
	<b>College of Arts and Applied Sciences</b>			
	<b>Department of Computer Science (CS)</b>			
	<b>Bachelor of Science in Computer Science with Specialization in Data Science</b>			
<b>Semester</b>	<b>Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Pre/Co- Requisite</b>
Semester 1	COMP 101	Introduction to Technical Computing	3	
	COMP 111	Programming Fundamentals	3	=COMP 101
	ARAB 101	Academic Writing in Arabic	3	
	ENGL 101	Basic Academic English	3	
	MATH 199	Calculus I	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 2	COMP 151	Discrete Structures	3	>COMP 111
	COMP 161	Numerical Systems	3	>COMP 111
	ENGL 102C	English for Computer Science I	3	
	COMP 171	Digital Design & Computer Architecture	3	>=COMP 161
	SOCS 102	Omani Society	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 3	COMP 201	Data Structures and Algorithms	3	>COMP 151
	COMP 211	Object Oriented Programming	3	>COMP 111
	ENGL 203C	English for Computer Science II	3	
	COMP 221	Computer Networks	3	>COMP 171
	ENTR 200	Entrepreneurship	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 4	COMP 251	Operating Systems	3	>COMP 221
	COMP 261	Database Management Systems	3	>COMP 211
	COMP 271	Introduction to Data Sciences	3	>=COMP 261
	COMP 281	Introduction to Cybersecurity	3	>COMP 221
		Humanities and Social Science Elective	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 5	COMP 301	Software Engineering	3	>COMP 201
	COMP 311	Random Processes	3	>COMP 161
		General Elective	3	
		1 <sup>st</sup> Data Science Elective - 300 Level	3	
		2 <sup>nd</sup> Data Science Elective - 300 Level	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 6	COMP 351	Artificial Intelligence	3	>COMP 271
	COMP 361	Linear Systems	3	>COMP 311
		3 <sup>rd</sup> Data Science Elective - 300 Level	3	
		4 <sup>th</sup> Data Science Elective - 300 Level	3	
		5 <sup>th</sup> Data Science Elective - 300 Level	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 7	COMP 401	Web Technologies	3	>COMP 261
	COMP 411	IT Ethics & Society	3	>= SOCS 102

		6 <sup>th</sup> Data Science Elective - 400 Level	3	
		7 <sup>th</sup> Data Science Elective - 400 Level	3	
		8 <sup>th</sup> Data Science Elective - 400 Level	3	
<b>Credits/Semester</b>			<b>15</b>	
Semester 8	COMP 451	Analytics for Decision Making	3	>COMP 361
	COMP 499	Final Year Project	3	>=COMP 411
		Physics and Natural Science Elective	3	
		9 <sup>th</sup> Data Science Elective - 400 Level	3	
		10 <sup>th</sup> Data Science Elective - 400 Level	3	
<b>Credits/Semester</b>			<b>15</b>	
<b>Total Credits</b>			<b>120</b>	

### DATA SCIENCE ELECTIVES

COURSE CODE	COURSE TITLE	Credits	Pre/Co-Requisite
COMP 330	Big Data Analytics	3	> COMP 271
COMP 331	Data Engineering	3	> COMP 271
COMP 332	Data Analytics Ethics	3	> COMP 271
COMP 333	Natural Language Processing	3	> COMP 211
COMP 334	Knowledge Representation	3	> COMP 211
COMP 352	Machine Learning	3	>= COMP 351
COMP 353	Data Mining	3	>= COMP 351
COMP 354	Deep Learning	3	>= COMP 351
COMP 428	Data Analysis and Visualization	3	> COMP 271
COMP 429	Business Intelligence Analysis	3	> COMP 351
COMP 430	Advanced Data Analytics	3	> COMP 271
COMP 452	Data Science for Marketing Analytics	3	> COMP 351
COMP 453	Research Topics in Data Analytics	3	> COMP 351
COMP 454	Predictive Modeling	3	> COMP 351
COMP 489	Practical Training in Data Science	3	> COMP 351

\*\*\*\*\*