

Undergraduate Curriculum of Informatics and Telecommunication Department

Notes:

- a) The first 5 semester have exclusive mandatory courses.
- b) The 6th semester has two selection of courses while
- c) the 7th and 8th semesters allow to select courses through courses groups.

1o SEMESTER

A/A	COURSE	HOURES	ECTS
101	Mathematical Analysis	5	7
102	Linear Algebra	5	5
103	Programming Language I	6	6
104	Logical Design	5	7
105	Electronics	5	5
		26	30

2o SEMESTER

A/A	COURSE	HOURES	ECTS
201	Principles of Electromagnetism & Telecommunications	4	6
202	Network Protocols and Architectures	5	6
203	Discrete Mathematics	4	6
204	Programming Language II	6	7
205	Digital Electronics	5	5
		24	30

3o SEMESTER

A/A	COURSE	HOURES	ECTS
301	Computer architecture	5	6
302	Object-Oriented Programming	5	7
303	Signals & Systems	5	6
304	Signal Distribution	6	5
305	Data structures	5	6

		27	30
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4o SEMESTER

A/A	COURSE	HOURES	ECTS
401	Principles of Programming Languages	5	6
402	Operating Systems	5	7
403	Computer Networks	5	6
404	Data Base	5	6
405	Probability and Statistics	5	5
		25	30

5o SEMESTER

A/A	COURSE	HOURES	ECTS
501	Embedded Systems	5	5
502	Artificial Intelligence	4	5
503	Digital Telecommunications	6	5
504	Algorithms & Complexity	5	5
505	Software Engineering	4	5
506	Broadband Networks	4	5
		28	30

6o SEMESTER

A/A	COURSE	HOURES	ECTS
601	Digital Signal Processing	5	5
602	Telecommunication Systems	5	5
603	Image processing	5	5
604	Systems Security	4	5
605	General Course Selection	4	5
606	Mathematic Analysis II or Selection Course from Course Groups (8 Semester)	4	5
		28	30

7o SEMESTER

A/A	COURSE	HOURES	ECTS
701	Selection Course from Winder Course Groups	4	5
702	Selection Course from Winder Course Groups	4	5
703	Selection Course from Winder Course Groups	4	5

704	Selection Course from Winder Course Groups	4	5
705	Selection Course from Winder Course Groups	4	5
706	Selection Course from Winder Course Groups	4	5
		24	30

8o SEMESTER

A/A	COURSE	HOURES	ECTS
801	Selection Course from Spring Course Groups	4	5
802	Selection Course from Spring Course Groups	4	5
803	Selection Course from Spring Course Groups	4	5
804	Selection Course from Spring Course Groups or Dissertation	4	5
805	Selection Course from Spring Course Groups or Dissertation	4	5
806	Selection Course from Spring Course Groups or Dissertation	4	5
		24	30
	Dissertation		
	Traineeship		

GENERAL COURSES SELECTION

A/A	COURSE	HOURES	ECTS
605A	Innovation and Entrepreneurship	4	5
605B	Research Methodology and technical writing	4	5
605C	Project management.	4	5
605D	Business Administration	4	5

MANDATORY COURSES SELECTION: WINTER SEMESTER (7o)

A/A	COURSE	HOURES	ECTS
P1_X1	Compilers	4	5
P1_X2	Data Base II	4	5
P1_X3	Business Information Systems	4	5

P1_X4	Internet Application Technologies	4	5
P2_X5	Data Mining	4	5
P2_X6	Gamification	4	5
P2_X7	Optimization	4	5
P3_X8	Internet of Things	4	5
P3_X9	Biomedical Technology	4	5
P3_X10	Modeling and Systems Control	4	5
P4_X11	Antennas - Microwaves	4	5
P4_X12	Microwave Integrated Circuits	4	5
P4_X13	Optical Communications - Waveguides	4	5
P5_X14	Advanced Network Programming Issues	4	5
P5_X15	Special Network issues	4	5
P5_X16	Distance Education Systems	4	5

MANDATORY COURSES SELECTION: SPRING SEMESTER (8^o)

A/A	COURSE	HOURES	ECTS
P1_E1	Web development Applications and Databases	4	5
P1_E2	Computer Graphics	4	5
P1_E3	Mobile Device Programming	4	5
P2_E4	Statistical Engineering	4	5
P2_E5	Bioinformatics	4	5
P3_E6	Sensor Networks	4	5
P3_E7	CMOS ASIC Design Techniques	4	5
P3_E8	Parallel and Distributed Systems	4	5
P4_E9	Nanoelectronics	4	5
P4_E10	Optoelectronics	4	5
P5_E11	Telecommunication Networks	4	5
P5_E12	Network Analysis and Simulation	4	5
P5_E13	Network Management	4	5