Republic of Yemen
Ministry of Higher Education & Scientific Research
AL-NASSER UNIVERSITY
FACULTY OF ENGINEERING & COMPUTER SCIENCES

وزارة التعليم العالي والبحث العلمي
جامعة الناصر
كلية الهندسة وعلوم الحاسوب

Bachelor of Data Science Curriculum V9

First Level

Semester One						Semester Two				
No	Course Name	Credit	T	P		No	Course Name	Credit	T	P
1	Introduction to Data Science	3	3	-		7	OOP	3	2	1
2	Computer Fundamentals	2	1	1		8	Introduction to Web Design	3	2	1
3	Programming Principles and Techniques	4	2	2		9	Principles of Database	3	2	1
						10	Discrete Mathematics	3	3	0
4	Calculus	3	3	0		11	English 2	2	2	0
5	English 1	2	2	0		12	National Culture	2	2	0
6	Islamic Culture	2	2	0			**Total**	**16**	**13**	**3**
	Total	**16**	**13**	**3**						

Second Level

Semester One						Semester Two				
No	Course Name	Credit	T	P		No	Course Name	Credit	T	P
13	Data architecture	3	3	0		19	Data Science Programming	3	2	1
14	Advanced Database	3	2	1		20	Computer Networks	3	2	1
15	Probability and Statistics	3	2	1		21	Large Data Management	3	2	1
16	Principles of Big Data	3	3	0		22	Data structure	3	2	1
						23	Data warehouse	3	3	0
17	Operating systems	3	2	1		24	Arabic 2	2	2	0
18	Arabic 1	2	2	0			**Total**	**17**	**13**	**4**
	Total	**17**	**14**	**3**						

Third Level

Semester One						Semester Two				
No	Course Name	Credit	T	P		No	Course Name	Credit	T	P
25	Advanced Big Data	3	2	1		31	Web mining	3	2	1
26	Liner Algebra	3	3	0		32	Data Visualization	3	2	1
27	Web Development	3	2	1		33	Software Engineering	3	3	0
28	Elective 1	3	3	0		34	Elective 2	3	2	1
29	Data Mining	3	2	1		35	Advanced DSP	3	2	1
30	Arab Israeli Conflict	2	2	0		36	Communication Skills	2	2	0
	Total	**17**	**14**	**3**			**Total**	**17**	**13**	**4**

No	Summer Semester			
37	Industrial Training	3		

Fourth Level

Semester One						Semester Two				
No	Course Name	Credit	T	P		No	Course Name	Credit	T	P
38	Algorithm Analysis and Design	3	2	1		43	Information retrieval	3	2	1
39	Project Management	3	3	0		44	Data and Information Security	3	2	1
40	Elective 3	3	2	1		45	Computing Ethics	3	3	0
41	Graduation Project 1	3	0	3		46	Elective 4	3	2	1
42	Artificial Intelligence	3	3	0		47	Graduation Project 2	3	0	3
	Total	**15**	**10**	**5**			**Total**	**15**	**9**	**6**

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Elective Courses

Domain	Subject Name	Credit
Modeling & Visualization	Image processing and Pattern Recognition	3
	Business Intelligence	3
	GIS	3
Data Description and Curation	Text Mining	3
	Machine learning	3
	Selected Topics in Data Science	3
	Blockchains technology	3
Programming	Advanced OOP	3
	Mobile Programming	3
Computing	IOT and Cloud Computing	3

Aptech Certificates Mapping

No	Aptech Certificate	Certificate Awarding Time
1	Professional Diploma in Data science	After Completing Year 4