ARISTOTLE UNIVERSITY OF THESSALONIKI FACULTY OF SCIENCES SCHOOL OF INFORMATICS

SCHOOL OF INFORMATICS

GUIDE FOR UNDERGRADUATE STUDIES 2019-2020

THESSALONIKI 2019

This document has been edited by Professor C. Kotropoulos, Professor N. Bassilliades, Associate Professor S. Demetriadis, and Assistant Professor K. Tsichlas under the supervision of Professor E. Angelis (Head of the School of Informatics) and the assistance of M. Milosi, S. Gkoutzamanis, E. Trikka, and G. Theochari (secretarial staff). Assistant Professor Georgios Keramidas was responsible to produce the English version of this document.

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1. PREFACE

The School of Informatics of the Faculty of Sciences of the Aristotle University of Thessaloniki (AUTH) was established in 1991 and accepts students since the academic year 1992-1993. The foundation of the School was a milestone for the Faculty of Sciences and AUTH, bringing a particularly important impact on the scientific life and technological development of the city of Thessaloniki.

The School of Informatics welcomes every year new students who managed to be highly ranked in the Greek national-level qualifications exams while a high percentage of them achieved excellence. The continuous efforts of the personnel for teaching, research, improvement of the infrastructure and staffing of the School, have made the School of Informatics well reputed at national and international levels. The quality of the School is also evident by the recent and past evaluations as reported by independent evaluators who acknowledged the high educational and research quality.

Even during the social and economic crisis of the last decade, the School managed to evolve dynamically and elevate its activities into multiple educational and research areas, without sacrificing the high quality standards and principles that has adopted. Today, the School is considered as a renowned and distinguished School at both national and international levels. Its outstanding reputation is due to the distinctions and awards it has achieved, the research activities of its members, the funded programs it coordinates or participates in, but mainly to the high quality education it offers and the professional recognition of its graduates. The School of Informatics is firmly listed in the top University rankings in the fields of Computer Science and / or Computer Engineering. In the current academic year, it is ranked in the positions 301-400 in the world rankings of Times Higher Education list, 301-350 in the Quacquarelli Symonds rankings, 401-500 in the Academic Ranking of World Universities rankings (Shanghai list), 250 of the CWTS Leiden ranking (with PP-10% criterion), and at 181 position in the US News rankings.

The main goal of the curriculum of the school is to equip future computer scientists with a wide range of knowledge and skills so that they can address the multifaceted difficulties and unpredictable challenges that arise in an ever-evolving world of technology. Indeed, as In-formation Technology now affects every aspect of social life, it is crucial for a computer scientist to be able to learn and adapt quickly and continuously to the complex needs of our society and to new technological developments. Due to these reasons, the School of Informatics gives high priority to the cultivation of a strong theoretical background with Science, Technology, and Mathematics courses (Science, Technology, and Mathematics, STEM). The curriculum of the School is continuously evolving and being improved according to the scientific sub-jects which must correspond both to basic demands and current scientific trends, as well as to current technological peaks. The four-year curriculum is structured in such a way that strong theoretical foundations are built during the first five semesters, while the next three semesters offer a wide range of elective courses leading to specializations in scientific areas covering the major trends in computer science in order to enable a smooth transition of the graduated students to follow postgraduate studies or to enter in the industrial sector.

The School of Informatics is constantly evolving. The curriculum is constantly being revised, with the last major reformation taking place in 2019 after considering the evaluations of students, graduates, external evaluators, as well as the international scientific and technological trends, and developments. The organizational structure of the School has been updated with the establishment of three Divisions (Sectors), which comprise six (6) Laboratories focusing on cutting-edge specializations.

The School also offers six (6) new graduate programs, one of which is in collaboration with the School of Economics of the Aristotle University of Thessaloniki. In addition, the School participates and supports one more cross-sectional postgraduate program in Medicine. In general, the members of the School are particularly active in all academic activities and being part of committees in the Faculty of Sciences and the Aristotle University of Thessaloniki, contributing decisively to the operation of the entire University community. Moreover, the School enhances the extroversion of students by raising their awareness and active participation in the activities of social actors of the city and the country emphasizing the role of Information Technology as a mean of coping with social and economic problems.

As Head of the School of Informatics of the Aristotle University of Thessaloniki and on behalf of all the teaching, research, and administrative staff of the School, I would like to congratulate and welcome all new students and wish to the entire academic community, a happy and creative academic year!

Professor Eleftherios Angelis

Head of the School of Informatics

2. THE FACULTY OF SCIENCES

The Faculty of Sciences was established in 1925 (until 1982 was called Faculty of Physics and Mathematics). The Faculty of Sciences comprises six (6) Departments:

- 1. Department of Biology
- 2. Department of Geology
- 3. Department of Mathematics

4. Department of Informatics

- 5. Department of Physics
- 6. Department of Chemistry

DEAN'S COUNCIL

DEAN

Prof. C. Chintiroglou	Department of Biology
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MEMBERS

Prof. D. Vokou	Head of the Department of Biology
Prof. C. Papazachos	Vice President of the Department of Geology
Prof. H. Charalambous	Head of the Department of Mathematics
Prof. E. Angelis	Head of the Department of Informatics
Prof. A. Bais	Head of the Department of Physics
Prof. P. Spathis	Head of the Department of Chemistry

SECRETARY

E. Raftopoulou

3. THE SCHOOL OF INFORMATICS

The School of Informatics was established in 1992 as a part of the Faculty of Sciences. The School is managed by the General Assembly (GA), whose participants include all Academic staff members, representatives of the Specialized Educational Personnel and Specialized Administrative and Technical staff.

Part of the Department (lecture rooms, laboratories, academic and administrative staff offices) is located in Kalamaria (Ethinikis Antistaseos 16 str.; map: <u>http://tinyurl.com/csd-auth-east</u>).



Map of the Aristotle University Campus

- 1. Department of Philosophy
- 2. Department of Chemistry
- 3. Faculty of Sciences
- 4. Departments of Agriculture and Forestry & Natural Environment
- 5. Department of Veterinary Medicine
- 6. Medical School
- 7. Meteorological Station
- 8. Observatory
- 9. AHEPA University Hospital
- 10. Faculty of Dentistry
- 11. AHEPA University Hospital
- 12. Faculty of Theology
- 13. A.U.Th. Administration Building
- 14. Faculty of Law, Economics, and Political Sciences
- 15. Ceremony Hall
- 16. Central Library Reading Room
- 17. Faculty of Engineering
- 18. Faculties of Physical Education & Sports Science, Education, and Fine Arts
- 19. Student Club
- 20. University of Sports Centre
- 21. University of Macedonia

The School of Informatics is divided into three main sectors. Each sector serves academic and research activities in different scientific areas.

A. Web, Data and Knowledge Engineering Sector

Director: Professor Nick Bassiliades

Teaching and Research in:

- 1. Logic Programming and Intelligence Systems
- 2. Knowledge Representations and Reasoning
- 3. Machine Learning and Knowledge Discovery
- 4. Operating Systems and Web Systems
- 5. Programming Techniques for Problem Solving
- 6. Artificial Intelligence
- 7. Web Information Systems
- 8. Digital Social Networks
- 9. Data Structures
- 10. Databases
- 11. Algorithms and Computational Complexity
- 12. Data Mining
- **13**. Information Retrieval
- 14. Big Data Analytics
- 15. Distributed and Massively Parallel Systems
- 16. Informetrics

Two research laboratories belong to this sector:

Data and Web Science Laboratory (DataLab)

Director: Professor Athena Vakali

Members:

- 1. Anastasios Gounaris (Assistant Professor)
- 2. Ioannis Manolopoulos (Professor)
- 3. Apostolos Papadopoulos (Associate Professor)
- 4. Konstantinos Tsichlas (Assistant Professor)

Webpage: <u>https://datalab.csd.auth.gr/</u>

Intelligent Systems Laboratory (ISL)

Director: Professor Ioannis Vlahavas

Members:

- 1. Nick Bassiliades (Professor)
- 2. Dimitrios Vrakas (Assistant Professor)
- 3. Grigorios Tsoumakas (Assistant Professor)

Ιστοσελίδα: <u>https://intelligence.csd.auth.gr/</u>

B. Software, Hardware and Foundations Sector

Director: Associate Professor Nikos Konofaos

Teaching and Research in:

- 1. Software Engineering
- 2. Reliability and Security in Software
- 3. Information and Communication Technologies in Education
- 4. Internet Educational Technologies
- 5. Computer Music Technologies
- 6. Human Computer Interaction
- 7. Open Technologies
- 8. Embedded Systems
- 9. Probabilities, Statistics, and Information Systems
- 10. Electronics and Microelectronics
- 11. Computer Architecture
- 12. Applied Mathematics
- 13. Information Theory Cryptography
- 14. Operations Research and Decision Making
- 15. Optimization Algorithms
- 16. Linear Algebra

Two research laboratories belong to this sector:

Software and Interactive Technologies Laboratory (SWITCH)

Director: Associative Professor Stavros Demetriadis

Members:

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

Webpage: <u>http://switch.csd.auth.gr/</u>

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

Director: Associate Professor Nikos Konofaos

Members:

- 1. Lefteris Angelis (Professor)
- 2. Konstantinos Draziotis (Lecture)
- 3. Georgios Keramidas (Assistant Professor)
- 4. Nikolaos Tsitsas (Assistant Professor)

Webpage: <u>http://samep.csd.auth.gr/</u>

C. Communication Networks and Information Analysis Sector

Director: Associate Professor Nikolaos Nikolaidis

Teaching and Research in:

- 1. Computer Communication Systems
- 2. Distributed Systems
- 3. Optical Communication Systems
- 4. Optical Communications
- 5. Wireless Networks
- 6. Communication Systems
- 7. Optical Networks
- 8. Nanonetworks
- 9. Expert Systems and Fuzzy Logic
- 10. Digital Signal Processing
- 11. Computer Graphics Digital Image Synthesis
- 12. Artificial (Computational) Intelligence
- 13. Digital Signal Processing in Biomedicine and Bioinformatics
- 14. Robot Perception
- 15. Virtual/Enhanced Reality
- 16. Big Data Information Analysis

Two research laboratories belong to this sector:

Artificial Intelligence and Information Analysis Laboratory (AIIA Lab)

Director: Professor Ioannis Pitas

Member:

- 1. Constantine Kotropoulos (Professor)
- 2. Nikolaos Laskaris (Assistant Professor)
- 3. Nikolaos Nikolaidis (Associate Professor)
- 4. Anastasios Tefas (Associate Professor)

Webpage: <u>http://www.aiia.csd.auth.gr</u>

Network and Communication Systems Laboratory (NetCom Lab)

Director: Professor Georgios Papadimitriou

Members:

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

Webpage: <u>http://netcom.csd.auth.gr/</u>

4. SCHOOL OF INFORMATICS STAFF

Head	Deputy Head	Secretary
Prof. Eleftherios Angelis	Prof. Athena Vakali	Maria Milosi
Professors	Eleftherios Angelis	
	Ioannis Vlahavas	
	Athena Vakali	
	Nick Bassiliades	
	Constantine Kotropoulos	
	Ioannis Manolopoulos	
	Georgios Papadimitriou	
	Ioannis Pitas	
	Ioannis Stamelos	
Associate Professors	Stavros Demetriadis	
	Nikos Konofaos	
	Panagiotis Katsaros	
	Amalia Miliou	
	Nikolaos Nikolaidis	
	Petros Nikopolitidis	
	Apostolos Papadopoulos	
	Nikolaos Pleros	
	Anastasios Tefas	
Assistant Professors	Dimitris Vrakas	
	Anastasios Gounaris	
	Christos Katsanos	
	Georgios Keramidas	
	Nikeless Leskeris	
	Dionisios Politis	
	Thrasyvoulos Tstatsos	
	Nikolaos Tsitsas	
	Constantinos Tsichlas	
	Grigorios Tsoumakas	
Lecturers	Konstantinos Draziotis	

ORGANIZATION OF SCHOOL OF INFORMATICS

Previous Faculty Members	Konstantinos Lazos (Emeritus Professor)
	Georgios Bleris † ¹
	Ioannis Tsoukalas (Emeritus Professor)
	Panagiotis Linardis
	Miltiadis Chatalis
	Nikolaos Atreas
	Alexandros Nanopoulos
	Andreas Pomportsis $\dot{\uparrow}^2$
	Kostas Karanikas
	Eleni Karatza (Emeritus Professor)
Specialized Educational Personnel	Vasiliki Peana
	Eleftherios Tiakas
Specialized Administrative and	Stavros Stavroulakis
Technical Staff	
Secretariat	Maria Milosi (head)
	Spiros Gkoutzamanis
	Metaxia Nastou
	Eirini Trikka
Secretariat of Faculty	Georgia Theochari
	Elvira Tsaklidou

Kalamaria Campus Administrative Support Konstantina Lagotheodorou

¹ Georgios Bleris served as Professor of the Informatics Department from 1998 to 2005. He is deceased on April 17, 2005.

 $^{^2}$ Andreas Pomportsis served as Professor of the Informatics Department from 1993 to 2013. He is deceased on September 1, 2013.

5. HEADS & DEPUTY HEADS

Period	Head & Deputy Head
1992 – 1997	Professor Ioannis Tsoukalas
1997 - 2001	Professor Andreas Pomportsis
	Professor Ioannis Pitas
2001 - 2003	Professor Constantinos Lazos
	Professor George Bleris
2003 - 2005	Professor Ioannis Tsoukalas
	Professor Ioannis Vlahavas
2005 - 2007	Professor Andreas Pomportsis
	Professor Kostas Karanikas
2007 - 2009	Professor Kostas Karanikas
	Professor Andreas Pomportsis
2009 - 2011	Professor. Yannis Manolopoulos
	Assoc. Professor Ioannis Stamelos
2011 - 2013	Professor. Yannis Manolopoulos
	Assoc. Professor Eleftherios Angelis
2013 - 2017	Professor Ioannis Vlahavas
	Professor Eleftherios Angelis
2017 –	Professor Eleftherios Angelis
	Professor Athina Vakali

	Name	Supervisor	Graduation Date
1	Bors Adrian-Georghe	I. Pitas	25/1/1999
2	Theoni Akexoudi	A. Miliou	23/11/2015
3	George Albanidis	C. Kotropoulos	2/7/2008
4	Apostolos Ampatzoglou	A. Stamelos	29/2/2012
5	Leonidas Anthopoulos	I. Tsoukalas	12/10/2005
6	Soumela Atmatzidou	S. Demetriadis	20/3/2018
7	Nikos Bagis	K. Karanikas	10/10/2007
8	Evangelos Banos	I. Manolopoulos	23/11/2015
9	Stylianos Basagiannis	A. Pomportsis	17/2/2010
10	Nikoletta Bassiou	C. Kotropoulos	29/2/2012
11	Nick Bassiliades	I. Vlahavas	20/3/1998
12	Christos Berberidis	I. Vlahavas	20/12/2007
13	Stamatia Bibi	I. Stamelos	24/9/2008
14	Despoina Chatzakou	A. Vakali	21/11/2017
15	Alexander Chatzigeorgiou	I. Tsoukalas	14/6/2000
16	George Chatzielefteriou	P. Katsaros	20/7/2018
17	Panagiota Chatzipetrou	E. Angelis	17/6/2015
18	Vassilios Chatzis	I. Pitas	8/7/1999
19	Vasilios Chouvardas	A. Miliou	8/7/2014
20	Eleni Constaninou	I. Stamelos	23/11/2015
21	Stavros Demetriadis	A. Pomportsis	8/3/2000
22	Dimitrios Dervos	P. Linardis	8/3/2000
23	Nikolaos Dimokas	I. Manolopoulos	17/2/2010
24	Michael Dimopoulos	P. Linardis	28/6/2004
25	Anestis Fachantidis	I. Vlahavas	21/7/2016
26	Stavros Filippidis	I. Tsoukalas	2/7/2008
27	Dimitrios Filippopoulos	E. Karatza	20/12/2007
28	Dimitrios Fitsios	N. Pleros	23/11/2015
29	Eirini Giannakidou	A. Vakali	29/1/2014
30	Maria Giatsoglou	A. Vakali	23/11/2015
31	Antonia Gogoglou	I. Manolopoulos	22/1/2018
32	Evaggelos Hatzikos	I. Vlahavas	5/11/2008
33	Nantia Iakovidou	I. Manolopoulos	29/1/2014
34	Alexandros Iosifidis	I. Pitas	29/1/2014
35	Vasiliki Kakali	G. Papadimitriou	27/6/2012
36	George Kakarontzas	I. Stamelos	6/2/2013
37	Konstantinos Kantelis	G. Papadimitriou	20/7/2018
38	Zafeirios Karaiskos	K. Lazos	28/6/2004
39	Anastasios Karakostas	S. Demetriadis	16/3/2011
40	Konstantinos Karaoglanoglou	E. Karatza	8/7/2014

6. PHD GRADUATES

	Name	Supervisor	Graduation Date
41	Ioannis Karidis	I. Manolopoulos	6/11/2006
42	Athanasios Karoulhs	A. Pomportsis	29/6/2001
43	Ioannis Kapsouras	N. Nikolaidis	22/7/2019
44	Ioannis Katakis	I. Vlahavas	2/7/2009
45	Dimitrios Katsaros	I. Manolopoulos	28/6/2004
46	Panagiotos Katsaros	K. Lazos	11/2/2002
47	Ioannis Kavakiotis	I. Vlahavas	22/11/2016
48	Pavlos Kefalas	I. Manolopoulos	19/7/2017
49	Efstathios Kirkos	I. Manolopoulos	20/12/2007
50	Fwtios Kokkoras	I. Vlahavas	29/6/2006
51	Andreas Konstantinidis	A. Pomportsis	29/6/2011
52	Maria Kontaki	I. Manolopoulos	2/7/2009
53	Efstratios Kontopoulos	N. Bassiliades	16/3/2011
54	Georgia Kougka	A. Gounaris	19/7/2017
55	Vasiliki Koutsonikola	A. Vakali	4/2/2009
56	Kalliopi Kravari	N. Bassiliades	4/3/2015
57	Michael Krinidis	I. Pitas	2/7/2009
58	Stilianos Krinidis	I. Pitas	28/6/2004
59	Makrina-Viola Kosti	E. Angelis	22/7/2019
60	Margarita Kotti	C. Kotropoulos	2/7/2009
61	Eirini Kotsia	I. Pitas	2/7/2008
62	Marios Kyperountas	I. Pitas	17/2/2010
63	Maria Kyprianidou	A. Pomportsis	29/2/2012
64	Konstantinos Kyriakopoulos	G. Papadimitriou	20/11/2018
65	Thomas Lagas	A. Pomportsis	6/11/2006
66	Charalambos Laskaridis	A. Pomportsis	10/2/2003
67	Christos Liaskos	G. Papadimitriou	29/1/2014
68	Dimitris Liparas	E. Angelis	17/6/2015
69	Constantinos Liotsios	I. Tsoukalas	29/6/2007
70	Fotis Loukos	E. Karatza	29/1/2014
71	Ioannis Mademlis	I. Pitas	20/11/2018
72	Ioannis Magnisalis	S. Demetriadis	21/7/2016
73	Pavlos Maniotis	N. Pleros	21/11/2017
74	Dimitrios Margounakis	I. Tsoukalas	6/2/2013
75	Apostolos Mavridis	T. Tsiatsos	19/7/2017
76	Constantinos Mavromoustakis	E. Karatza	14/3/2006
77	Georgios Meditskos	N. Bassiliades	2/7/2009
78	Anakreon Mentis	P. Katsaros	27/6/2012
79	Victoria Mironi	A. Pomportsis	17/2/2010
80	Nikolaos Mitas	E. Angelis	2/7/2009
81	Eleftherios Moisiadis	A. Vakali	2/7/2009
82	Ioannis Moschakis	E. Karatza	23/11/2015
83	Eirini Myrgioti	A. Miliou	31/5/2013

Aristotle University of Thessaloniki

	Name	Supervisor	Graduation Date
84	Alexandros Nanopoulos	I. Manolopoulos	10/2/2003
85	Athanasios Naskos	A. Gounaris	19/7/2017
86	Symeon Nikitidis	I. Pitas	13/3/2013
87	Athanasios Nikolaidis	I. Pitas	11/2/2002
88	Savvas Nikolaidis	K. Lazos	28/6/2004
89	Petros Nikopolitidis	A. Pomportsis	12/6/2002
90	Georgios Ntampos	N. Pleros	20/7/2018
91	George Palaigeorgiou	I. Tsoukalas	14/3/2006
92	George Pallas	G. Papadimitriou	7/10/2009
93	George Pallis	A. Vakali	29/6/2006
94	Yannis Panagakis	C. Kotropoulos	8/7/2014
95	Alexis Papadimitriou	I. Manolopoulos	27/6/2012
96	Apostolos Papadopoulos	I. Manolopoulos	14/6/2000
97	Pantelis Papadopoulos	I. Tsoukalas	2/7/2009
98	Symeon Papadopoulos	A. Vakali	29/2/2012
99	Sotirios Papaioannou	N. Pleros	23/11/2015
100	Yannis Papanikolaou	G. Tsoumakas	20/11/2018
101	Zafirios Papazachos	E. Karatza	29/6/2011
102	Ioannis Partalas	I. Vlahavas	7/10/2009
103	Nikolaos Passalis	A. Tefas	20/11/2018
104	Sofia Petridou	G. Papadimitriou	2/7/2008
105	Dionisios Politis	I. Tsoukalas	16/10/1998
106	Persephoni Polixronidou	K. Karanikas	2/7/2008
107	Prokopis Prokopiou	N. Tsitsas	20/11/2018
108	Konstantinos Prousalis	N. Konofaos	22/7/2019
109	Catherine Raptopoulou	I. Manolopoulos	29/6/2006
110	Dimitrios Rafailidis	I. Manolopoulos	29/6/2011
111	Ioannis Refanidis	I. Vlahavas	29/6/2001
112	Emmanouil Rigas	N. Bassiliades	20/11/2018
113	George Roumelis	I. Manolopoulos	19/7/2017
114	Ilias Sakelariou	I. Vlahavas	14/3/2006
115	Ioannis Samoladas	I. Stamelos	16/3/2011
116	Theodosios Sapounidis	S. Demetriadis	8/7/2014
117	Antonios Sarigiannidis	P. Nikopolitidis	21/7/2016
118	Panagiotis Sarigiannidis	G. Papadimitriou	29/6/2007
119	Panagiotis Sentas	E. Angelis	20/12/2007
120	Dimitrios Settas	I. Stamelos	21/12/2011
121	Panagiotis Sfetsos	I. Stamelos	29/6/2007
122	Antonios Sidiropoulos	I. Manolopoulos	29/6/2006
123	Panagiotis Simeonidis	I. Manolopoulos	2/7/2008
124	Panagiotis Siozos	I. Tsoukalas	5/11/2008
125	Vasilios Solahidis	I. Pitas	28/6/2004
126	Georgios Spanos	E. Angelis	8/4/2019

	Name	Supervisor	Graduation Date
127	Eleftherios Spyromitros-Xioufis	I. Vlahavas	21/7/2016
128	Maria Spyropoulou	A. Miliou	6/2/2013
129	Emmanouela Stachtiari	P. Katsaros	20/11/2018
130	Konstantinos Stamos	A. Vakali	13/10/2010
131	Georgios Stavrinides	E. Karatza	8/7/2014
132	Thanos Stavropoulos	I. Vlahavas	17/6/2015
133	Konstantina Stoupa	A. Vakali	7/3/2007
134	Sowe Sulayman	A. Stamelos	10/10/2007
135	Anastasios Tefas	I. Pitas	11/2/2002
136	Stergios Tegos	S. Demetriadis	21/7/2016
137	George Terzopoulos	E. Karatza	21/7/2016
138	Eleftherios Tiakas	A. Papadopoulos	29/6/2011
139	Theodosios Theodosiou	E. Angelis	2/7/2008
140	Eleni Tousidou	I. Manolopoulos	12/6/2002
141	Evangelos Triantafillou	A. Pomportsis	26/6/2003
142	George Triantafyllakos	I. Tsoukalas	13/10/2010
143	Efthymia Tsamoura	I. Manolopoulos	31/5/2013
144	Nikolaos Tsapanos	N. Nikolaidis	9/3/2016
145	Sofia Tsekeridou	I. Pitas	1/3/2001
146	Grigorios Tsoumakas	I. Vlahavas	24/6/2005
147	George Tzanis	I. Vlahavas	29/6/2011
148	Theodoros Tzouramanis	I. Manolopoulos	12/6/2002
149	Christos Vagionas	A. Miliou	21/3/2017
150	Athina Vakali	I. Manolopoulos	17/1/1997
151	Dimitris Ververidis	C. Kotropoulos	5/11/2008
152	Dimitrios Vrakas	I. Vlahavas	28/6/2004
153	Nicholas Vretos	I. Pitas	27/6/2012
154	Stefanos Zafiriou	I. Pitas	29/6/2007
155	Constantinos Zerfiridis	E. Karatza	15/3/2004
156	Christos Zigkolis	A. Vakali	29/1/2014
157	Stilianos Zikos	E. Karatza	29/6/2011
158	Olga Zoidi	I. Pitas	5/11/2014

	Name	Supervisor
1	Nikiforos Anastasios	D. Politis
2	Katerina Antimaxitou	N. Tsitsas
3	Christina Antoniou	N. Bassiliades
4	Hippokratis Apostolidis	T. Tsiatsos
5	Konstantinos Athanasopoulos	I. Stamelos
6	Dimitrios Balobas	N. Konofaos
7	Georgia Baltsou	K. Tsichlas
8	Alexandros Bassiliades	N. Bassiliades
9	Georgia Beletsioti	G. Papadimitriou
10	Christos Bellas	A. Gounaris
11	Agisilaos Chadogeridis	T. Tsiatsos
12	Evaggelia Chatzianagnostou	A. Miliou
13	Alexandros Chatzikiriakou	P. Nikopolitidis
14	Despina Christou	G. Tsoumakas
15	Giannis Christoforidis	A. Papadopoulos
16	Eleana Dalagdi	D. Vrakas
17	Ilias Dimitriadis	A. Vakali
18	Dimitris Dimitriadis	G. Tsoumakas
19	Dimitra Evaggelopoulou	G. Papadimitriou
20	Umar Farooq	A. Miliou
21	Nikolaos Floropoulos	A. Tefas
22	Konstantinos Fotiadis	N. Pleros
23	Maria Ganopoulou	A. Vakali
24	Dimitrios Gerontitis	N. Tsitsas
25	Nikolaos Georgiadis	A. Papadopoulos
26	Kostas Georgiadis	N. Laskaris
27	Alexios Gidiotis	G. Tsoumakas
28	Georgios Gravanis	A. Vakali
29	Efstratios Kakaletsis	N. Nikolaidis
30	Fotis Kalaganis	N. Laskaris
31	Ioannis Kalliantzis	A. Papadopoulos
32	Andreas Kalogeropoulos	N. Tsitsas
33	Pantelis Kaplanoglou	I. Pitas
34	Jason Karakostas	I. Pitas
35	Dmitra Karanasiou	A. Vakali
36	Georgios Karantaidis	C. Kotropoulos
37	Christos Karapiperis	L. Angelis
38	Vasileios Kassiano	A. Papadopoulos
39	Andreas Kosmatopoulos	K. Tsichlas
40	Elia Kouzari	I. Stamelos

7. PHD CANDIDATES

	Name	Supervisor
41	Elefterios Kouloubris	I. Vlahavas
42	Sotiris Kousoutis	P. Nikopolitidis
43	Apostolos Kritikos	I. Stamelos
44	Paraskevas Lagakis	S. Demetriadis
45	Athanasios Lagopoulos	G. Tsoumakas
46	Aristotelis Lazaridis	I. Vlahavas
47	Georgia Latsiou	A. Papadopoulos
48	Nasos Lentzas	D. Vrakas
49	Bin Liu	G. Tsoumakas
50	Apostolos Lyritsis	A. Papadopoulos
51	Grazyna Majhrowska	K. Karanikas
52	Dimitrios Mamatsas	A. Papadopoulos
53	Stavroula Mammou	N. Konofaos
54	Fotios Mandaras	C. Kotropoulos
55	Athanasios Manolis	N. Pleros
56	Ilias Mavridis	E. Karatza
57	Stathis Mavridopoulos	P. Nikopolitidis
58	Panagiotis Melidis	P. Nikopolitidis
59	Charoula Mitsolidou	A. Miliou
60	Nikolaos Michailidis	C. Karanikas
61	Anna-Valentini Michailidou	A. Gounaris
62	Konstantinos Mokos	P. Katsaros
63	Ioannis Mollas	N. Bassiliades
64	Miltiadis Moralis-Pegios	N. Pleros
65	Achilleas Moschos	P. Nikopolitidis
66	George Mourgias-Alexandris	N. Pleros
67	Vagia Moustaka	A. Vakali
68	Vasileios Mygdalis	I. Pitas
69	Christoforos Nalmpantis	D. Vrakas
70	Anastasios Nentidis	G. Tsoumakas
71	Paraskevi Nousi	A. Tefas
72	Dimitrios Ntalaperas	N. Konofaos
73	Myrsini Ntemi	C. Kotropoulos
74	Evangellia Pantraki	C. Kotropoulos
75	Eirini Papagiannopoulou	G. Tsoumakas
76	Chrisoula Papazoglou	G. Papadimitriou
77	Christos Papaioannidis	I. Pitas
78	Maria Papoutsoglou	L. Angelis
79	Maria-Eleni Pascali	I. Stamelos
80	Fotini Patrona	I. Pitas
81	Maria-Eirini Pegia	K. Tsichlas
82	Stelios Pitris	N. Pleros
83	Nikolaos Politopoulos	T. Tsiatsos

	Name	Supervisor
84	Polykarpos Porfyrakis	N. Tsitsas
85	Georgios Psathas	S. Demetriadis
86	Eugenio Ruggeri	A. Miliou
87	Lazaros Spyridopoulos	N. Konofaos
88	Afroditi Stolaki	T. Tsiatsos
89	Georgios Stoupas	I. Manolopoulos
90	Panagiotis Stylianidis	T. Tsiatsos
91	Nikolaos Stylianou	I. Vlahavas
92	Charalampos Symeonidis	N. Nikolaidis
93	Nikolaos Terzenidis	A. Miliou
94	Sofia Terzi	I. Stamelos
95	Theodouli Terzidou	C. Karanikas
96	Theodoros Toliopoulos	A. Gounaris
97	Apostolos Tsakyridis	N. Pleros
98	Athina Tsanousa	L. Angelis
99	Avraam Tsantekidis	A. Tefas
100	Ioannis Tsiggalis	C. Kotropoulos
101	ThomasTsiolakis	N. Konofaos
102	Polixeni Tsompanoglou	G. Papadimitriou
103	Dimitrios Tychalas	E. Karatza
104	Maria Tzelepi	A. Tefas
105	Dimitrios Tzimas	S. Demetriadis
106	Theodore Tzirides	D. Vrakas
107	Rafail Tzimas	D. Politis
108	Georgios Tziroglou	G. Papadimitriou
109	Anastasios Valkanis	G. Papadimitriou
110	Georgios Vlahavas	A. Vakali
111	Panagiotis Vosniadis	N. Konofaos
112	Dimitris Zaikis	I. Vlahavas
113	Elias Zosimadis	I. Stamelos

8. 1st (Undergraduate) Course of Studies: General Infor-Mation

- The academic year starts on September 1st and ends on August 31st of the next calendar year. Each academic year consists of two semesters. Each semester comprises of at least thirteen (13) full weeks devoted to educational activities.
- 2. For the 2019-2020 academic year:
 - The fall semester starts on 1 October 1st, 2019 and ends on January 17th, 2020.
 - The fall semester exams last from January 20th to February 7th, 2020.
 - The spring semester starts on February 10th, 2020 and ends on May 29th, 2020.
 - The spring semester exams lasts from June 1st to June 22nd, 2020.
 - The September re-examinations start on September 1st and ends on September 22nd, 2020.
- 3. If, for any reason, the educational activities of a specific course are not being held for at least thirteen weeks, the course is deemed incomplete and no final examinations will take place.
- 4. In outstanding circumstances, it is possible to extend the duration of the semester for up to two weeks to complete the educational activities of a course. This decision must be made by the Rector upon the proposal of the deanery of the School.
- 5. The students enroll in the School at the beginning of each semester on dates set by the University and registers to specific courses on dates set by the School.
- 6. Students that can prove that they work for at least 20 hours per week can enroll as part-time students. To this end, the students must submit the related application to the Dean of the School. The exact requirements to be considered as a part-time student are defined by the regulations of the University.
- 7. Course exams are conducted only after the fall and spring semesters for the courses taught in these semesters, respectively. The students are entitled to take exams in both semesters before the start of the fall semester. Resit examinations are held in September. In all examination periods the student can be examined only in courses he/she has selected at the beginning of the semesters. Special care is taken for the oral examination of students with proven dyslexia prior to admission to the institution.
- 8. No classes are held during the two examination periods. Also, there are no classes during Christmas Eve until the day of the Epiphany, from Tyrophagus Thursday (27 February 2020) to the day of clean Monday (3 March 2020) and from Holy Monday (13 April 2020) to Thomas Sunday (26 April 2020). In addition, there are no classes or examinations during weekends and during the following dates:
 - October 26th St. Demetrius day
 - October 28th -National holiday
 - November 17th
 - January 30th
 - March 25th National holiday
 - May 1st Labor day
 - Holy Spirit day (June 8th, 2020)
 - Students' election day
- 9. The curriculum is divided into semester courses. The followings are considered as educational activities: (a) the lectures of the course, (b) providing assistance in small groups of students, (c) laboratory exercises and the corresponding exams, d) supervision of bachelor thesis or course projects and e) the organization of seminars or other similar activities aiming at consolidating students' knowledge.

- 10. The Curriculum includes the title, content and weekly schedule (lectures, laboratory practices etc.) of all courses (both compulsory and elective) as well as their temporal succession and dependencies (if any). According to the National Qualifications Framework for Higher Education, the curriculum also contains the learning outcomes and qualifications obtained from the curriculum as a whole, as well as from each individual course or educational activity or internship included therein. The credit units of each course, as well as the level of qualifications acquired, are matched with the rules set by the National Qualifications Framework, the European Lifelong Learning Qualifications Framework and the Qualifications Framework of the European Higher Education Council.
- 11. Based on the decision of the Assembly of the School of Informatics, from the 2019-2020 academic year, the course tracks are rescinded. From the 6th semester and onwards, the students can select the various courses offered by the School in order to complete the number of ECTS required to obtain the degree. The elective courses in 6th, 7th, and 8th semesters are organized in sets of courses, called streams. Course streams consist of well-defined sets of courses dealing with one or a combination of scientific fields. At least one course stream must be completed to obtain the degree.
- 12. Course textbooks or other course materials (in printed or electronic form) are provided to students free of charge. Students can select the textbook they wish to receive for each course from the corresponding list of suggested textbooks. The selection is accomplished through the Eudoxus on-line system (<u>http: //eudoxus.gr/</u>). All course teaching notes and slides should be available to the students. Students that enroll to a course (for which they have already obtained a textbook) for the second time are not entitled to free textbooks.
- 13. Each instructor should distribute the first week of the lectures to all students that have enrolled to his/her course the course's study plan and outline, bibliography and supplementary documentation.
- 14. Grading is being provided by the course instructor who can conduct written and/or oral exams or grade students on the basis of assignments or laboratory exercises.
- 15. If a student fails more than three times in a course examination, he/she can request to be examined by a committee consisting of three members of the School's staff. The three members must be appointed by the Dean of the School. The instructor of the course is not allowed to participate in the three-member committee. In the event of an additional failure, the student continues or does not continue his studies in accordance with the terms and conditions that are determined by the University (that explicitly defines the maximum number of possible examinations in a specific course).
- 16. In case a student fails in a course examination, he/she must attend the course again in the corresponding forthcoming semester.
- 17. Each semester course contributes a specific number of ECTS credits that are defined in accordance to the European Credit Transfer System (ECTS). The ECTS credits are a numerical value assigned to each course and it represents the workload required by the student to successfully complete the course. One ECTS unit corresponds to 30 hours of workload. One semester corresponds to 30 ECTS, while one full academic year corresponds to 60 ECTS.
- 18. During the first four academic years, students can select to attend and be examined to up to n+3 courses offered in this semester (the value of n corresponds to the number of courses for the current semester, as specified in the Curriculum). More specifically, for the first five (5) semesters, n is equal to five (5), while for the 6th and 7th semesters n is equal to six (6). In the 8th semester, n is equal to three (3) if the student selects to conduct a bachelor thesis; otherwise the n is set to six (6).
- 19. The course enrollment procedure takes place through the webpage <u>https://sis.auth.gr/</u>. Students can also use this webpage to obtain information regarding their current grades.

- 20. If a student does not enroll to courses for two consecutive semesters, she/he looses the student status. The courses required to obtain the Pedagogical and Didactical Competence certificate are disregarded from the n + 3 rule mentioned above. The said courses are two (2) and are offered by the Faculties of Philosophy and Education Departments, namely 1) "Education and Schooling" and 2) "Educational Issues on the Introduction of Information and Communications Technologies in the School Praxis."
- 21. In case a student has not been examined or failed in courses of the first five (5) semesters of the Curriculum, he/she must enroll, in the current semester, to all these courses, provided that they are being taught in a semester that is equivalent (fall /spring) to the current one. If the number of these courses exceeds the number n+3, the student should enroll to all the courses in the order they appear in the semesters, until the number n+3 is reached. This clause is applicable to all students during the first four (4) years of studies; while it is not applicable for the students that exceed the first four (4) years of studies.
- 22. After the first four academic years, students can select, at the beginning of each semester, to attend and be examined to up to eleven (11) courses offered in this semester.
- 23. Students can apply to discontinue their studies to the Dean of the School. The Council of University is responsible to define the procedure for the discontinuation, the supplementary documentation, the maximum time of the discontinuation of the studies as well as the possibility of exceeding that time. Students that discontinue their studies loose their student status unless the discontinuation is due to a proven health problem or due to another serious reason. By the end of this period, students resume their studies and status.
- 24. Students can apply to the Department Secretary for a suspension of their studies for up to 8 semesters (either consecutive or not). These semesters are not taken into account in the evaluation of the maximum duration of studies. Students that suspend their studies loose their student status during the suspension period. By the end of the suspension period, students resume their studies and status.
- 25. From the following websites <u>http://www.csd.auth.gr/</u> and <u>https://elearning.auth.gr/</u>, the students can obtain useful material related to the curriculum (course syllabus, class and exams schedule, assignments, laboratory practices, course materials, etc.). Announcements and information about the School can also be found on the School's Facebook page (<u>https://www.facebook.com/csdauthgr/</u>)
- 26. In every semester, prior to the examination period, students have the right and obligation to evaluate the courses and the instructors in order to improve the quality of the studies. More information is available on the Quality Assurance Unit's website (MODIP-AUTH http://qa.auth.gr) and on the School website.
- 27. In case of disciplinary offense (such as copying of exams, use of electronic means during the exams, copying of specific material from other courses in the course projects, etc.), it is prescribed by the Assembly of the School to impose penalties (from written reprimand to exclusion from examinations for subsequent semesters).

9. THE STUDENTS UNION

The Students Union was founded during the 1992-93 academic year. Its aim is to contribute to the development of the School and to ensure high level educational procedures.

One of the primary goals of the Union is to facilitate the smooth introduction of new students in the academic community. In addition, the Union organizes lectures and seminars to keep its members updated on issues related to employment opportunities and developments in the field of Computer Science. Other aims include the promotion of culture within the School and its active participation in scientific conferences and workshops. The Students Union has also set up a lending library for the benefit of its members. The library contains books related to the undergraduate courses.

THE ADMINISTRATIVE ORGANS OF THE ASSOCIATION:

The students participate in the General Assembly of the School as well as in other administrative bodies of the University e.g. in the Senate. The number of students' representatives in the General Assembly equals 50% of the Academic Staff members.

The Head and the Deputy Head of the School are elected by a body of electors that comprises of i) all Academic Staff members, ii) all undergraduate and graduate students, iii) all research and teaching assistants, scientific associates, Specialized Educational Personnel members, and Specialized Administrative and Technical Staff members of the School.

The Students Union elects a Steering Board comprising of seven (7) members as well as fivemember boards for each year of studies. All students' representatives are elected during the student elections that take place yearly in the beginning of April.

The Students Union Steering Board is responsible for all issues related to students. All decisions are taken by the Students General Assembly, which is the main governing body and convenes when deemed necessary. The five-member boards for each year of studies deal with issues that are specific to this year. The students' representatives in the School's General Assembly participate in the School administration, for example in the screening of applications for the transfer of students from equivalent University Schools or in the decision-making for issues such as the School Curriculum and its implementation (in what refers to student-related issues). In other issues, such as the selection of members of electoral bodies or the distribution of the School yearly budget, the students' representatives have no voting rights and can only express their opinion.

ALUMNI PORTAL

A dedicated portal for the alumni of the School of Informatics is maintained at the following webpage: <u>http://grads.csd.auth.gr/</u>. The purpose of this portal is to offer a contact point with the alumni of the School after their graduation.

10. THE UNDERGRADUATE STUDIES PROGRAM

During their undergraduate studies, all students attend a common core programme for the first five (5) semesters. In the last three (3) semesters students attend the compulsory courses of the selected course stream and a number of elective courses offered either by the selected or by another course stream. Course streams consist of well-defined sets of courses dealing with one or a combination of scientific fields. Each course stream contains seven (7) up to eleven (11) compulsory (core) courses. Apart from the core courses, each stream also includes a set of relevant optional-elective courses (there is no restriction in the selected number of optional courses). At least one course stream must be completed to obtain the degree. The optional courses do not lead to the completion of a specific course stream, although are considered in the total ECTS calculation. To be enrolled to a specific stream, a student must attend at least six (6) core courses from the selected course stream. Up to two course streams can be annotated in the Diploma Supplement of each student. The students must be enrolled and attend at least one (1) course stream. If the student has registered to more than 2 streams, he / she may choose which of the two (2) will appear in the Diploma Supplement. The course streams have been designed in a way to avoid overlapping of the compulsory courses (i.e., overlapping of core courses) by more than 50% between the 2 course streams, while no restriction was applied to the associated elective courses of the course streams.

Students do not register for a specific course stream during their studies. Only retrospectively (i.e., upon receiving the degree) it is checked that the potential graduate has attended a sufficient number of core courses of a specific course stream so as to record the specific course stream in the Diploma Supplement.

For students enrolled in the School during the 2012-2013 academic year or earlier, the provisions introduced in the academic years 2013-2014 & 2015-2016 must be applied to address all the issues arising from the changes in the curriculum during the respective years. These provisions are described in the study guide for the 2018-2019 academic year.

SPECIALIZED COMMITTEE FOR ISSUES RELATED TO STUDY REGULATIONS

The Assembly of the School in cooperation with the Student Affairs Committee (<u>student-af-fairs@csd.auth.gr</u>) is responsible for resolving any issues related to the curriculum as well as study regulations. Students should contact the Secretariat of the School for any issues that may be addressed by the relevant Committee.

EUROPEAN CREDIT TRANSFER SYSTEM (ECTS)

ECTS, the European Credit Transfer System, was developed within the framework of the ERAS-MUS (European Community Action Scheme for the Mobility of University Students) program in order to provide common procedures to guarantee academic recognition of studies abroad by measuring and comparing learning achievements and/or transferring them from one academic institution to another. The ECTS is based on mutual trust and confidence in the academic performance of partner institutions.

ECTS credits are a numerical value allocated to course units to describe the student's workload required to complete them. They reflect the quantity of work each course unit requires in relation to the total quantity of work necessary to complete a full year of academic study at the institution, that is, lectures, practical work, seminars, tutorials, field-work, private study - in the library or at home - and examinations or other assessment activities. ECTS is thus based on a full student

workload and not limited to contact hours only. In ECTS, 60 credits represent the workload of an academic year of study, whereas the workload for a semester and a term (defined as a 4-month period) usually corresponds to 30 and 20 credits respectively. Each ECTS credit unit corresponds to 30 hours of workload under Greek law regulations.

ECTS credits are allocated to all compulsory or elective courses. Credits can also be allocated to project work and thesis where the "units" are an integral part of the degree program. Credits are awarded only when the course has been finalized and all required examinations have been successfully completed.

Further information is provided by the ERASMUS Program Officer at the School of Informatics, Associate Professor P. Katsaros (<u>katsaros@csd.auth.gr</u>) or the University's Department of European Educational Programs (DEEP).

REQUIREMENTS FOR GRADUATION

In order to obtain the degree, the students must fulfill the following criteria:

- To successfully complete the 25 core courses of the new Undergraduate Program or the corresponding core courses of previous Undergraduate Programs, as set out in the transitional provisions.
- To successfully complete the bachelor thesis. In order for a student to complete his / her thesis, he / she must have passed 4/5 of the required coursework to obtain a degree.
- To accumulate at least 240 ECTS.
- To follow to at least on course stream.

From the academic year 2012-13 and onwards, the ECTS of the courses are recorded according to the value they had on the examination at which the course was successfully passed. For courses successfully completed prior to the 2012-13 academic year, the 2012-13 Curriculum ECTS applies.

If a student has followed the course stream system, he/she must have fulfilled the qualification requirements for his degree, as set forth in the first paragraph of Section 16 of this Guide.

DIPLOMA DEGREE CALCULATION

The degree of the diploma for those students who have been enrolled during the academic year 2010-11 and afterwards is calculated with a weighting factor equal to the exact number of ECTS credits for each course, according to the following equation:

Degree = (Course Degree1 x ECTSCourse1 + Course Degree2 x ECTSCourse2 +... + ThesisDegree x ECTSThesis) / Total ECTS credits

For students who have been enrolled before the academic year 2010-11, the provisions defined in the General Assembly of School 8/1.3.96 are employed. That is: multiply the degree of each course by a weighting factor determined by the course credits, and the sum of the individual products is divided by the sum of the weighting factors of all the courses. The weighting coefficients range from 1.0 to 2.0 and are calculated as follows: 2 credit courses have a weighting factor of 1.0. Courses with 3 or 4 credits have a weighting factor of 1.5 and courses with more than 4 credits have a weighting factor of 2.0. The weighting factor of the thesis is 4.5.

DIPLOMA SUPPLEMENT

The School of Informatics provides a Diploma Supplement to its graduates. The Diploma Supplement is an explanatory document with information on the nature, level, general context of education, content and status of the studies, as well as a Graduate Scoreboard based on the graduates' scores of the two previous academic years. It aims to aid mobility and access to lifelong learning opportunities and promotes transparency in higher education and fair and informed judgments about qualifications.

The Diploma Supplement does not substitute the actual diploma but is attached to it and is issued automatically (in Greek and in English languages) without any financial cost for the graduate student.

RECOGNITION OF COURSES TAKEN AT OTHER UNIVERSITIES

In general, student coming from other Universities either in Greece or abroad may recognize the ECTS of the courses that have successfully completed. The material covered by the course must have has sufficient overlap with the material taught in the corresponding course of the School. Students that are interested in recognizing such courses shall provide a related application to the School Secretariat. Apart from the application, the students should also provide the course material and a certificate from the Origin Department, which should prove that they have successfully passed the course.

11. POSTGRADUATE AND PHD STUDIES

Since the academic year 2018-2019, the School of Informatics offers five (5) new Postgraduate Studies Programmes.

Postgraduate Program (MSc) "Digital Media - Computational Intelligence" Director: Professor Constantine Kotropoulos Website: <u>https://dmci.csd.auth.gr/en/</u>

Postgraduate Program (MSc) "Artificial Intelligence" Director: Professor Ioannis Vlahavas Website: <u>https://ai.csd.auth.gr/en/</u>

Postgraduate Program (MSc) "Data and Web Science" Director: Associate Professor Apostolos Papadopoulos **Website:** <u>https://dws.csd.auth.gr/en/</u>

Postgraduate Program (MSc) " Interactive Hardware and Software Technologies" Director: Professor Ioannis Stamelos Website: <u>https://ihst.csd.auth.gr/en/</u>

Postgraduate Program (MSc) " Communication Networks and Systems Security" Director: Professor Georgios Papadimitriou Website: https://cnss.csd.auth.gr/en/

Contact info:

Secretariat of the School of Informatics Aristotle University of Thessaloniki 541 24, Thessaloniki E-mail: <u>pms_info@csd.auth.gr</u> Tel: 2310998930, 2310998709, 2310998410 Fax: 2310998310

Joint Postgraduate Studies Programmes (M.Sc)

The Department of Informatics participates in two Joint Postgraduate Studies Programmes.

(a) Joint Postgraduate studies programme (M.Sc) on "Management and Information Systems", which is offered jointly by the School of Informatics and Economic Sciences of the Aristotle University of Thessaloniki.

Director: Professor Nikolaos Vassiliadis

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

Contact info:

Secretariat of the School of Informatics Aristotle University of Thessaloniki 541 24, Thessaloniki E-mail: <u>deps_info@csd.auth.gr</u> Tel: 2310998930, 2310998709, 2310998410 Fax: 2310998310

(b) Joint Postgraduate studies programme (M.Sc) on "Medical Informatics", which is offered jointly by the Medical School, the Department of Electrical and Computer Engineering, and the School of Informatics of the Aristotle University of Thessaloniki. The courses concern applications of Medical Informatics technology on biomedical issues as well as on medical informatics technology.

Director: Professor Antonios Aletras Website: http://promesip.med.auth.gr/

Contact info:

Laboratory of Medical Informatics Medical School Aristotle University of Thessaloniki 541 24, Thessaloniki E-mail: <u>promesip@med.auth.gr</u> Tel: 2310999272 Fax: 2310999263

DOCTORAL STUDIES

The School of Informatics awards a doctoral degree in a wide range of research fields. The research of the PhD candidates is supervised by the Professors of the School who all have extensive research experience in their knowledge domains. The results of the doctoral thesis research are published in leading conferences and journals that are published by the most important scientific organizations in Computer Science, such as: Association for Computing Machinery (ACM) and Institute of Electrical and Electronics Engineers (IEEE).

Website: https://www.csd.auth.gr/en/studies/doctoral-studies

12. STUDENT MOBILITY

ERASMUS+ PROGRAM

Information about the ERASMUS+ program is provided below. Further information can be given by the Associate Professor P. Katsaros, who serves as the designated ERASMUS+ Program Officer of the School of Informatics (<u>katsaros@csd.auth.gr</u>) and by the Department of European Educational Programs (DEEP) (<u>http://eurep.auth.gr</u>).

STUDY MOBILITY

The Erasmus+ program enables undergraduate and postgraduate students to attend part of their curriculum (i.e., some of their courses), or elective courses not offered in their curriculum, as well as carry out their bachelor, postgraduate or doctoral work or internship in any of the countries of the European Union or the rest of the world.

PARTICIPATION IN THE ERASMUS+ PROGRAM

ERASMUS+ Mobility Scholarships are offered to students of all levels of education (undergraduate, postgraduate, and doctoral).

Rules for participation:

1. The beneficiaries must be Citizens of a Member State of the European Union or of another country participating in the program.

2. The website of DEEP <u>https://eurep.auth.gr/en/agreementsform/viewall</u> contains a list with the School of Informatics cooperation agreements and the Universities in which a student can apply for.

3. Students must have completed at least the first year of their studies and have successfully passed 50% of the ECTS by the current semester of studies. Also, the students must have not completed the minimum required ECTS credit level to obtain their degree in order to pursue part of their studies at the host University.

4. The applicant should have a proven and sufficient knowledge of the language in which the courses are offered at the host University. At the website of the Department of Education and Science at <u>https://eurep.auth.gr/en/agreementsform/viewall</u> the student can verify the foreign language degree that is required by the host University. An exception is the preparation of a thesis or postgraduate thesis, which can also be written in English.

5. The period of study at the host University can range from 3 up to 12 months.

- 6. The student may participate in the ERASMUS+ program only once during his/her studies.
- 7. There are no tuition fees, enrollment fees, exams, etc. at the host University.

8. National scholarships and loans are still fully paid to selected students.

9. The ERASMUS+ program also provides the opportunity to opt ERASMUS+ students without a scholarship as long as the mobility criteria are met.

At the website of the Department of Education and Science, the detailed procedure for evaluating student applications is depicted (<u>http://eurep.auth.gr/en/students/international/studies/evaluation</u>). The website also contains all the required steps that must be followed before the student's movement, during his/her movement as well as the process to certify the successful completion of the attended courses.

MOBILITY FOR INTERNSHIPS

As part of the framework of the European Community Lifelong Learning Program ERASMUS+, undergraduate students (from their first year of study), postgraduate students and doctoral candidates are able to get an internship abroad through their University / Business / Institution of ERASMUS+ Practical Sector Action. At <u>https://eurep.auth.gr/en/students/traineeship</u> the student can see general information and eligibility criteria.

Eligible Countries for Mobility:

- Member States of the European Union (EU)
- The countries of the European Economic Area EEA (Norway, Iceland, Liechtenstein)
- Countries from rest of the world.

Students must be enrolled in an official curriculum of the Aristotle University of Thessaloniki that leads to a bachelor degree, postgraduate, or doctoral degree. To follow an internship program, it is NOT necessary to have a student exchange agreement between the Aristotle University and the host institution.

AIESEC

AIESEC is the largest non-profit organization in the world offering internships and volunteer programs. It can be found in 110 countries and is administered exclusively by students. At the same time, as a network of multiple opportunities, it enables young people to develop their leadership skills, apply the knowledge they already have, and to challenge themselves by experiencing an international experience. The internship is mainly concerned in four (4) main axes:

Management: Working in areas related to management. It can be in finance, accounting, marketing, project management, organizational management or human resources management.

Development: Working on social development areas. It may include human rights, environmental issues, education, rural development and entrepreneurship.

Technical: Work related to Informatics and Information Technologies. It may include web development and management, software development and programming, system analysis and design, network management and database management.

Educational: Education related work. It may include language teaching, foreign language course teaching, career guidance, cultural understanding, and personal development.

The offered programs are constantly updated to cover a wider range of academic and scientific areas.

Contact info:

Office: NOPE Exterior corridor, in front of the Administration Center **Phone:** 2310-246165 **Email:** <u>aiesec.auth@gmail.com</u>

13. INTERNSHIP PROGRAMS

The "AUTH Student Practice" Programme is implemented within the framework provided by the Operational Programme "Education and Lifelong Learning," and co-funded by the European Union (European Social Fund) and national resources. The programme provides students with training for a specific period of time, ranging from one (1) to four (4) months, in private and public organizations that provide internship positions. The internships provide a unique opportunity to the student to familiarize themselves with the work environment. The students who participate in the Programme benefit in the following ways:

- They get the opportunity to fulfill tasks that are directly related to their field of study
- They familiarize themselves with market trends and required skills
- They get the opportunity to demonstrate and put into practice the skills and knowledge they have acquired during their studies
- They acclimate to the work environment and receive information necessary for them to choose wisely what is best for themselves both at a personal and professional level

The internship is considered as an elective course of the undergraduate program (NGE-07-02) and corresponds to five (5) ECTS credit units. The intern cannot obtain the degree before the start or during the internship period. This is because the internship is considered as part of the Curriculum of the School. However, the student may complete his/her academic obligations during the period of the internship. Assistant Professor Anastasios Gouraris along with a faculty member by each sector (Assistant Professor D. Vrakas, Associate Professor P. Nikopolitidis, Associate Professor S. Dimitriadis and N. Dimitriadis) are the Scientific Responsibles for the Internship programmee for the School of Informatics. Assistant Professor Anastasios Gouraris is supported by the Faculty secretary Ms. G. Theochari (tel. 2310-998164, gtheocha@csd.auth.gr). Students can apply and pursue an internship program as follows:

- As part of the framework provided by the Operational Programme "Education and Lifelong Learning"
- As part of the ERASMUS+ program
- By applying directly to organizations that provide internship positions (e.g., private and public organizations, AIESEC)

In the rest of this session, more details are provided for each one of the above directions. Information and announcements regarding the internship programmee are posted on the School website and specifically at <u>http://www.csd.auth.gr/en/news/praktiki-askisi</u>

INTERNSHIP IN THE FRAMEWORK OF THE OPERATIONAL PROGRAMME "ED-UCATION AND LIFELONG LEARNING" 2014-2020

The School of Informatics participates in the program "AUTH Student Practice" which is being implemented in the framework of the Operational Program "Education and Lifelong Learning" 2014-2020. This program offers the possibility to the students to perform a paid internship for a period of three months (as part-time employees) to Private and Public Sectors that provide internship positions. The payment and insurance obligations are covered by the AUTH University; not the host organizations. The "AUTH Student Practice" program is offered to students of 7th semester and above. The designating periods for performing an internship are (a) April to June and (b) July to September. The internship is conducted under the guidance of a member of the host organization and supervised by a faculty member. Students may participate in the "AUTH Student Practice" Program only once.

The students can express their interest to perform an internship within this program following an invitation published on the School website and social media channels. If the number of applications exceeds the number of available internship positions, if students are interested in more than the available positions, a selection is made based on academic criteria (average grades, semester, ECTS, number of courses passed). If a student is selected for an internship program through the above procedure, this will automatically correspond to the enrollment of the corresponding course. No further actions are required by the students.

Once a student is selected for an internship program, he/she must submit the corresponding application at the Internship Information Office (<u>www.dasta.auth.gr</u>) adhering to the dates set by the School. The next step is to select a host organization after consulting the School's Scientific responsible. When the internship is conducted, the student should be present and maintain a working hours schedule that must be decided by the Internship Scientific Representative and the host organization. The working hours schedule (electronic diary) must be updated in a regular basis. At the end of the internship, each intern receives a Certificate of Participation electronically.

The students who participate in the programme can do their internship locally, in the city of Thessaloniki, or in any other city in Greece. It needs to be noted that accommodation costs are not covered. The "AUTH Student Practice" Programme is not related to the other type of internships that described in the rest of this section. Therefore, if a student has completed a different type of an internship program, he / she may also perform an additional internship through the "AUTH Student Practice" program.

For further information / clarifications, the students can contact the Internship Information Office of AUTH (<u>http://dasta.auth.gr/cmsitem.aspx?sid=3&id=21</u>) at 2310 997178, 2310 997187 or at the following email: <u>praktiki@auth.gr</u>.

INTERNSHIP IN THE FRAMEWORK OF THE ERASMUS+ PROGRAM, THROUGH DIRECT CONTACT WITH APPROPRIATE BODIES AND IN COLLABORATION WITH AIESEC

In order to perform an internship under the ERASMUS+ program, through direct contact with appropriate organizations and in collaboration with AIESEC a specific procedure must be followed:

- 1. Prior to the internship, an application must be submitted by the student. The application must contain a detailed description of work schedule, the host organization, and the work that will be conducted.
- 2. Approval by the designated committee consisting of the Scientific Responsible, the supervisors of each sector, and the Erasmus supervisor of the School. The approval will be based on academic criteria (7th semester or above and the student must have more than half of the courses of the Curriculum) and the relevance of the internship description to the curriculum.
- 3. The internship must be supervised regularly by a Faculty member who must monitor the progress of the internship in collaboration with the representative of the host organization
- 4. Evaluation process. The student must submit a mid-term report to describe the status and the outcome of the internship as well as a final report along with a corresponding certificate from the host organization. Since the internship is considered as an elective course of the Curriculum, the intern is graded after the end of the internship. This evaluation is based on the reports (submitted by the student) and the evaluation report from the host organization. The is then responsible to decide whether or not to acknowledge the internship as successful and provide the five (5) ECTS credit unit approval.

Information on the internship opportunities under the Erasmus+ program is available on the AUTH European Training Programs website <u>https://eurep.auth.gr/en/students/traineeship</u>. For further information you can contact the Department of European Training Programs, Mr Nikos

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Liolios (tel +30 2310 995169, <u>lioliosn@auth.gr</u>) and George Wei (tel +30 2310996727, <u>gveis@auth.gr</u>) and responsible for the ERASMUS+ program in the School of Informatics, Assistant Professor P. Katsaros (<u>katsaros@csd.auth.gr</u>). Information on internships for companies abroad provided by AIESEC is available at <u>http://aiesec.gr/students/globaltalent/</u>. Further information on the ERASMUS + program and AIESEC is provided in the Student Mobility session of this studies guide.

INTERNSHIP TO OBTAIN THE PEDAGOGICAL AND DIDACTICAL COMPETENCE CERTIFICATE

The internship to obtain the certificate for the "Pedagogical and Didactical Competence" is considered as a general elective course in the Curriculum (code NGE-07-03). The internship can be performed by students that are enrolled in the 7th semester or above. The student does not need to register the course. The Secretariat is responsible to perform the enrollment of the corresponding course. During the internship, the selected interns are assigned and placed to a specific School Unit of Thessaloniki where they are trained as IT teachers, attending and participating in educational activities in the Classroom and the Information Technology Laboratory.

The course corresponds to five (5) ECTS credit units and the course grade is provided in the form of PASS/FAIL (this grade is not considered in the calculation of the average grade of the degree). The intern cannot obtain the degree before the start or during the internship period. This is because the internship is considered as part of the Curriculum of the School. However, the student may complete his/her academic obligations during the period of the internship. Responsible Professor of the course is Associate Professor St. Dimitriadis.

The students that are interest to apply for the Certificate of Pedagogical and Didactical Competence, must follow the following procedure:

- 1. They must send an email to the responsible professor of the School (<u>sdemetri@csd.auth.gr</u>) in a timely manner (e.g., before the start of the semester for which the student is interested in doing the internship).
- 2. They must submit an application to the School secretariat (before the beginning of the internship). The application must contain a detailed description of work schedule, the host organization, and the work that will be conducted.
- 3. They must communicate with the Supervisor of the School Unit. The internship is conducted under the guidance of a member of the host organization and supervised by the internship Supervisor and the Head of the School.
- 4. Evaluation process. Upon the completion of the internship, the student must submit to the internship Supervisor the following:
 - a. A final report that describes the status and the outcome of the internship (signed also by the Head of the School Unit
 - b. Certification of the School Unit for the successful completion of the Internship.
- 5. The internship corresponds to five (5) ECTS credit units and the course grade is provided in the form of PASS/FAIL.

14. USEFUL SERVICES TO STUDENTS

Anyone studying at Aristotle University of Thessaloniki may request the assistance of special University services in order to solve various problems they may face during their studies. They can also become themselves volunteers by offering their services to other colleagues or fellow students in need.

Webstite: http://www.auth.gr/services

SOCIAL POLICY AND HEALTH COMMITTEE

The Social Policy and Health Committee (SPHC) aims to create conditions that will make the University an accessible area to all members of the University community, by giving priority to space (and therefore knowledge) accessibility to disabled persons.

For this reason, qualified members of the teaching staff can train students with visual impairment to use electronic equipment linked with Braille printers installed in some of the University libraries. Also, the SPHC tries, to the extent possible, to ensure the granting of books with voice output to these students.

The SPHC also provides a bus for disabled persons, in order to facilitate their movement in the campus for classes and exams during the academic year. It is worthwhile to mention that the University has created a Program for the Promotion of Self-Help, which is basically run by a team of volunteers, the majority of whom are students (email: <u>selfhelp@auth.gr</u>, website: <u>http://www.selfhelp.gr/en/</u>).

Many years ago the Social Policy and Health Committee established the institution of Voluntary Blood Donation, which also led to the creation of a Blood Bank in AHEPA hospital. Since May 2007, a second Blood Bank was founded too, in the Department of Physical Education in Serres with the collaboration of the Social Policy and Health Committee and the General Hospital of Serres. Voluntary blood donation takes place twice a year during the months of November and April, at the Ceremony Hall of Aristotle University. The target is to cover all needs for blood through voluntary blood donation, which currently covers 40% of total needs. Volunteering for blood donation, which is a safe and a complications-free procedure, is open to every person above 18 years old, who does not have special health problems.

Email: socialcom@ad.auth.gr

Website₅: <u>http://ekpy.web.auth.gr/</u>

Tel./Fax: 2310 995386, 2310 995360

COUNSELLING AND PSYCHOLOGICAL SUPPORT COMMITTEE

The Counselling and Psychological Support Committee aims to the better organization and function of the University structures that offer psychological assistance and counselling to AUTH students.

The services provided by the University Centre for Counselling and Psychological Support are offered to students and University staff alike. The Committee works closely with other related Committees and organizes workshops with students, as well as with the administrative and other staff of the University community. Among the future aims of the Committee is the operation of a campus hotline, in order to provide immediate assistance to people in crisis and to those facing personal difficulties that could feel safer to talk about their problems in anonymity and in absence of visual contact.

The Counselling and Psychological Support Committee is located on the ground floor of the University Student Club, in the Sanitary Service Section at offices 5 & 8.

Website: <u>http://kesypsy.web.auth.gr/</u>

Email: <u>vpapadot@ad.auth.gr</u>

Fax: 2310 992607 & 210992621

VOLUNTEER COMMITTEE

The Volunteer Committee has as its prime goal to promote to the members of AUTH University the idea of volunteering as a contemporary social demand. In this direction, the Volunteer Committee having also as its motivation the improvement of the daily life of everyone working in Aristotle University –students, teaching, and administrative staff– in areas such as student affairs, environmental issues and social aid, and encourages all members of the University community to take initiative by submitting ideas and suggestions. To this end, some Networks of Volunteers in Departments and Faculties have already been created, consisting of a faculty member and a student, in order to develop a body of volunteers in each Department /Faculty of AUTH.

Email: vrect-ac-secretary@auth.gr

Tel: 2310996713, 996708 **Fax**: 2310996729

SURVIVAL GUIDE

The Department of Studies of the Aristotle University of Thessaloniki (<u>http://dps.auth.gr/en</u>) publishes a Survival Guide targeting primarily at first-year students that offers useful information about the city of Thessaloniki and the Aristotle University.

Website: http://www.dps.auth.gr/en/info/main

15. UNDERGRADUATE STUDIES AND TUTORS

This section presents the courses offered by the School of Informatics in each academic semester. The title of each course corresponds to a hyperlink which contains a detailed description of the course as registered in the Quality Assurance Unit (MODIP) of the Aristotle University of Thessaloniki.

COMPULSORY CURRICULUM

All students follow a common compulsory curriculum up to the 5th semester of their studies.

1st SEMESTER

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NCO-01-01	MATHEMATICAL ANALYSIS I	4	5	TC	Nikolaos Tsitsas, Konstan- tinos Draziotis
NCO-01-02	INTRODUCTION TO INFORMAT- ICS	3	4	TC	Thrasyvoulos Tsiatsos, Christos Katsanos
NCO-01-03	LINEAR ALGEBRA	4	5	TC	Konstantinos Draziotis
NCO-01-04	DISCRETE MATHEMATICS	5	7	TC	Constantinos Tsichlas
NCO-01-05	BASIC PROGRAMMING PRINCI- PLES	7	9	TC	Dimitris Vrakas

2nd SEMESTER

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NCO-02-01	MATHEMATICAL ANALYSIS II	4	5	TC	Nikolaos Tsitsas, Konstan- tinos Draziotis
NCO-02-02	PROBABILITIES & STATISTICS	4	5	TC	Eleftherios Angelis, Niko- laos Laskaris
NCO-02-03	DATA STRUCTURES	6	7	TC	Apostolos Papadopoulos, Dimitris Vrakas
NCO-02-04	DIGITAL DESIGN	6	7	TC	Georgios Keramidas
NCO-02-05	THEORY OF COMPUTATION	5	6	TC	Panagiotis Katsaros

3rd SEMESTER

CODE	TITLE	CR	ECTS	ТҮРЕ	TEACHING STUFF
NCO-03-01	APPLIED MATHEMATICS	6	7	TC	Nikolaos Tsitsas
NCO-03-02	NUMERICAL ANALYSIS	4	5	TC	Anastasios Tefas
NCO-03-03	ELECTRONICS	4	5	TC	Nikos Konofaos
NCO-03-04	OBJECT ORIENTED PROGRAMMING	6	8	TC	Grigorios Tsoumakas
NCO-03-05	COMPUTER ARCHITECTURE	4	5	TC	Georgios Keramidas

4th SEMESTER

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NCO-04-01	PROGRAMMING LANGUAGE DESIGN	5	7	TC	Panagiotis Katsaros
NCO-04-02	ARTIFICIAL INTELLIGENCE	4	5,5	TC	Ioannis Vlahavas
NCO-04-03	ALGORITHMS	6	7	TC	Anastasios Gounaris
NCO-04-04	HUMAN-COMPUTER INTERACTION	4	5,5	TC	Christos Katsanos
NCO-04-05	DIGITAL COMMUNICATIONS	4	5	TC	Georgios Papadimitriou, Petros Nikopolitidis

5th SEMESTER

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NCO-05-01	SIGNALS AND SYSTEMS	6	7	TC	Ioannis Pitas, Constantinos Ko- tropoulos, Nikolaos Laskaris
NCO-05-02	COMMUNICATION NETWORKS	5	6	TC	Georgios Papadimitriou, Petros Nikopolitidis
NCO-05-03	DATABASES	6	7	TC	Anastasios Gounaris
NCO-05-04	OPERATING SYSTEMS	4	5	TC	Athena Vakali
NCO-05-05	SOFTWARE ENGINEERING	4	5	TC	Ioannis Stamelos

COURSE STREAMS

The courses in 6th, 7th, and 8th semesters are organized in streams. Course streams consist of well-defined sets of courses dealing with one or a combination of scientific fields. Each course stream contains 7 up to 11 compulsory (core) courses. Apart from the core courses, each stream also includes a set of relevant optional-elective courses (there is no restriction in the selected number of optional courses). At least one course stream must be completed to obtain the degree. The optional courses do not lead to the completion of a specific course stream, although are considered in the total ECTS calculation. The established course streams are:

- A. Artificial Intelligence
- **B.** Data and Web Management
- **C. Software Engineering**
- **D.** Learning Technologies
- **E. Scientific Computing**
- F. Communication Networks and Systems Security
- G. Computer and Communication Systems
- H. Digital Media Computational Intelligence
- I. Robotics Autonomous Systems

CODE	TITI F	R	SL				S	trea	m				TEACHING STUEE
CODE	IIILL	О	EC	A	B	С	D	E	F	G	H	Ι	TEACHING STUFF Ioannis Vlahavas, Grigorios Tsoumakas Nick Bassiliades Adjunct Professor Apostolos Papadopoulos Ioannis Stamelos Adjunct Professor Will not be taught Athana Vakali
NIS-06-01	DECISION SUPPORT THEORY AND SYS- TEMS	3	5										Ioannis Vlahavas, Grigorios Tsoumakas
NIS-06-02	COMPUTATIONAL LOGIC AND LOGIC PROGRAMMING	4	5										Nick Bassiliades
NIS-06-03	DISTRIBUTED AND IN- TERNET COMPUTING	3	5										Adjunct Professor
NIS-06-04	DATABASE TECHNOL- OGY	3	5										Apostolos Papadopoulos
NIS-06-05	INFORMATION SYS- TEMS ANALYSIS	3	5										Ioannis Stamelos
NIS-06-06	ALGORITHMIC GRAPH THEORY	4	5										Adjunct Professor
NIS-06-07	DATA STRUCTURING TECHNIQUES	3	5										Will not be taught
NIS-07-01	WEB INFORMATION SYSTEMS	3	5										Athena Vakali
NNA-06-05	OPTICAL COMMUNICA- TION SYSTEMS	4	5										Amalia Miliou, Nikolaos Ple- ros
NNA-06-02	MANAGEMENT OF COMPUTER NET- WORKS	4	5										Amalia Miliou

6th SEMESTER^{3, 4}

³ Compulsory selection of six (6) courses. The selection of the courses must follow the rules presented in Section 10.

⁴ The cells annotated with black color correspond to the compulsory courses of the course stream. The cells annotated with grey color correspond to optional courses of the course stream.

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CODE		R	TS				S	trea	т				
CODE	IIILE	C	EC	A	B	С	D	E	F	G	H	Ι	TEACHING STUFF
NNA-06-06	ADVANCED ISSUES ON SYSTEMS ARCHITEC- TURE	3	5										Georgios Keramidas
NDM-06-01	DIGITAL SIGNAL PRO- CESSING	4	5										Nikolaos Laskaris
NDM-06-02	STOCHASTIC SIGNAL PROCESSING	4	5										Constantinos Kotropoulos
NDM-06-04	<u>PATTERN RECOGNI-</u> <u>TION – STATISTICAL</u> <u>LEARNING</u>	4	5										Ioannis Pitas
NDM-07-04	COMPUTER GRAPHICS	4	5										Nikolaos Nikolaidis
NET-06-01	MOBILE DEVICE IN- TERFACES	4	5										Dionisios Politis
NET-06-03	LEARNING THEORIES & EDUCATIONAL SOFTWARE	4	5										Stavros Demetriadis
NET-06-02	MULTIMEDIA SYSTEMS	4	5										Thrasyvoulos Tsiatsos
NNA-06-04	MOBILE NETWORKS AND APPLICATIONS	4	5										Christos Katsanos
NGE-06-01	MATHEMATICAL MOD- ELING	3	5										Nikolaos Tsitsas
NGE-06-02	OPTIMIZATION	3	5										Nikolaos Tsitsas
NGE-06-03	FOUNDATIONS OF CRYPTOGRAPHY	3	5										Konstantinos Draziotis
NGE-06-04	FOREIGHN LANGUAGE ENGLISH ⁵	3	2										Foreign Language Teaching Unit
NGE-06-05	FOREIGHN LANGUAGE - GERMAN ⁶	3	2										Foreign Language Teaching Unit

⁵ It is not considered in the total ECTS calculation to obtain the degree.

⁶ It is not considered in the total ECTS calculation to obtain the degree.

7th SEMESTER^{7,8}

		~	rs				S	trea	m				
CODE		C	EC	A	B	С	D	E	F	G	H	Ι	TEACHING STUFF
NIS-07-02	KNOWLEDGE SYSTEMS	4	5										Nick Bassiliades
NIS-07-03	DATAWAREHOUSES AND DATA MINING	3	5										Anastasios Gounaris
NIS-07-04	CONCURRENCY AND SE- CURITY IN SOFTWARE	4	5										Panagiotis Katsaros
NIS-07-05	INFORMATION RETRIEVAL	3	5										Apostolos Papadopoulos
NIS-07-06	COMBINATORICS AND COUNTING	3	5										Eleftherios Angelis
NIS-07-07	MULTIAGENT SYSTEMS	3	5										Will not be taught (unless the position is fulfilled by an Adjunct Professor)
NNA-07-09	OPTICAL NETWORKS	3	5										Georgios Papadimitriou
NNA-07-03	NETWORK SECURITY	4	5										Georgios Papadimitriou, Petros Nikopolitidis
NNA-07-04	OPTICAL SWITCHING	3	5										Nikolaos Pleros
NNA-07-06	WIRELESS NETWORKS	3	5										Petros Nikopolitidis
NNA-08-07	MICROPROCESSORS	4	5										Georgios Keramidas
NDM-07-01	DIGITAL IMAGE PRO- CESSING	4	5										Ioannis Pitas
NDM-07-02	DISCRETE-TIME SPEECH PROCESSING	4	5										Constantinos Kotropou- los
NDM-07-05	<u>NEURAL NETWORKS -</u> <u>DEEP LEARNING</u>	4	5										Anastasios Tefas
NDM-08-03	MODELLING/DIGITAL IMAGE SYNTHESIS	3	5										Nikolaos Nikolaidis
NET-07-01	INTERNET EDUCATIONAL ENVIRONMENTS	4	5										Thrasyvoulos Tsiatsos
NET-07-02	FLEXIBLE LEARNING	4	5										Dionisios Politis
NET-07-03	DIDACTICS OF INFOR- MATICS	4	5										Stavros Demetriadis
NIS-07-08	SOFTWARE SYSTEMS QUALITY ASSURANCE	4	5										Christos Katsanos
NGE-07-01	ALGORITHMS AND COMPLEXITY	3	5										Adjunct Professor
NGE-08-01	ENTREPRENEURSHIP AND INNOVATION	3	5										Will not be taught
NNA-07-02	MODELING & SIMULA- TION OF COMPUTER SYSTEMS	3	5										Eleni Karatza, Petros Ni- kopolitidis
NNA-07-08	DIGITAL ELECTRONICS SYSTEMS	4	5										Nikos Konofaos
NNA-08-04	PHOTONIC TECHNOLOGY	4	5										Amalia Miliou, Nikolaos Pleros

⁷ Compulsory selection of six (6) courses. The selection of the courses must follow the rules presented in Section 10.

⁸ The cells annotated with black color correspond to the compulsory courses of the course stream. The cells annotated with grey color correspond to optional courses of the course stream.

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INTERSHIP

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NGE-07-02	INTERNSHIP		5	GE	Supervisor: Anastasios Gounaris
NGE-07-03	INTERNSHIP FOR PEDAGOGICAL AND DIDACTICAL COMPETENCE		5	GE	Supervisor: Stavros Demetriadis

GENERAL ELECTIVES (OFFERED BY THE FACULTIES OF PHILOSOPHY AND EDUCA-TION DEPARTMENTS AND ARE PREREQUISITES TO OBTAIN THE PEDAGOGICAL AND DIDACTICAL COMPETENCE)

CODE	TITLE	CR	ECTS	ТҮРЕ	TEACHING STUFF
ΣΧΠΙ400	EDUCATION AND SCHOOLING	3	5	E	Teaching Stuff of the Fac- ulty of Philosophy-Educa- tion Departments
П1901	EDUCATIONAL ISSUES ON THE INTRODUCTION OF INFOR- MATION AND COMMUNICA- TIONS TECHNOLOGIES IN THE SCHOOL PRAXIS	3	6	E	Teaching Stuff of the Fac- ulty of Philosophy-Educa- tion Departments

8th SEMESTER^{9, 10}

CODE		×	ST				S	trea	т				TEACHING STUFF
CODE	IIILE	C	EC	A	B	С	D	E	F	G	H	Ι	TEACHING STUFF
ПЕ-08-01	Bachelor Thesis ¹¹		15										All Faculty Members
NIS-08-01	INTELLIGENT AU- TONOMOUS SYS- TEMS	4	5										Will not be taught (unless the position is fulfilled by an Adjunct Professor)
NIS-08-02	OPERATIONAL RE- SEARCH & BUSI- NESS INTELLIGENCE	3	5										Will not be taught (unless the position is fulfilled by an Ad- junct Professor)
NIS-08-04	MACHINE LEARNING	3	5										Grigorios Tsoumakas
NNA-08-03	INFORMATION THE- ORY AND CODING	3	5										Nikolaos Pleros, Konstantinos Draziotis
NDM-08-01	DIGITAL VIDEO PROCESSING	3	5										Ioannis Pitas
NDM-08-02	COMPUTATIONAL INTELLIGENCE	3	5										Anastasios Tefas
NNA-08-08	ROBOTIC CONTROL	4	5										Constantinos Kotropoulos
NET-08-01	DESIGN AND EVAL- UATION OF EDUCA- TIONAL SOFTWARE	4	5										Will not be taught (unless the position is fulfilled by an Adjunct Professor)
NET-08-02	COMPUTER MUSIC	4	5										Dionisios Politis
NIS-08-03	COMPUTATIONAL GEOMETRY	3	5										Will not be taught
NNA-08-05	PERFORMANCE OF PARALLEL AND DIS- TRIBUTED SYSTEMS	4	5										Eleni Karatza, Nikos Konofaos
NNA-08-06	STATISTICAL COMPUTING	4	5										Eleftherios Angelis
NNA-08-09	QUANTUM COMPUTING	4	5										Nikos Konofaos

INTERSHIP

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NGE-07-02	INTERNSHIP		5	GE	Supervisor: Anastasios Gounaris
NGE-07-03	INTERNSHIP FOR PEDAGOGICAL AND DIDACTICAL COMPETENCE		5	GE	Supervisor: Stavros Demetriadis

GENERAL ELECTIVES

CODE	TITLE	CR	ECTS	TYPE	TEACHING STUFF
NGE-08-02	LAW OF INFORMATICS	3	5	GE	Ioannis Iglezakis

Course Streams

⁹ Compulsory selection of three (3) courses. The selection of the courses must follow the rules presented in Section 10.

 $^{^{10}}$ The cells annotated with black color correspond to the compulsory courses of the course stream. The cells annotated with grey color correspond to optional courses of the course stream.

¹¹ It is accompanied by a two-hour tutorial entitled "Research Methodology"

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The designated courses for the nine (9) course streams, as defined during the 2019-20 academic year, are depicted below.

Stream	A:	Artificial	Intelligence
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Course Category	Course Title
	Operational Research & Business Intelligence
	Decision Support Theory and Systems
	Machine Learning
	Knowledge Systems
	Computational Logic and Logic Programming
Compulsory Courses (CC)	Multiagent Systems
	Pattern Recognition - Statistical Learning
	Neural Networks - Deep Learning
	Computational Intelligence
	Discrete-Time Speech Processing
	Stochastic Signal Processing
	Datawarehouses and Data Mining
	Information Retrieval
	Algorithms and Complexity
Optional Courses (OC)	Algorithmic Graph Theory
	Optimization
	Digital Image Processing
	Digital Video Processing

Stream B: Data and Web Management

Course Category	Course Title
	Web Information Systems
	Information Retrieval
Commulating Countries (CC)	Database Technology
Compulsory Courses (CC)	Algorithmic Graph Theory
	Algorithms and Complexity
	Knowledge Systems

	Datawarehouses and Data Mining
	Data Structuring Techniques
	Operational Research & Business Intelligence
	Decision Support Theory and Systems
	Computational Geometry
Optional Courses (OC)	Machine Learning
	Internet Educational Environments
	Mobile Networks and Applications
	Distributed and Internet Computing

Stream C: Software Engineering

Course Category	Course Title
	Information Systems Analysis
	Entrepreneurship and Innovation
	Knowledge Systems
	Web Information Systems
Compulsory Courses (CC)	Software Systems Quality Assurance
	Concurrency and Security in Software
	Mobile Networks and Applications
	Internet Educational Environments
	Design and Evaluation of Educational Software
Optional Courses (OC)	Mobile Device Interfaces
Optional Courses (OC)	Computer Graphics
	Computational Logic and Logic Programming

Stream D: Learning Technologies

Course Category	Course Title
	Learning Theories & Educational Software
Compulsory Courses (CC)	Flexible Learning
	Internet Educational Environments

Course Category	Course Title
	Design and Evaluation of Educational Software
	Didactics of Informatics
	Computer Music
	Multimedia Systems
	Mobile Device Interfaces
	Web Information Systems
Optional Courses (OC)	Education and Schooling
	Educational Issues on the Introduction of Information and Communications Technologies in the School Praxis

Stream E: Scientific Computing

Course Category	Course Title
	Combinatorics and Counting
	Quantum Computing
Compulsory Courses (CC)	Algorithms and Complexity
	Mathematical Modeling
	Foundations of Cryptography
	Optimization
	Statistical Computing
Optional Courses (OC)	Operational Research & Business Intelligence

Stream F: Communication Networks and Systems Security

Course Category	Course Title
	Network Security
	Concurrency and Security in Software
	Wireless Networks
Compulsory Courses (CC)	Optical Networks
	Foundations of Cryptography
	Management of Computer Networks
	Optical Communication Systems

Course Category	Course Title
	Modeling & Simulation of Computer Systems
Optional Courses (OC)	Performance of Parallel and Distributed Systems
	Optical Switching

Stream G: Computer and Communication Systems

Course Category	Course Title
Compulsory Courses (CC)	Optical Switching
	Optical Communication Systems
	Photonic Technology
	Optical Networks
	Advanced Issues on Systems Architecture
	Microprocessors
	Information Theory and Coding
	Wireless Networks
Optional Courses (OC)	Modeling & Simulation of Computer Systems
	Performance of Parallel and Distributed Systems
	Digital Electronics Systems

Stream H: Digital Media – Computational Intelligence

Course Category	Course Title
Compulsory Courses (CC)	Digital Signal Processing
	Stochastic Signal Processing
	Pattern Recognition – Statistical Learning
	Computer Graphics
	Digital Image Processing
	Neural Networks - Deep Learning
	Modelling/Digital Image Synthesis
	Discrete-Time Speech Processing
	Digital Video Processing
	Computational Intelligence

Course Category	Course Title
	Information Theory and Coding
	Multimedia Systems
	Algorithmic Graph Theory
	Optimization
Optional Courses (OC)	Mathematical Modeling
	Web Information Systems
	Information Retrieval
	Computational Geometry

Stream I: Robotics – Autonomous Systems

Course Category	Course Title
	Digital Signal Processing
	Computer Graphics
	Pattern Recognition – Statistical Learning
	Digital Image Processing
	Neural Networks - Deep Learning
Compulsory Courses (CC)	Robotic Control
	Decision Support Theory and Systems
	Intelligent Autonomous Systems
	Machine Learning
	Wireless Networks
	Concurrency and Security in Software
	Modelling/Digital Image Synthesis
	Computational Intelligence
	Stochastic Signal Processing
Optional Courses (OC)	Discrete-Time Speech Processing
	Multiagent Systems
	Computational Logic and Logic Programming
	Optimization

16. UNDERGRADUATE STUDIES (SYLLABUS)

TRANSITIONAL PROVISIONS FOR 2019-2020ACADEMIC YEAR

Students, enrolled before the spring semester of the 2018-2019 academic year, are the last ones who follow the studies program organized in tracks. These students can either conclude their studies based on the track system (the selected major and minor tracks will be annotated in the Diploma Supplement) or follow the studies program organized in course streams (in the latter case the selected course stream will be annotated in the Diploma Supplement).

The established tracks were four: "Information Systems", "Networks-Communications- Systems Architecture", "Digital Media - Computing Intelligence" and "Learning Technologies". The students must successfully complete the following:

- at least ten (10) compulsory courses from the "Information Systems" track, offered in the 6th to 8th semesters
- at least four (4) compulsory courses of the 6th semester, at least 4 compulsory courses of the 7th semester, and at least 2 compulsory courses of the 8th semester offered by the "Networks-Communications-Systems Architecture" track
- six (6) compulsory courses of the selected track plus at least two (2) of the four (4) compulsory courses offered by the "Digital Media - Computational Intelligence" track
- six (6) compulsory courses offered by the "Learning Technologies" track, four (4) out of eight (8) compulsory selective courses offered in the 6th to 8th semesters, and five (5) courses offered by all tracks.

Since the 2018-2019 academic year, it is possible to record in the Diploma Supplement the detailed examinations grades also for the minor track followed by the student. It is a prerequisite for the student, in addition to his / her main track, to have completed at least 5 (five) courses from another track. Applications for the latter must be submitted to the Secretariat at the time of the oath application.

In the 6th and 8th semesters, the following changes were made to elective courses in the Curriculum for the 2019-2020 academic year in relation to the academic year 2018-2019:

- 1. Renaming of the Applied Mathematics II course to "**Mathematical Modeling**" and reformation of its content
- 2. Renaming of the Discrete Mathematics II course to "Combinatorics and Counting"
- 3. Renaming of the Mobile Networks and Application Development course to "**Mobile Networks and Applications**" and reformation of its content
- 4. Introduction of the new course: "Statistical Computing".
- 5. Introduction of the new course: "Quantum Computing"
- 6. Introduction of the new course: "Microprocessors"
- 7. Introduction of the new course: "Robotic Control"

TRANSITIONAL PROVISIONS FOR 2017-2018 ACADEMIC YEAR

The following 8th semester courses "Computer System Performance" and "Parallel and Distributed Processing" will no longer be offered by the School, so from January 2018 and onwards, there will be no examination for these courses. Any student who has successfully passed one or both of these two courses is not eligible to re-enroll in the 8th semester course "Performance of Parallel and Distributed Systems".

TRANSITIONAL PROVISIONS FOR 2015-2016 ACADEMIC YEAR

There is no requirement to examine specific courses that were designated as compulsory courses and in the meantime appear as compulsory elective courses in the tracks of "Information Systems", "Digital Media - Computational Intelligence", and "Learning Technologies."

"Networks-Communications-Systems Architecture" track. Students who have selected this track up to the 2014-2015 Academic Year, the 2014-2015 Academic Degree requirements are applied.

The course "Optical Communication Systems" corresponds to the previous course titled as "Optical Communication Implementation Technologies".

Students who have successfully passed the previous course "Optical Communication Implementation Technologies" cannot enroll in the following courses: "Optical Communication Systems" and "Photonic Technology".

TRANSITIONAL PROVISIONS FOR 2013-2014 ACADEMIC YEAR

Transitional provisions for the 2013-2014 academic year are presented in the study guides of the corresponding academic years.

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