Transilvania University of Brasov, Romania
Study program: Computer Science

Faculty: Mathematics and Computer Science
Study period: 3 years (bachelor)

1st Year – 1st Semester

Course title	No. of credits	Number of hours per week			
		course	seminar	laboratory	project
Mathematical analysis	5	3	2	0	0
Basic algebra for computer science	5	2	2	0	0
Fundamental algorithms	5	2	1	2	0
Fundamentals of Programming	5	2	0	2	0
Mathematical and computational logic	5	2	1	0	0
Scientific and Professional Writing and Communication	2	1	1	0	0
English language 1 German language 1 French language 1 Spanish language 1	2	1	1	0	0
Physical education and sport	1	0	1	0	0

1st Year – 2nd Semester

Course title	No. of credits	Number of hours per week			
		course	seminar	laboratory	project
Linear algebra, analytical and differential geometry	5	2	2	0	0
Computer systems architecture	5	2	1	1	0
Object oriented programming	6	2	0	2	0
Data structures	6	2	0	2	0
Operating systems	5	2	0	2	0
English language 2 German language 2 French language 2 Spanish language	2	1	1	0	0
Physical education and sport	1	0	1	0	0

2nd Year – 1st Semester

Course title	No. of credits	Number of hours per week			
		course	seminar	laboratory	project
Graph algorithms	5	2	0	2	0
Formal languages and automata theory	5	2	1	1	0
Programming environments and tools	5	2	0	2	0
Databases	5	2	0	2	0
Artificial intelligence	5	2	0	2	0

Modern C++ managing networking problems	5	2	0	2	0
Physical education and sport	2	0	2	0	0

2nd Year – 2nd Semester

Course title	No. of credits	Number of hours per week			
		course	seminar	laboratory	project
Automata, calculability and complexity	5	2	1	1	0
Advanced methods of programming	5	2	0	2	0
Computer networks	5	2	0	2	0
Numerical computation	5	2	0	2	0
Digital image processing	5	2	0	2	0
Digital technologies for IoT	5	2	0	2	0

3rd Year – 1st Semester

Course title	No. of credits	Number of hours per week			
		course	seminar	laboratory	project
Software engineering	5	2	0	2	0
Human-computer interfaces	5	2	0	2	0
Development of web applications	5	2	0	2	0
Professional practice	5	0	0	0	8
Developing computer games in Unity with C#	5	2	0	2	0
Front-end application architecture using Angular	5	2	0	2	0

3rd Year – 2nd Semester

Course title	No. of credits	Number of hours per week			
		course	seminar	laboratory	project
IT project management	5	2	0	2	0
Parallel, concurrent and distributed programming	5	2	0	2	0
Probability and statistics	5	2	1	1	0
Practical coordination for bachelor thesis	5	0	0	0	6
Designing mobile applications	5	2	0	2	0
Introduction to quantum computation	5	2	0	2	0