



RAO University
KNOWLEDGE FOR ALL

Roshan Afghanistan Online University

Faculty Of computer Science



Computer Science Curriculum

RAO University
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2023

Software engineering department

1. Basic Subjects

Number	Subject	Credit	Total	Prerequisite	Code
1	Computer Fundamentals 1	3	48	None	1301201
2	Computer Fundamentals 2	3	48	Computer Fundamentals 1	1301200
3	Introduction to Algorithm & Programming	4	64	None	1301208
4	Math 1	4	64	None	1301202
5	Math 2 (Discrete Math)	4	64	Math 1	1301213
6	Math Logic	3	48	Math 2	1301203
7	Linear Algebra	3	48	Math 1	1301207
8	Statistics	3	48	Math 1	1301211
9	Probability Theory	2	32	Statistics	1301214
10	Physics 1	3	48	None	1301210
11	Physics 2	3	48	Physics 1	1301205
12	Research Methodology	2	32	Computer Fundamentals 1	1301212
Total Credits		37			

2. Special Subjects

Number	Subject	Credit	Total	Prerequisite	Code
1	Special English 1	2	32	English 2	1301301
2	Special English 2	2	32	Special English 1	1301302
3	Programming	4	64	Introduction to Algorithm & Programming	1301303
4	Database Fundamentals	4	64	Computer Fundamentals 1	1301309
5	Database Administration	3	48	DB Fundamentals	1301310
6	Computer Networks 1	3	48	Computer Fundamentals 1	1301306
7	Computer Networks 2	3	48	Computer Networks 1	1301307

8	Web Design	3	48	Computer Fundamentals 1	1301308
9	Web Development	3	48	Web Design	1301322
10	Software Engineering 1	3	48	Programming	1301310
11	Data Structure	3	48	Programming	1301311
12	Operating Systems	3	48	Computer Architecture	1301312
13	Algorithm Design & Analysis	3	48	Data Structure	1301326
14	ICT Management	2	32	Computer Networks 2, DB Fundamentals	1301401
15	Human Computer Interaction (HCI)	3	48	Software Engineering 1	1301323
16	Logic Circuit	3	48	Math Logic	1301316
17	Computer Architecture	3	48	Logic Circuit	1301317
18	Distributed Systems	3	48	DB Fundamentals	1301318
19	Network Programming	4	64	Programming, Computer Networks 1	1301320
20	Object Oriented Programming	4	64	Programming	1302321
21	Mobile Programming	4	64	Programming	1302322
22	Software Engineering 2	3	48	Software Engineering 1	1302323
23	Automata Theory	4	64	Computer Architecture	1302324
24	Software Project	3	48	Software Engineering 2	1302325
25	Artificial Intelligence	3	48	Algorithm Design & Analysis	1302326
26	Monograph	6	96	Complete subjects	1301327
Total Credits		84			

3. Elective Subjects

Number	Subject	Credit	Total	Prerequisite	Code
1	Social Networks	3	48	Computer Fundamentals 2	1301403
2	Computer Networks 3	3	48	Computer Networks 2	1303321
3	Computer Networks 4	3	48	Computer Networks 3	1303322
4	Wireless & Mobile Networks	4	64	Computer Networks 3	1303324
5	Visual Programming	3	48	Programming	1302405
6	Data Mining	3	48	Database Administration	1302408
7	Information Security	3	48	Object Oriented Programming	1302409
8	Computer Graphics	3	48	Programming	1301313
Total Credits		25			

4. General Subjects

Number	Subject	Credit	Total	Prerequisite	Code
1	Islamic Studies 1	2	32	None	1000101
2	Islamic Studeis 2	2	32	Islamic Culture 1	1000102
2	Islamic Studeis 3	2	32	Islamic Culture 2	1000103
2	Islamic Studeis 4	2	32	Islamic Culture 3	1000104
2	Islamic Studeis 5	2	32	Islamic Culture 4	1000105
2	Islamic Studeis 6	2	32	Islamic Culture 5	1000106
2	Islamic Studeis 7	2	32	Islamic Culture 6	1000107
2	Islamic Studeis 8	2	32	Islamic Culture 7	1000108
3	English 1	2	32	None	1000109
4	English 2	2	32	English 1	1000110
5	Dari Literture	2	32	None	1000111
6	Internship	2	32	Research Methodology	1000112
7	Afghanistan History	2	32	None	1000113
Total Credits		14			

Information Technology department

1. Basic Subjects

Number	Subject	Credit	Total	Prerequisite	Code
1	Computer Fundamentals 1	3	48	None	1301201
2	Computer Fundamentals 2	3	48	Computer Fundamentals 1	1301200
3	Introduction to Algorithm & Programming	4	64	None	1301208
4	Math 1	4	64	None	1301202
5	Math 2 (Discrete Math)	4	64	Math 1	1301213
6	Math Logic	3	48	Math 2	1301203
7	Liner Algebra	3	48	Math 1	1301207
8	Statistics	3	48	Math 1	1301211
9	Probability Theory	2	32	Statistics	1301214
10	Physics 1	3	48	None	1301210
11	Physics 2	3	48	Physics 1	1301205
12	Research Methodology	2	32	Computer Fundamentals 1	1301212
Total Credits		37			

2. Special Subjects

Special Subjects					
Number	Subject	Credit	Total	Prerequisite	Code
1	Special English 1	2	32	English 1	1301301
2	Special English 2	2	32	Special English 1	1301302
3	Programming	4	64	Introduction to Algorithm & Programming	1301303
4	Database Fundamentals	4	64	Computer Fundamentals 1	1301309
5	Database Administration	3	48	DB Fundamentals	1301310
6	Computer Networks 1	3	48	Computer Fundamentals 1	1301306
7	Computer Networks 2	3	48	Computer Networks 1	1301307

8	Web Design	3	48	Computer Fundamentals 1	1301308
9	Web Development	3	48	Web Design	1301322
10	Software Engineering 1	3	48	Programming	1301310
11	Data Structure	3	48	Programming	1301311
12	Operating Systems	3	48	Computer Architecture	1301312
13	Algorithm Design & Analysis	3	48	Data Structure	1301326
14	ICT Management	2	32	Computer Networks 2, Database Fundamentals	1301401
15	Human Computer Interaction	3	48	Software Engineering 1	1301323
16	Logic Circuit	3	48	Math Logic	1301316
17	Computer Architecture	3	48	Logic Circuit	1301317
18	Distributed Systems	3	48	Database Administration	1301318
19	Network Programming	4	64	Computer Networks 2, Programming	1301320
20	Computer Networks 3	3	48	Computer Networks 2	1303323
21	Computer Networks 4	3	48	Computer Networks 3	1303322
22	Network Security	4	64	Computer Networks 3	1303325
23	Wireless and Mobile Networks	4	64	Computer Networks 3	1303324
24	Network Project	3	48	Computer Networks 4	1303321
25	Advanced Networks	4	64	Computer Networks 4	1303326
26	Monograph	6	96	Complete Subjects	1301327
Total Credits		84			

3. Elective Subjects

Elective Subjects (At least 8 credits)					
Number	Subject	Credit	Total	Prerequisite	Code
1	Social Networks	3	48	Computer Fundamentals 2	1301403
2	Object Oriented Programming	4	64	Programming	1302321

3	Artificial Intelligence	3	48	Algorithm Design & Analysis	1302326
4	Software Engineering 2	3	48	Software Engineering 1	1302323
5	Visual Programming	3	48	Programming	1303405
6	Systems Management	3	48	Computer Networks 2	1303407
7	Systems Visualization	3	48	Computer Networks 3	1303408
8	Computer Graphics	3	48	Programming	1301313
Total Credit		25			

4. General Subjects

Number	Subject	Credit	Total	Prerequisite	Code
1	Islamic Studies 1	2	32	None	1000101
2	Islamic Studeis 2	2	32	Islamic Culture 1	1000102
3	Islamic Studeis 3	2	32	Islamic Culture 2	1000103
4	Islamic Studeis 4	2	32	Islamic Culture 3	1000104
5	Islamic Studeis 5	2	32	Islamic Culture 4	1000105
6	Islamic Studeis 6	2	32	Islamic Culture 5	1000106
7	Islamic Studeis 7	2	32	Islamic Culture 6	1000107
8	Islamic Studeis 8	2	32	Islamic Culture 7	1000108
9	English 1	2	32	None	1000109
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11	Dari Litrature	2	32	None	1000111
12	Internship	2	32	Research Methodology	1000112
13	Afghanistan History	2	32	None	1000113
Total Credit		14			