



DEPT. OF AUTOMATION ENGINEERING T.E.
ATEI OF THESSALONIKI

UNDERGRADUATE PROGRAMME HANDBOOK

2017 – 2018

Thessaloniki 2017



Edition: 2017B, by M. E. Kiziroglou

The photography included in this handbook is from
the photography group of the Department
of Automation Engineering T.E., ATEI Thessaloniki



GREETING

Welcome to the Department of Automation Engineering T.E., School of Technological Applications, Alexander Technological Educational Institute of Thessaloniki. The specialization of the Automation Engineer covers an exciting wide and interdisciplinary field. It is a dynamic specialization that stimulates the interest of those who study it. It mainly deals with the application of the theory of automatic control systems and of the industrial automation, based on a strong theoretical and technological background.

The Automation Engineer can study, design and apply methods for the optimization of performance of industrial and other production units, aiming at production increase, quality improvement, reduction of energy consumption and at the protection of the environment. By the application of the information and communication technologies to the production process, they can contribute to the relief of humans from dangerous and laborious works. She/He is the expert who can implement surveillance control systems and resource management systems and networks. With the emergence of mechatronics and robotics, they design and apply smart and adaptive industrial equipment devices and measurement systems. By dynamic exploitation of data and information of transportation systems, they can work on vehicle and traffic control, on accident avoidance, route optimization, energy saving and on the protection of the environment. They can design and develop automatic systems for the management of smart buildings. They can contribute to the automation of medical equipment and biomedical systems. Their background is suitable for the development of information systems for decision making and it can be used in the analysis and management of data. They can become executives in the field of quality control, equipment maintenance and quality assurance.

We are all proud of the high quality of the undergraduate programme of the department, which emphasises both the theoretical background and the theory of automatic control systems, and the required technologies and methodologies for the development of integrated automation systems. The dissertation programme trains the new engineers on the world of research and creative synthesis of prototype automation products, methods, mathematical models, systems and implementations that are functional and effective. As students of the Department of Automation Engineering of ATEI Thessaloniki, you will enjoy a new experience which starts at the conception of creative ideas and novel compositions which, through the application of the fundamental scientific principles and rules, become smart machines and productive systems that are directed and function under strict performance and safety specifications.



The cooperation with similar departments of acclaimed European higher education institutions, in the frame of European mobility programmes and mainly through the Erasmus+ programme, provide the opportunity for following courses in other European countries for one or two semesters. The courses that are followed during an Erasmus+ programme are fully recognized by our department. The academic staff is evidently devoted to offering a free and friendly studying environment which gives prominence to talent and skills, through teaching methods that encourage participation and teamwork, and excite curiosity and the perpetual pursuit of knowledge.

In the Department of Automation Engineering, special care is given to the development of high ethics and sensitivity in societal topics, and to the development of respect to the diversity of ideas, of people and of the world around us. The decisions of engineers in the professional environment have a strong impact to the society and the environment, because the engineers are those who set the limits and the specifications for sustainable development and new potentials.

Finally, I would like to note that you are studying in one of the best, and accredited for quality of education, departments of the Technological Educational Institutes. There are only three departments of Automation Engineering in Greece, and not any corresponding university departments. This fact, in combination with the contemporary demand of the economy and the production sector, offers huge opportunities for professional progress. I would therefore like to encourage you to enjoy the knowledge and liberate your creativity. Think without limitations and aim high.

The Head of Department

Professor Simira Papadopoulou



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GENERAL INFORMATION

Name: Department of Automation Engineering, Technological Education
Institution: Alexander Technological Educational Institute of Thessaloniki
Founding year: 1989
Address: Sindos Campus, ATEI Thessaloniki, 57400, Sindos, Thessaloniki, Greece
Telephone: +30 2310 013940, +30 2310 013939
E-mail: infautom@autom.teithe.gr
Webpage: www.autom.teithe.gr

Course Duration: Four years, with compulsory dissertation and industrial training
Incoming students per year: 100
Academics: 16
Total number of courses: 38
Total number of laboratory courses: 19
Total number of alumni: 1264 (until March 2017)



Entry and Registration Procedure

Students enter the department through the National Higher Education Entry Examinations of Greece, or after a transfer/registration from another higher education institute. Students cannot be simultaneously registered to more than one higher education departments.

Students are required to renew their registration every semester. The registration renewal takes place at least one week before the start of each semester, through the online system of the Institute, within a given deadline. Failure to renew registration for two successive semesters, or for three semesters in total, leads to direct termination of registration.

Registration to Courses

Every semester, students define their personal programme of course attendance, by declaration of the courses they wish to follow. The course set declaration is submitted alongside the registration renewal through the website of the Institute (pithia.teithe.gr/unistudent). Student can declare courses from their current semesters, or from previous semesters of the same season (Fall / Spring). The maximum number of ECTS points that can be declared per semester by a student is defined by the General Assembly of the Department. Students can attend and participate to the examinations of only the courses declared for the active semester.

The students can adjust their course set by two courses at most, during the first two weeks of the semester. If a student hasn't submitted a course set declaration, they cannot attend or be examined for any courses for that semester.

ECTS Points

Each course is assigned a number of ECTS (European Credit Transfer and Accumulation System) points, which is representative of the required student effort. The total number of points per semester is 30. The dissertation and the industrial training programmes have been evaluated with 20 and 10 ECTS points respectively. The minimum number of ECTS points that are required for a successful completion of the undergraduate programme is 240.



Academic calendar and teaching programme

The academic year begins the 1st of September of each year and finishes on the 31st of August of the following year. The academic programme is structured in two semesters, the Fall Semester and the Spring Semester. Each one comprises 13 weeks of teaching and an examination period. In September, before the start of the Fall Semester, there is an additional examination period for all the courses of both semesters. For courses that are additionally examined during the teaching period, by mid-term progress assessment examinations or projects, the additional September examination is not obligatory.

The total duration of studies in the Department of Automation Engineering T.E. is eight semesters. The last semester consists of the industrial training and the dissertation.

Courses are suspended during the following bank holidays and anniversaries:

- a. From the 24th of December until the 2nd of January
- b. On the 6th of January
- c. On the 30th of January
- d. On the 25th of March (Greek Revolution Day)
- e. On Clean Monday
- f. From Wednesday before the Orthodox Easter until the Wednesday after.
- g. On the 1st of May
- h. On the Holy Spirit day
- i. From the 6th of July until the 31st of August.
- j. On the 26th of October (Saint Dimitrios Day)
- k. On the 28th of October (National Ohi Day)
- l. On the 17th of November (Polytechnic Uprising Day)

The specific course and examination period dates are determined each year by the Council of ATEI Thessaloniki.



Examinations and Marking

Each year, there are three four-week long examination periods. The January Examination Period takes place after the Fall Semester, for courses followed during that semester only. The same applies for the June Examination Period, after the Spring Semester. In the September Examination Period students can be examined in all the courses that have been declared during the academic year, but have not yet been passed.

During the examinations, students are assessed by written or oral examinations in the complete content of the course as defined in the course syllabus. The exams are organized by the instructor of the course and it cannot have a duration longer than three hours. In written examinations, students are provided with officially stamped, lined blank sheets and the examination paper. The invigilators check the identity of the students through their student IDs at the start of the process.

In the event of plagiarism, collusion, cooperation or obstruction during examinations, the exam paper of the participating student(s) are permanently voided voided by the invigilator. In addition, the incident is officially reported to the corresponding School Committee, which then determines an academic penalty and investigates whether the incident is required to be referred to the Courts.

Important Notes

It is not possible for students to finish their studies before the minimum duration of the undergraduate programme, which is four years.



ACADEMIC STRUCTURE

Management of the Department of Automation Engineering, T.E.

Head of Department:	Prof. Simira Papadopoulou
Deputy head of Department:	Prof. Dimitrios Manolakis
Secretary:	Christina Lazaridou

Divisions

The Department is organized in two divisions, determined by a decision of the General Assembly of the Department, published to the Official Government Gazette 2293/25.07.2016, issue B, page 24780.

Division of Automatic Control Systems

Director:	Prof. Dimitrios Manolakis
Deputy Director:	Assoc. Prof. Stilianos Xanthos

The Division of Automatic Control Systems covers the topics of Classic and Modern Theory of Automatic Control, Intelligent Systems, Computer Programming, Microcomputers and Microcontrollers, Industrial Computer Networks, Metrology and Instrumentation, SCADA, Telecommunications, Signal Processing and Process Control.



Division of Industrial Automation and Mechatronics

Director: Asst. Prof. Dimitrios Triantafyllidis

Deputy Director: Asst. Prof. Fotios Stergiopoulos

The Division of Industrial Automation and Mechatronics covers the topics of Electrical Circuits, Electronics, Technical Design, Applied Mechanics, Mechatronics, Electric Machines, Servo Motor Systems, Power Transducers for Electrical Energy Systems, Industrial Automation and Power Distribution Systems, Hydraulic and Pneumatic Systems, Robotics, CAD/CAM/CAE, CNC, Human-Mechatronics Interfaces, Programmable Logic Controllers and Industrial Systems and Product Design.

Assembly

The Assembly of the Department is the highest administration authority of the Department. Its members include the academic staff, representatives of other staff and one representative of the students. It assembles regularly or extraordinarily, after a decision by the Head of Department, or after a written request from at least one third of its members. Special topics such as academic promotions, are discussed and decided by an assembly of special composition, in accordance with the current legislation.

General Assemblies of the Divisions

The Assemblies of the Divisions are composed of the academic staff of each Division and have a consulting role to the Assembly of the Department for Division related topics such as course assignments and syllabi. The General Assemblies of the Divisions elect the Division Directors.

Academic Staff

Professors

Aristides Gogoussis

Diploma in Mechanical Engineering, AUTH, Greece, 1981

MSc in Mechanical Engineering, U. Minnesota, USA, 1984

MSc in Electrical Engineering, U. Minnesota, USA, 1986

Ph.D. in Mechanical Engineering, U. Minnesota, USA, 1988

Ph.D. in Philosophy, AUTH, Greece, 2002

Dimitris Manolakis

Diploma in Electrical Engineering, University of Patras, Greece, 1983

Ph.D. in Electronics and Computer Engineering, Technical Univ. of Crete, Greece, 1991

Simira Papadopoulou

Diploma in Chemical Engineering, AUTH, Greece, 1982

Dr. Ing in Process Control, Institute of Systems Dynamics and Control, Uni. Stuttgart, Germany, 1988

Panagiotis Tzionas

B. Eng. in Electrical Engineering, Imperial College London, 1988

MSc in Digital Electronics, King's College London, U.K., 1990

Ph.D., Department of Electrical and Computer Engineering, DUTH, Greece, 1994

Evangelos Hatzikos

B. Eng. in Electronic Telecommunications, U. Salford, U.K., 1977

M. Eng. in Control Systems Engineering, U. Salford, U.K., 1978

Ph.D., Department of Informatics, AUTH, Greece, 2008

Associate Professors

Stelios Xanthos

Diploma in Electrical Engineering, AUTH, Greece, 1991

Ph.D., Department of Electrical and Computer Engineering, AUTH, Greece, 2000

Assistant Professors

Maria Drakaki

BSc in Physics, AUTH, 1986

MSc in VLSI System Design, University of Westminster, London, U.K., 2004

Ph.D., Physics Department, University of Texas at Austin, U.S.A., 1992

Vasilios Ilioudis

Diploma in Electrical Engineering, AUTH, Greece, 1983

MSc in Electronic Control Engineering, U. Salford, 1987

Ph.D., Department of Electrical and Computer Engineering, AUTH, Greece, 2013

Michail Kiziroglou

Diploma in Electrical and Computer Engineering, AUTH, Greece, 2000

MSc in Electrical and Computer Engineering, DUTH, Greece, 2003

Ph.D. in Electronics and Electrical Engineering, University of Southampton, U.K., 2007

Fotis Stergiopoulos

Diploma in Electrical Engineering, AUTH, Greece, 1995

Ph.D. in Electrical and Electronic Engineering, U. Birmingham, U.K., 1999

Dimitris Triantafillides

Diploma in Electrical Engineering, AUTH, Greece, 1996

Ph.D., Department of Electrical and Computer Engineering, AUTH, Greece, 2001

Apostolos Tsagaris

Bachelor of Science in Automation, Alexander TEI of Thessaloniki, Greece, 1994

MSc, Department of Product and System Design Engineering, Univ. Aegean, Greece, 2005

MSc in Mechatronics, UP Catalunya, Spain και TEI Δυτ. Μακεδονίας, 2007

Ph.D., Department of Applied Informatics, University of Macedonia, Greece, 2013

Christos Yfoulis

Diploma in Electrical Engineering, AUTH, Greece, 1995

MSc in Control and Information Technology, U.M.I.S.T., U.K., 1996

Ph.D. in Theory of Control Systems, U.M.I.S.T., U.K., 2000

Applications Professors**Dimitrios Bechtsis**

Diploma in Electrical and Computer Engineering, AUTH, Greece, 2000

MSc in Medical Informatics, AUTH, Greece, 2003

Ph.D. Candidate, Mechanical Engineering, AUTH, Greece, 2014 – Today

Nikolaos Nikolaidis

Diploma in Electrical Engineering, University of Patras, Greece, 1977

Ph.D. in Engineering, AUTH, Greece, 2013

Fotini Papadopoulou

Diploma in Electrical Engineering, AUTH, 1991

Ph.D., Department of Electrical and Computer Engineering, AUTH, Greece, 2000

Scientific and Laboratory Associates

Georgios Danas

BSc in Mathematics, AUTH, Greece, 1985

M.A. in Mathematics, The City University of New York, USA, 1989

Ph.D. in Mathematics, The City University of New York, USA, 1991

Chrysovalantou Ziogou

BSc in Informatics, ATEI Thessaloniki, 2001

MSc in Information Systems, University of Macedonia, 2005

MSc in Control Theory, AUTH, Greece, 2009

Ph.D. Dep. of Informatics & Telecom. Engineering, Univ. of Western Macedonia, Greece, 2013

Dionisis Salonikidis

BSc in Automation, ATEI Thessaloniki, 2005

MSc in Applied Informatics, University of Macedonia, 2012

Other Academic Personnel

Michail Papachristoforou

Non-Destructive Testing

Odyseas Maaita

Mathematical Modelling – System Identification

Administration Staff

Chief of Administration Staff Christina Lazaridou

Stergios Rampotas



Committees and assignment of academic activities

Post-Graduate Programme Committee

Stelios Xanthos

Christos Yfoulis

Fotis Stergiopoulos

Industrial Training Committee

Stelios Xanthos

Vasilios Ilioudis

Dimitrios Bechtsis

Undergraduate Programme Committee

Christos Yfoulis

Dimitris Triantafillides

Michail Kiziroglou

Fotini Papadopoulou

Simira Papadopoulou

Academic Councillor for Students – Organization and Programming of Teaching

Apostolos Tsagaris

Erasmus Programme

Maria Drakaki



Departmental Webpage

Dimitrios Bechtsis

Internal Evaluation Group

Dimitris Triantafillides

Christos Yfoulis

Fotini Papadopoulou

Research Coordination Group

Fotis Stergiopoulos

Maria Drakaki

Michail Kizioglou

Connection with the Labour Market

Fotis Stergiopoulos

Connection with the Alumni of the Department

Maria Drakaki

Cultural Activities

Fotini Papadopoulou



HISTORY OF THE DEPARTMENT

At 15 km from the Thessaloniki City Centre, in the Industrial Park of Sindos there is the 1.5 km² campus of the Alexander Technological Educational Institute of Thessaloniki. The ATEI of Thessaloniki was founded through the 1404 Education Legislation in 1983, with name: “Structure and Operation of Technological Educational Institutes, T.E.I.”. In 2001 it became an Institution of the Hellenic Higher Education System, by the Law with number 2916. It comprises four Schools seventeen Departments. The ATEI of Thessaloniki today has over 21.000 students and it is the fourth largest Higher Education Institution of Greece, with respect to student population. The Department of Automation Engineering T.E. belongs to the School of Technological Applications, which also comprises the Departments of Electronic Engineering T.E., Automotive Engineering T.E., Informatics Engineering T.E. and Civil Engineering T.E..

The Department of Automation Engineering T.E. is operating since September 1989. The yearly number of incoming students is around one hundred, through the National Higher Education Entry Examinations of Greece. This number is increased by around 10% through student transfers and registration from other Departments. The Department is in academic and research cooperation with similar Departments from other domestic and foreign Universities. It also participate to research and post-graduate programmes, and has successfully organized scientific conferences and other higher education programmes.

The Department is systematically evaluated with respect to the quality of the research and education it provides. In particular, since the academic year 2008-2009, there have been eight Departmental Evaluations from the Institute, one per year. In addition, in 2013 an External Evaluation of the Department was carried out, by a National Committee including members from renowned International Higher Education Institutions. The evaluation reports are available through the website of the department. In the following table, the number of incoming, outgoing and registered students over the years is presented

Year	Total Intake	Graduated	Total Registered
2005-2006	133	61	1269
2006-2007	128	62	1248
2007-2008	127	67	1241
2008-2009	122	91	1206
2009-2010	161	97	1108
2010-2011	173	86	1049
2011-2012	138	102	878
2012-2013	116	86	968
2013-2014	168	59	896
2014-2015	119	88	989
2015-2016	131	65	980
2016-2017	146		981

Table 1: Number of incoming, outgoing and registered students since 2005. (Source: Department Registry and Institute's electronic system: Pithia).



UNDERGRADUATE PROGRAMME

The new undergraduate programme of the Department of Automation Engineering T.E. was designed and certified by the Hellenic Quality Assurance & Accreditation Agency (HQA) in 2016. Its implementation began in 2017. Its fundamental scientific fields are Automation, Control Systems and System Engineering. It comprises thirty eight compulsory courses, a six-month long compulsory dissertation programme and a compulsory six-month long industrial training programme. The structure of the programme is outlined graphically in Figure 1. In the electronic version of this handbook, each colour represents the correspondence between course groups and scientific expertise, skills and abilities. In the following tables, an overview of the courses per semester is presented.

Characteristics of the Automation Engineering Graduate

The graduates of the Automation Engineering T.E. Department, according to their given scientific and technical knowledge and skills, can follow a professional carrier in the public, private and entrepreneurial sector, mainly in the following professional areas:

A) Implementation and supervision of analysis, design, planning, development and fabrication activities related to Automation Installations and Systems. Examples include electrical, mechanical, electronic, computing, data logging, hydraulic, pneumatic and supervisory systems, elevators, lifting and transfer systems, electrical installations, industrial informatics and data management and analysis and decision making systems.



B) Surveillance, supervision of operation, technical support and maintenance of robotic and mechatronic systems, information systems, industrial networks, data acquisition and transmission systems in all industrial and production services such as:

Industrial plants

Solar, wind and fuel energy production plants and energy distribution systems.

Land, sea and air transportation systems, such as road networks, transportation control and all vehicle types.

Agricultural systems, precision and smart agriculture production and supply chain.

Ecological waste management, processing and recycling systems

Medical electronic and automation systems including patient monitoring and wearables

Industrial informatics

C) In the undertaking and management of large and complex projects and works that include automation systems, throughout the production sector and services spectrum.

D) In the undertaking of scientific expert evaluation works, expert witnessing reports, evaluation of offers, product quality, work outcome and infrastructure, in automation related fields.

F) In education and training of automation technology related subjects including automatic control, supervisory, digital and intelligent control, robotics and mechatronics, data sensing, transmission and analysis, informatics and industrial informatics.

The graduates of the Department of Automation Engineering T.E. can also continue their studies in any domestic or foreign post-graduate programme, including Ph.D. degrees.

Courses taught in the English language

All courses of the department are offered to incoming Erasmus students and are available in English.

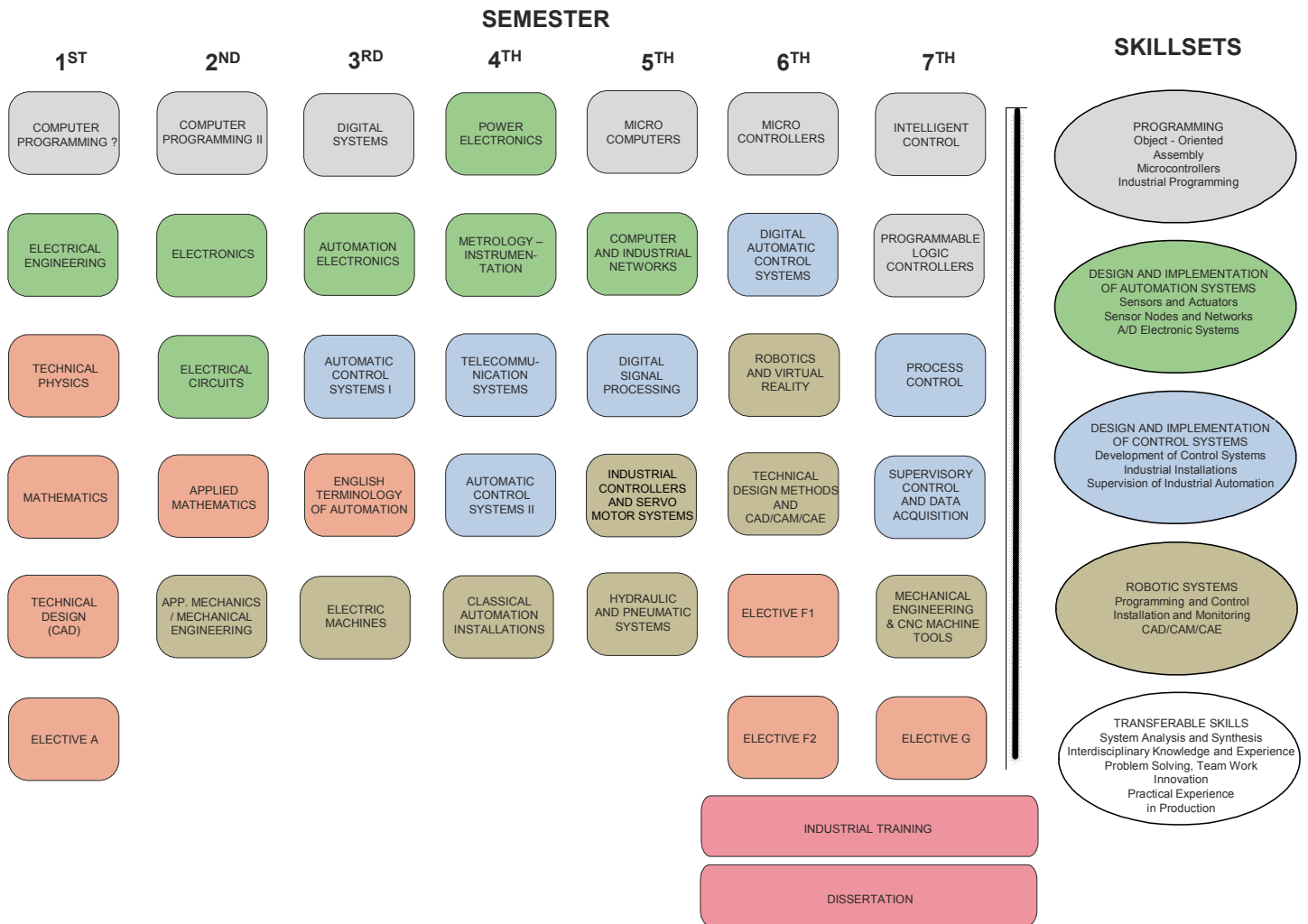


Figure 1. Graphical overview of the undergraduate programme. Different colours represent correspondence of course groups to knowledge background and skills.



Code	COURSE	Hours of Teaching			ECTS Th./Lab
		Lectures	Tutorials	Laboratory	

1st Semester

11	Mathematics	4			5
12	Technical Physics	2	2		5
13	Computer Programming I	2		2	4/2
14	Electrical Engineering	4			6
15	Technical Design (CAD)	2		2	3/2
16.x	Elective A	2			3

2nd Semester

21	Applied Mathematics	3	1		5
22	Computer Programming II	2		2	4/2
23	Electronics	4		2	4/3
24	Applied Mechanics – Mechanical Engineering	2	2		6
25	Electrical Circuits	2		2	4/2

3rd Semester

31	Automatic Control Systems I	4	1		4/3
32	Automation Electronics	2		2	4/2
33	Digital Systems	3		2	4/3
34	Electric Machines	3		2	4/3
35	English Terminology of Automation	2			3

4th Semester

41	Power Electronics	2	1	2	4/2
42	Metrology - Instrumentation	4		2	4/3
43	Automation Control Systems II	2		2	4/2
44	Classical Automation Installations	2		2	3/2
45	Telecommunication Systems	2	1	2	4/2

Code	COURSE	Hours of Teaching			ECTS Th./Lab
		Lectures	Tutorials	Laboratory	

5th Semester

51	Industrial Controllers and Servo Motor Systems	2	1	2	4/3
52	Hydraulic and Pneumatic Systems	2		2	3/2
53	Digital Signal Processing	2	1	2	4/3
54	Microcomputers	2		2	3/2
55	Computer and Industrial Networks	3		2	4/2

6th Semester

61	Digital Automatic Control Systems	2	1	2	4/3
62	Robotics and Virtual Reality	2	1	2	4/2
63	Technical Design Methods & CAD-CAM-CAE	2		2	3/2
64	Microcontrollers	2	1	2	4/2
65.x	Elective F1	2			3
66.x	Elective F2	2			3

7th Semester

71	Intelligent Control	2		2	3/2
72	Programmable Logic Controllers			2	5
73	Mechanical Engineering & CNC Machine Tools	2	1	2	4/3
74	Process Control	4			6
75	Supervisory Control And Data Acquisition			2	4
76.x	Elective G	2			3

8th Semester

81	Industrial Training				10
82	Dissertation				20

16.x: Elective A

- 16.1 Introduction to Economy & Management
- 16.2 Work Safety
- 16.3 Project Management
- 16.4 Philosophy of Technology and Science
- 16.5 History and Evolution of Automation

65.x: Elective F1

- 65.1 Renewable Energy Sources
- 65.2 Non-Destructive Testing and Measurement
- 65.3 Industrial Product and System Design
- 65.4 Special Topics on Networks – Wireless Sensor Networks

66.x: Elective F2

- 66.1 Physical and Chemical Processes
- 66.2 Computer Programming III
- 66.3 Special Topics of Electrical Installations
- 66.4 Mathematical Modelling – System Identification
- 66.5 Human – Mechatronics Interfaces
- 66.6 Special Topics on Electric Machine Control

76.x: Elective G

- 76.1 Advanced Control Systems
- 76.2 Design and Implementation of Sensors
- 76.3 Probability Theory and Stochastic Processes
- 76.4 Supply Chain Management and Control
- 76.5 Non-Linear Dynamics and Design-Implementation of Automatic Control Systems

LABORATORIES

The Department of Automation Engineering T.E. operates the following educational and research laboratories:

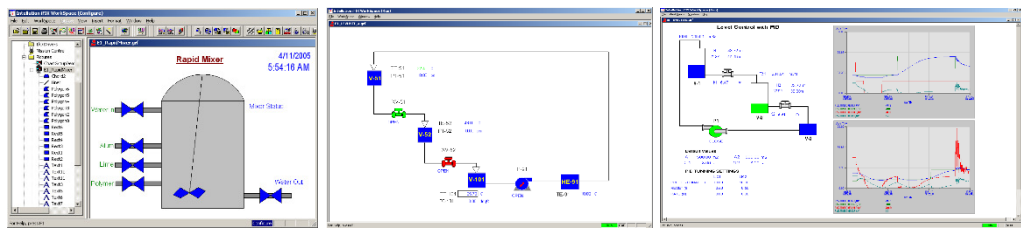
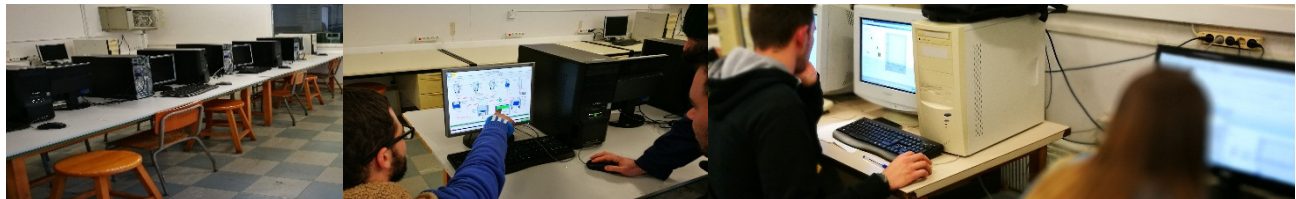
Name	Building	Room
Laboratory of CAD/CAM/CAE	School	3009A
Laboratory of PLC	Automation/Informatics	120
Laboratory of Computer Networks	Automation/Informatics	108
Laboratory of SCADA	School	3010B
Laboratory of Intelligent Control	Automation/Informatics	219
Laboratory of Electric Machines and Motion	School	3008B
Laboratory of Electronics	School	3011
Laboratory of Power Electronics	Automation/Informatics	111
Laboratory of Electrical Circuits	School	3017
Laboratory of Classical Automation Installations	Automation/Informatics	120
Laboratory of Metrology	Automation/Informatics	220
Laboratory of Microcomputers and Microcontrollers	Automation/Informatics	219
Laboratory of CNC Machine Tools	School	3009B
Laboratory of Computer Programming	Automation/Informatics	108
Laboratory of Robotics and Virtual Reality	School	3009A
Laboratory of Automatic Control Systems	School	3010
Laboratory of Telecommunications and Digital Signal Processing	Automation/Informatics	120
Laboratory of Hydraulic and Pneumatic Systems	School	3008A
Laboratory of Digital Systems	School	3019
Laboratory of Technical Design	School	3020



Laboratory of PLC and Digital Signal Processing



Laboratory of Process Control – SCADA





Laboratory of Electrical Machines and Motion



Laboratory of Electronics





Laboratory of Metrology

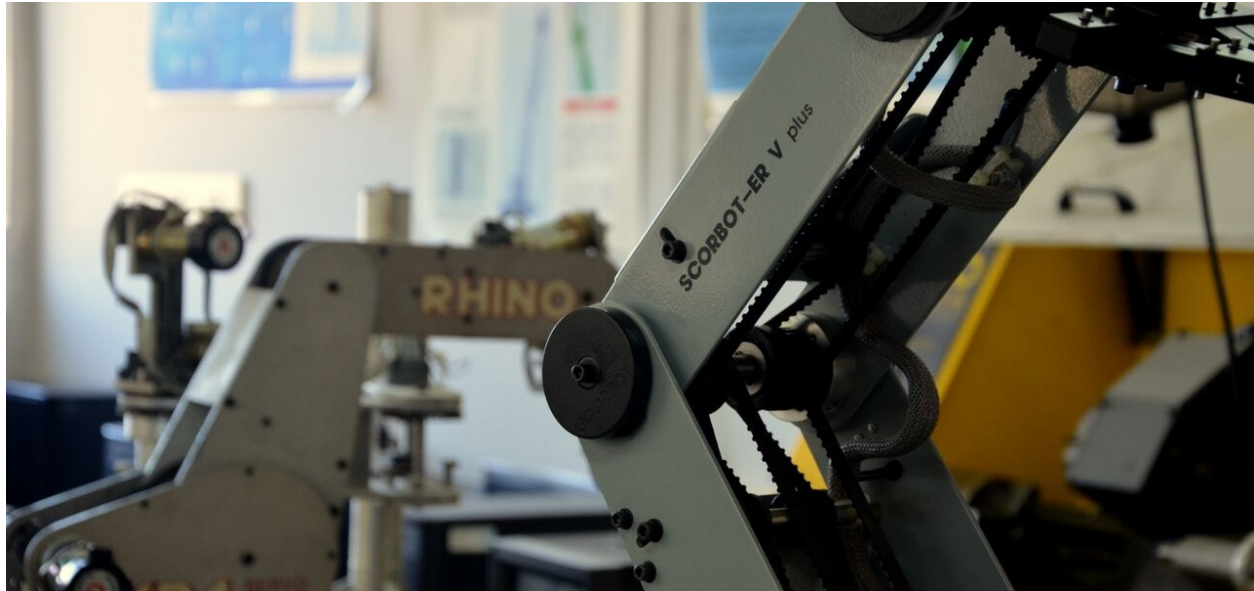


Laboratory of Computer Programming





Laboratory of Robotics and Virtual Reality

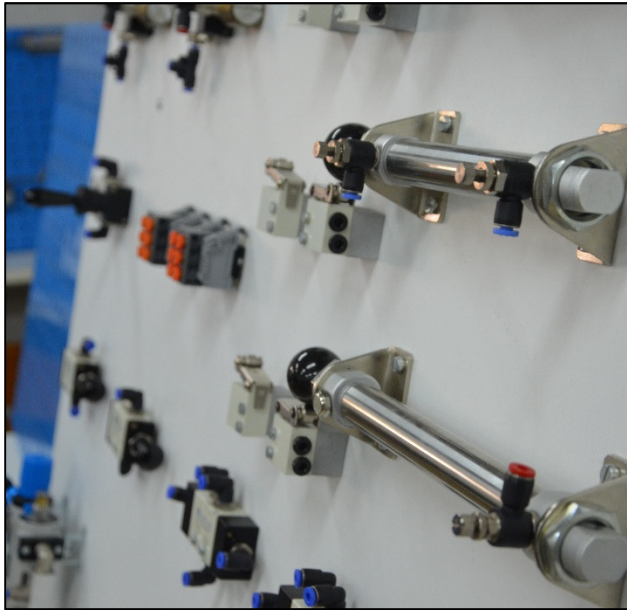


Laboratory of Automatic Control Systems

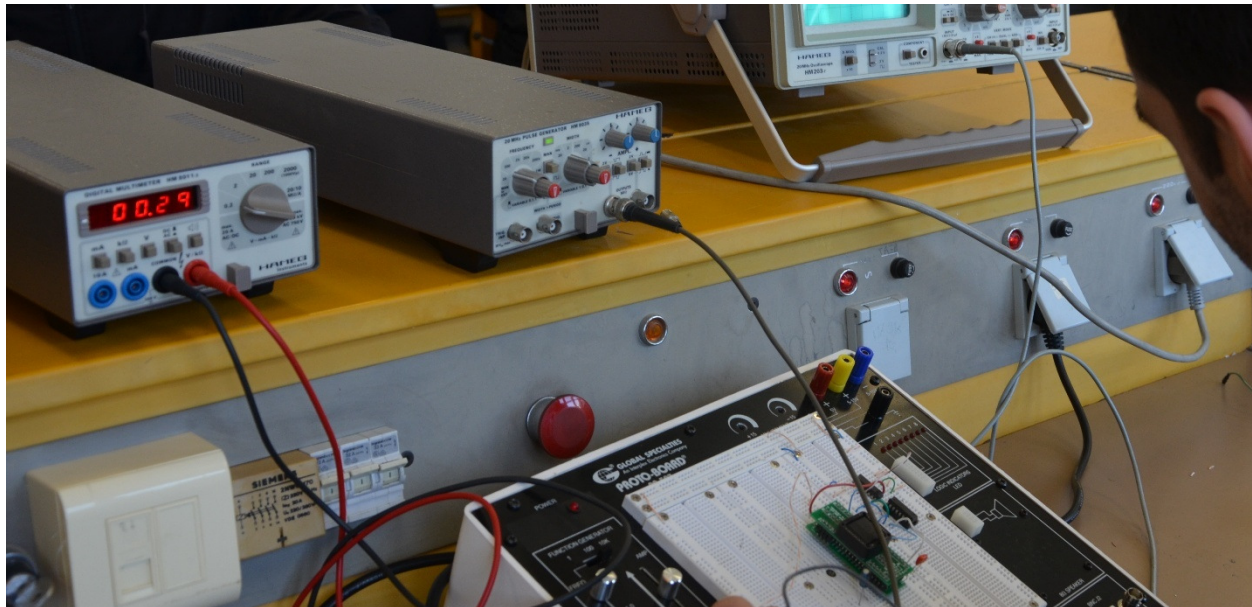




Laboratory of Hydraulic and Pneumatic Systems



Laboratory of Digital Systems





Laboratory of Technical Design





DISSERTATION

Introduction

The process of dissertation allocation, conduction and examination is monitored by the Dissertation Coordination Committee (DCC), which is composed by the Head of Department and the Directors of the two Divisions.

Students normally conduct their dissertation during the 8th Semester, although conducting it earlier is also possible. The formal requirements for a dissertation assignment is the successful completion of 120 ECTS points and having attended courses for at least four semesters. Dissertation topics are allocated at the beginning of the Fall and the Spring semesters. The total duration of a dissertation is six months at minimum and the correspond to 20 ECTS points. An extension can be granted by the supervisor, but a shorter duration is not permitted. In the event of a dissertation termination, for example due to missing the submission deadline, the supervisor informs the Dissertation Coordination Committee and the student is informed in writing by the Secretary of the Department.

Outline of Key Points

Requirements: 120 ECTS and 4 semesters completed

Duration: 6 months minimum

Starting dates: Beginning of each semester

ECTS points: 20

Topics must include an applied part. They can't be only bibliographical

Definition of Dissertation Topics

The objective of the Dissertation Programme is to provide the students with the opportunity to apply the knowledge and skills obtained through taught courses, on the development of useful functional system. It aims at developing creative thinking. Therefore, the Dissertation topics usually involve the design and implementation of an applied, automation related system. They are usually related to recent scientific and industrial progress, and the research and development activities of the Department. Topics can be assigned to one or two students at most.

Academics are required to propose at least one topic per semester. All topics are submitted to the Dissertation Coordination Committee at least three weeks before the Semester start date. The Committee assesses, approves and registers the topics with a code number. The topics are then posted to the departmental website by the secretary office.

Students that would like to be allocated with a dissertation topic may contact academics directly. After an agreement, an allocation form, provided by the secretary office, is signed by the student and the academic. All allocation forms must be submitted to the secretary office by the academics within one week from the semester start date. Subsequently, a table of dissertation topics and allocations is posted to the departmental website. In the case that a dissertation supervisor becomes unavailable, the committee re-assigns the supervision to another academic with related expertise.

Academics of other Departments and Universities can also supervise dissertations, by submitting a topic to the DCC, according to the aforementioned procedure.

Students can also conduct their dissertation in a foreign higher education institution, through the Erasmus programme. In this case they must apply to the committee at least one month before the intended start date. The application is assessed and discussed by the Assembly of the Department which defines the foreign institution and supervisor, the dissertation topic, the thesis language and the assessment procedure. Progress is monitored on behalf of the home Department by the DCC.

Retrospectively, the Department accepts incoming students for conducting a dissertation through the Erasmus programme. In this case, the same procedure as for home students applies.

A dissertation cannot be only bibliographical. It must contain an applied part, such as the design and fabrication of hardware or software, the use of software in an application, the development of a model, measurement acquisition and analysis. In exceptional cases, and after detailed justification a bibliographical topic may be approved by the DCC.



Thesis Structure and Content

A dissertation thesis must contain:

- Title and abstract (10 lines up to 1 page long) both in Greek and in English.
- An overview of the scientific and technical field and the theoretical framework
- A detailed description of the methodology that was followed
- Results that demonstrate functionality and usefulness
- Conclusions
- References, sequentially numbered and following the IEEE style
- Appendices with related programming code, datasheets etc

With respect to formatting, the departmental Dissertation Template must be observed. The template is available on the departmental webpage. The cover page in particular must be in line with the template of the School of Technological Applications of the Institute. On the second page, a declaration of copyright ownership must be signed by the student.

Completion and Assessment

Once a dissertation has been completed and approved by the supervisor, an application for examination must be submitted to the secretary office, with a suggestion for three academic examiners which may or may not include the supervisor, accompanied by a digital storage medium containing the thesis in pdf. A printed copy of the thesis is not compulsory. Each student must submit a separate application for examination.

Dissertations are presented and examined publicly on dates announced by the secretary office. On a dissertation assessment day, approved dissertations are presented, usually in Room 3010 of the School building, according to a daily schedule. Presentations are open for questions by all attendants. Each dissertation is assessed by the three associated examiners in a 0-10 scale. The final mark is calculated as the average of the three, rounded to two-decimal precision.

There are at least four dissertation examination dates distributed in every academic year. Extraordinary examination dates are possible but must also be publicly announced and justified by emergencies such as health issues, severe weather conditions and army leave restrictions.

Plagiarism

The student is the sole dissertation author and signs the copyright ownership included as a second page in the dissertation. All the dissertation material, including text, figures, tables and data must be original. All sources used during the dissertation must be referred to explicitly, through IEEE style formatted references.

Plagiarism is taken extremely seriously by the department and may lead to direct academic disciplinary action and referral for criminal act investigation.

Examples of plagiarism:

Repeating text from a source without using quotes.

Repeating text from a source without proper citation

Use of the wrong citation

Claiming ideas or work of others

Adaptation of text from a source without proper citation

Translation of text from a source without proper citation

Use of Figures from the network without citation AND written consent from the creator

Copying parts of work from other students, regardless of consent

Use of work performed by any other person (e.g. by third-party dissertation assistants)

Instructions for avoiding plagiarism:

Do not assign a dissertation to a third party. It is a criminal act and you are risking a permanent loss of your degree, a criminal record, and most importantly your reputation.

Using text from others must be avoided, but if it is absolutely necessary, quote marks AND proper citation MUST be used

In the main text and the references sections, all used sources must be cited, even the ones that were not directly used for conducting the dissertation work

Do not include translation of other works or sources in the dissertation thesis

Students must describe things in their own words and develop their personal view of the subject rather than repeating the opinions of others



Don't copy-paste from webpages in order to build your background section. You need to write your own introduction to the subject.

Be clear on which ideas come from other sources and which ones are your own.

While conducting the dissertation, keep track of sources used, in order to include them all in the references.

Consult your supervisor about citations and plagiarism before you start writing.

Bibliography and Further Sources on Plagiarism

Library, orion.lib.teithe.gr/index.php?page=plagiarism-intro, ATEI Thessaloniki, Greece, 2016

P. Koutsampasis, syros.aegean.gr/users/kgp/plagiarism.html, Univ. of the Aegean, Greece, 2016

Decision of the General Assembly, Department of International, European and Area Studies, deps.panteion.gr/images/akad_deontologia_8_6_11.pdf, Panteion University, Greece, 2016



INDUSTRIAL TRAINING

The Industrial Training Programme of the Department of Automation Engineering T.E. operates according to its Regulation. A short version of this regulation is presented in this section.

General Regulations

According to the founding law of Technological Educational Institutes, Law 1404/83, and the Presidential Decree 174/85, the students of TEI must follow a compulsory six-months long Industrial Training programme, in a public or private institution that is active in the subject of their specialization. The training programme is considered as a course of the 8th semester and it is an integral part of the undergraduate programme. It is qualitatively assessed and it corresponds to 10 ECTS points. It is followed for a continuous period of six months, except if the hosting institution is a seasonal business. The training programme can be carried out:

- a) In the public sector
- b) In the private sector
- c) Abroad, in the framework of a European programme

Eligibility

The conditions that must be met for starting a training programme are defined in the regulative directive E5/4942/12-09-89, which states that the six-months training programme can start after the last semester, provided that the student has successfully completed all the specialization courses and two thirds for the total number of courses.

The specialization courses of the undergraduate programme are listed in the following table:

CODE	COURSE
31	Automation Control Systems I
33	Digital Systems
43	Automation Control Systems II
44	Classical Automation Installations
51	Industrial Controllers and Servo Motor Systems
52	Hydraulic and Pneumatic Systems
55	Computer and Industrial Networks
61	Digital Automation Control Systems
62	Robotics and Virtual Reality
63	Technical Design Methods & CAD-CAM-CAE
64	Microcontrollers
71	Intelligent Control
72	Programmable Logic Controllers
73	Mechanical Engineering & CNC Machine Tools
74	Process Control
75	Supervisory Control And Data Acquisition

Procedure

Students apply for starting their industrial training filling in the corresponding form at the secretary office. After an eligibility check by the secretary, and if all conditions of the directive E5/4942/12-09-89 are met, the student is requested to bring a verification of intent for employment and insurance by the employer, and a declaration of personal details by the student, using the special forms provided by the secretary.

Subsequently the following procedure is followed:



1. A special employment agreement is completed in three copies, one for the student, one for the employer and one for the Department. The agreement is signed by the student, the employer and by the Head of the Department. The student must return the signed agreement to the department within a reasonable timeframe.
2. The Department provides a verification to the employer, through the student, to use for the state salary subsidisation programme (OAED).
3. The Department provides the training booklet, which is updated weekly with the training progress.
4. An academic supervisor is assigned to the training programme. This assignment is finalized by the Industrial Training Committee of the Department.

In the case of Industrial Training Programmes that are funded by other (non-OAED) programmes, special procedure instructions are issued for each academic year, depending on the programme. In the case of Training Programmes funded by European Programmes, such as the Erasmus Programme, special instructions are provided in coordination with the corresponding office of the Institute.

If not all required courses have been completed, students can apply for exceptional admission to the training programme. Such applications are considered by the General Assembly of the Department on an individual basis.

Progress Monitoring

The Industrial Training Booklet is provided by the Department and it is updated weekly with the progress of the programme and the tasks that have been assigned to and carried out by the student. This log is checked and signed weekly by the employer. The regular completion of the booklet is carried out in coordination with the academic supervisor.

When a training programme is complete, the booklet is handed to the secretary office through the academic supervisor. Subsequently, The Head of Department assesses the progress and decides on the satisfactory completion of the programme. In the case of rejection, the student



may apply for a re-consideration by the General Assembly of the Department, which makes a final decision on accepting the training completion or specifies any additional training that may be required (Presidential Decree 174, Government Gazette Issue A, 59, Article 5).

Responsibilities of the Student

The student must abide to the health, safety and other regulations that apply at the working environment of the employer. Unjustified absence or breach of the employment code of practise may lead to termination of employment. In such a case, the student must apply for a new training programme in the following semester in order to complete the remaining training period.

Leave

During a training programme, a student can take up to five working days of leave in total, provided that a serious reason occurs. Absences are recorded in the Training Booklet, reviewed and signed for by the academic supervisor and authorized by the Head of Department, according to the Presidential Decree 174, Government Gazette Issue A, 59, Article 5.

The compulsory National annual leave dates for the public sector are those defined by law 1157/81, article 1, paragraph 11 (Government Gazette Issue A, 126).

Insurance

During the training programme, students are insured by the Social Insurance Institute of Greece (IKA), only for risk of employment accident. They are not insured for medical care.

Salary

According to Law 1566/1985, article 71, paragraph 4b, the salary of the student is determined jointly by the Ministries of Education and Treasury. In the private sector, the daily salary is defined at 80% of the daily salary of the unspecialised worker applicable according to the national collective employment agreement. In the public sector the monthly salary is today 176.08 Euros. The salary of the trainee is paid monthly.



Students that are already employed

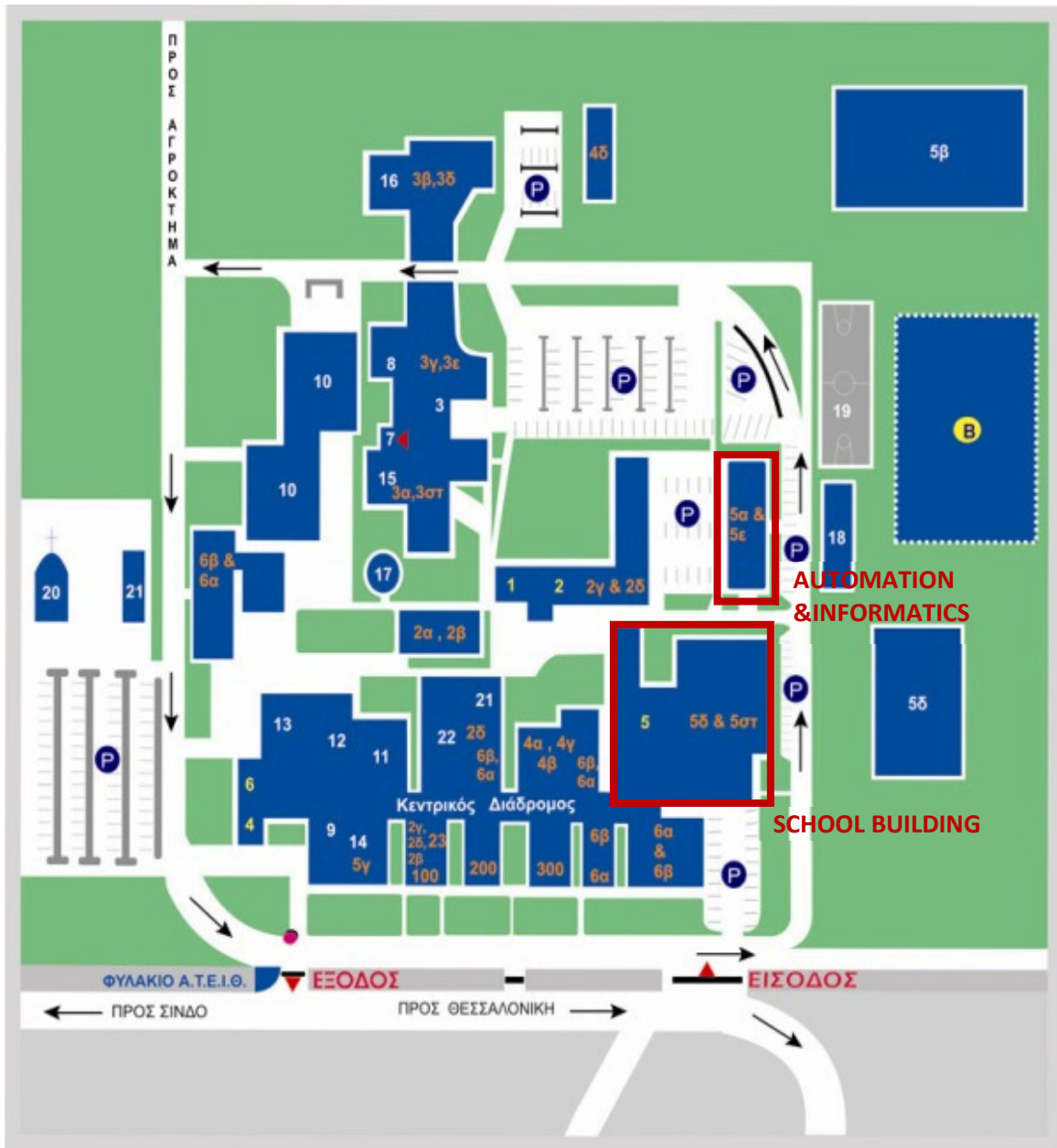
Already employed students can conduct their trainship during their work, provided that their work subject is related to that of the Undergraduate Programme, that they are insured for medical care and that they complete six months of continuous, full-time employment.

Additional information

More information about the Industrial Training Programme can be found at the training programme webpage, through the Departmental e-class platform. In that webpage, students can register in order to receive advertisements of new positions, news and information about the training programme. Students can also consult the Industrial Training Programme Committee in-person or via e-mail.

CAMPUS MAP

<p>1. ADMINISTRATION</p> <p>SECRETARY OFFICES OF DEPARTMENTS AND SCHOOLS</p> <p>2. School of Business Administration and Economics</p> <p>3/4. School of Agricultural Technology, Food Technology & Nutrition</p> <p>5. School of Technological Applications</p> <p>6. School of Health and Medical Care</p> <p>INSTITUTE SERVICES</p> <p>7. Career Services Office</p> <p>8. Socrates Office</p> <p>9. Central Library</p> <p>10. Student Halls of Residence</p> <p>11. Student Restaurant</p> <p>12. Central Coffee Shop</p> <p>13. Large Amphitheatre</p> <p>14. Small Amphitheatre</p> <p>15. Amphitheatre "Georgios Economou"</p> <p>16. New Amphitheatre of the School of Health and Medical Care</p> <p>17. Staff Restaurant</p> <p>18. Sports Centre – Network Operations Centre</p> <p>19. Sports Stadium</p> <p>20. Church</p> <p>21. Technical Services</p> <p>22. Health Services</p> <p>LECTURE ROOMS AND LABORATORIES</p> <p>School of Business Administration and Economics</p> <p>2a. Department of Business Administration: Marketing</p> <p>2b. Department of Library Science and Information Systems</p> <p>2c. Department of Business Administration: Accounting and Finance</p> <p>2d. Department of Business Administration: Tourism</p>	<p>School of Agricultural Technology, Food Technology & Nutrition</p> <p>3. Department of Agricultural Technology</p> <p>4a. Department of Food Technology</p> <p>4b. Department of Nutrition and Dietetics</p> <p>School of Technological Applications</p> <p>5a. Department of Informatics Engineering T.E.</p> <p>5b. Department of Electronics Engineering T.E.</p> <p>5c. General Department</p> <p>5d. Department of Automotive Engineering T.E.</p> <p>5e. Department of Automation Engineering T.E.</p> <p>5f. Department of Civil Engineering T.E.</p> <p>School of Health and Medical Care</p> <p>6a. Department of Aesthetics and Cosmetology</p> <p>6b. Department of Physiotherapy</p> <p>6c. Department of Medical Laboratories Studies</p> <p>6d. Department of Nursing</p> <p>6e. Department of Midwifery</p> <p>6f. Department of Early Childhood Care and Education</p> <p>23. English Learning Rooms and Laboratories</p> <p>24. Laboratories of Physics and Chemistry</p> <p>100. Lecture Rooms 101 - 121</p> <p>200. Lecture Rooms 201 - 221</p> <p>300. Lecture Rooms 301 - 321</p>
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Source: www.teithe.gr

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