Transilvania University of Brasov, Romania

Study program: Applied Computer Science

Faculty:	Mathematics and Computer Science 3 years (bachelor)
Study period:	
Academic year structure:	Two semesters (14 weeks per semester)
Examination sessions (two):	Winter session (January/February) Summer session (June/July)

Courses per years (C= course; S = seminar; L = laboratory; P = project)

1st Year

No. crt.	Course	Code	1st Semester					2nd Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
1.	Mathematical Analysis	AP01	3	2	0	0	6					
2.	Basic algebra for computer science	AG13	2	2	0	0	5					
3.	Fundamental Algorithms	IT11	2	1	2	0	6					
4.	Basic Programming	IA11	2	0	2	0	5					
5.	Mathematical and Computational Logic	IT13	2	1	0	0	4					
6.	Academic Writing	RCS01	1	0	2	0	2					
7.	English Language (1) German Language (1)	LE1 LG1	1	1	0	0	2					
8.	Linear Algebra, Analytical and Differential Geometry	AG03						2	2	0	0	5
9.	Computer Systems Architecture	IT21						2	1	1	0	5
10.	Object Oriented Programming	IT22						2	0	2	0	6
11.	Data Structures	IT23						2	0	2	0	6
12.	Operating Systems	IA21						2	0	2	0	6
13.	English Language (2) German Language (2)	LE2 LG2						1	1	0	0	2
14.	Physical Education and Sport 1	EF01						0	2	0	0	2

2nd Year

No. crt.	Course	Code	3rd Semester					4th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
1.	Graph algorithms	IT31	2	0	2	0	5					
2.	Formal languages and automata theory	IT32	2	1	1	0	5					
3.	Programming environments and tools	IA31	2	0	2	0	5					
4.	Databases	IT33	2	0	2	0	5					
5.	Modern C++ applied in artificial intelligence	IT34	2	0	2	0	5					
6.	Modern 3D graphics modeling systems in C++ with Open GL and Direct 3D	AG131	2	0	2	0	5					
7.	Artificial intelligence	IA42						2	0	2	0	5
8.	Visual programming	IA43						2	0	2	0	5
9.	Computer networks	IA44						2	0	2	0	5
10.	Probability and mathematical statistics	IA45						2	1	1	0	5
11.	Statistical inference in machine learning	IA46						2	0	2	0	5
12.	Web and Mobile Application Development with Angular, .Net and Android	AG141						2	0	2	0	5
13.	Physical Education and Sport 2	EF02						0	2	0	0	2

3rd Year

No. crt.	Course	Code	5th Semester					6th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
1.	Verification and validation of software systems	IA51	2	0	2	0	5					
2.	Web technologies	IA52	2	0	2	0	5					
3.	Mobile application development	IA53	2	0	2	0	5					
4.	Practice	IT53	0	0	0	8	5					
5.	Digital image processing	IA541	2	0	2	0	5					
6.	Deep learning	IA542	2	0	2	0	5					
7.	Computer graphics	IA61						2	0	2	0	5
8.	Logical and functional programming	IA62						2	0	2	0	5
9.	Practical Coordination for Bachelor Thesis	IA63						0	0	0	6	5
10.	Database management systems	IA64						2	0	2	0	5
11.	Full stack development of web-based applications	IA651						2	0	2	0	5
12.	Elements of programming in the Go language	IA652						2	0	2	0	5