. CONTACT INFORMATION FOR ALL MEMBERS OF THE SCHOOL OF INFORMATICS

Faculty Member	Phone	E-mail
Angelis Eleftherios	2310 99-8230	lef@csd.auth.gr
Vakali Athena	2310 99-8415	avakali@csd.auth.gr
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13. FORMER DIRECTORS

Period	Director & Deputy Director
2018 – 2020	Professor Ioannis Vlahavas / Assistant Professor Dimitrios Vrakas
2020 – 2022	Professor Ioannis Pitas / Professor Ioannis Vlahavas
2022 – 2024	Associate Professor Grigorios Tsoumakas / Professor Anastasios Tefas