Politehnica University of Timisoara
Faculty: Automation and Computing/ Facultatea de Automatica si Calculatoare

Field of study:	**Computer and Information Technology/ Calculatoare si tehnologia informatiei**
Programme of study:	**INFORMATION TECHNOLOGY/ TEHNOLOGIA INFORMATIEI**

Form of education:	**with frequency**
Length of study:	**2 years**

Fundamental domain of study **(DFI):**	**Engineering Sciences/ Stiinte ingineresti**
Branch of science **(RSI):**	**System Engineering, Computer and Information Technology/ Ingineria sistemelor, calculatoare si tehnologia informatiei**
Domain of study of master **(DSU_M):**	**Computer and Information Technology/ Calculatoare si tehnologia informatiei**

Cod DFI	Cod RSI	Cod DSU_M
20	60	10

level	c1c2c3	a1a2
M	002	19

CURRICULUM
Academic year 2020 - 2021
1st YEAR

	SEMESTER 1										SEMESTER 2									
1	Core 1 (choose one from positions 1-3)										Core 3 (choose one from positions 1-4)									
	M002.19.01.*1	7	E	28	0	28	0	0	***	119	M002.19.02.*1	7	E	28	0	28	0	0	***	119
2	Core 2 (choose one from positions 1-3)										Core 4 (choose one from positions 1-4)									
	M002.19.01.*2	7	E	28	0	28	0	0	***	119	M002.19.02.*2	7	E	28	0	28	0	0	***	119
3	Elective 1 (choose one from Master IT/ CI/ ML/ SE)										Elective 2 (choose one from Master IT/ CI/ ML/ SE)									
	M002.19.01.*3	7	E	28	0	28	0	0	***	119	M002.19.02.*3	7	E	28	0	28	0	0	***	119
4	Research Topics in IT										Introduction to Research									
	M002.19.01.V4	9	D	28	0	0	0	168	DCAV	29	M002.19.02.V4	7	D	28	0	0	0	140	DCAV	7
5											Academic Ethics and Integrity									
											M002.19.02.S5	2	D	14	7	0	0	0	DS	29
6																				
7																				

total / semester	VAi:	196	VPI:	386	VAi:	217	VPI:	393
	VA (VAi+VAp):	364	VCA (VA+VPI):	750	VA (VAi+VAp):	357	VCA (VA+VPI):	750
	credits	30	evaluations:	3E, 1D	credits	30	evaluations:	3E, 2D
total / week	VAi:	14	VPI:	28	VAi:	16	VPI:	28
	VA (VAi+VAp):	26	VCA (VA+VPI):	54	VA (VAi+VAp):	26	VCA (VA+VPI):	54
	distribution	8 0 6 0 12	(c, s, l, p, VAp)		distribution	9 1 6 0 10	(c, s, l, p, VAp)	

Academic year 2020 - 2021
2nd YEAR

	SEMESTER 3										SEMESTER 4									
1	Core 5 (choose one from positions 1-3)										Research Activity and Internship									
	M002.19.03.*1	7	E	28	0	28	0	0	***	119	M002.19.04.S1	10	C					168	DS	82
2	Core 6 (choose one from positions 1-3)										Master Thesis Development									
	M002.19.03.*2	7	E	28	0	28	0	0	***	119	M002.19.04.S2	10	C					196	DS	54
3	Elective 3 (choose one from Master IT/ CI/ ML/ SE)										Master Thesis Defense									
	M002.19.03.*3	7	E	28	0	28	0	0	***	119	M002.19.04.S3	10	E						DS	
4	Directed Thesis Research																			
	M002.19.03.S4	9	D	0	0	0	28	168	DS	29										
5																				
6																				
7																				

total / semester	VAi:	196	VPI:	386	VAi:	0	VPI:	136
	VA (VAi+VAp):	364	VCA (VA+VPI):	750	VA (VAi+VAp):	364	VCA (VA+VPI):	500
	credits	30	evaluations:	3E, 1D	credits	30	evaluations:	1E, 2C
total / week	VAi:	14	VPI:	28	VAi:	0	VPI:	10
	VA (VAi+VAp):	26	VCA (VA+VPI):	54	VA (VAi+VAp):	26	VCA (VA+VPI):	36
	distribution	6 0 6 2 12	(c, s, l, p, VAp)		distribution	0 0 0 0 26	(c, s, l, p, VAp)	

Competences:
- Advanced knowledge of the main topics and problems in the field of Information Technologies;
- Knowledge of the current technologies and abilities to select and apply them in the development of IT projects;
- Combining knowledge from the area of computer and information technology, with skills to critically analyze and innovate, in order to research, design, optimize, implement and test specific methods and systems;
- Development ot techniques, technologies, methods and methodologies specific to computer systems and information technology.

RECTOR,
Conf.dr.ing. Florin DRĂGAN

DECAN,
Prof.univ.dr.ing. Marius-George MARCU

ELECTIVE COURSES
Academic year 2020 - 2021
1st YEAR

		SEMESTER 1									SEMESTER 2								
01		Data Transmission, Coding and Compression									Integrated Information Systems								
		7	E	28	0	28	0	0	DCAV	119	7	E	28	0	28	0	0	DCAV	119
02		Bioinformatics									Optic Fiber Transmissions								
		7	E	28	0	28	0	0	DCAV	119	7	E	28	0	28	0	0	DCAV	119
03		Cellular Data Networks									Emergent and Collective Intelligence Systems								
		7	E	28	0	28	0	0	DA	119	7	E	28	0	28	0	0	DCAV	119
04											Fault Diagnosis and Design for Testability								
											7	E	28	0	28	0	0	DA	119
05																			
06																			

ELECTIVE COURSES
Academic year 2020 - 2021
2nd YEAR

		SEMESTER 3									SEMESTER 4								
01		Advanced Web Programming																	
		7	E	28	0	28	0	0	DA	119									
02		High-End Interfaces and Equipments																	
		7	E	28	0	28	0	0	DA	119									
03		Big Data in Health and Bioinformatics																	
		7	E	28	0	28	0	0	DCAV	119									
04																			
05																			
06																			

Legenda

Title of discipline								
Code	nc	FE	c	s	l	p	VAp	CF	VPI

Example								
Advanced measuring technologies								
M170.17.01.V1	8	E	28	0	28	0	49	DCAV	50

Code = code of discipline
nc = no.of the subject transferable credits
FE = forma de evaluare
 FE ∈ {E, D, C}
  E=exam
  D=distributive assessment
 C=colloquy
c=no.of course hours/semester
s=no.of seminar hours
l=no.of laboratory hours
p=no. of project hours
VAp = no. of hours needed for partially assisted activities

CF=the cathegory the discipline belongs to
 CF={DA, DCAV, DS, DC}
  DA - thoroughgoing study discipline
  DCAV - advanced knowledge discipline
  DS - synthesis discipline
  DC - complementary discipline
VPI =no. of unattended hours during a 14 weeks semester plus 4 weeks of examination session

VAi- no. of hours needed for entirely assisted activities=c+s+l+p
VA - no. of hours needed for entirely assisted activities and partially assisted activities=VAi+Vap
VCA - cumulated no. of hours for all activities= VA+VPI

Notes
1) The first two independent electives ("Core x") in each semester will be selected from the table "ELECTIVE COURSES", corresponding semester, and can be of the types DCAV, DA, or DS, as specified in the cell marked with ***.
2) The third independent elective ("Elective y") in each semester will be selected from the the Master programs in the CTI field (Master IT/ CI/ ML/ SE), corresponding semester, and can be of the types DCAV, DA, or DS, as specified in the cell marked with ***.
3) The electives in the table "ELECTIVE COURSES" will be activated based on student options, number of students and financial coverage.

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