

	WALJAT COLLEGE OF APPLIED SCIENCES In academic partnership with BIRLA INSTITUTE OF TECHNOLOGY	
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAMME STRUCTURE APPLICABLE FROM 2015

Subject Code	Subject Title	Credits
Semester I		
HU1101	Technical English	3
PH1201	Physics	4
MA1201	Engineering Mathematics	4
EE2201	Principles of Electrical Engineering	4
CH1401	Engineering Chemistry	3
ME1202	Engineering Graphics	3
CS1302	Fundamental of Unix & C Programming	3
PE1202	Workshop Practice	2
PH1202	Physics Lab	2
GA1002/GA1004/ GA1006/GA1008	NCC/NSS/ PT & Games/ Creative Art	1
Sub-Total		29
Semester II		
EC2001	Principles of Electronics Engineering	3
MA2201	Advance Engineering Mathematics	4
CH2303	Environmental Science	3
CS2301	Fundamental of Data Structure	4
ME2001	Principles of Mechanical Engineering	3
AM1201	Engineering Mechanics	4
CH1402	Chemistry Lab	2
EE3202	Basic Electrical Engineering Lab	2
EC2002	Basic Electronics Engineering Lab	2
CS2302	Data Structure Lab	2
GA2002/GA2004	NCC/NSS/	1
GA2006/GA2008	PT & Games/Creative Art	1
Sub-Total		30

First Year Total Credit		59
Semester III		
CS 3005	Object Oriented Programming using Java	3
EC 3201	Digital Electronics	4
CS 4101	Discrete Mathematical Structures	3
CS 6101	Design and Analysis of Computer Algorithms	3
BT3001/ HU4001/HU4002	Biological Science/Language(German/French)	3
AM2202/EE3202	Engg. Mechanics lab/ Basic Electrical Engg. lab	2
CS 3006	Object Oriented Programming Lab.	2
EC 3202	Digital Electronics Lab.	2
GA3002/GA3004	NCC/ NSS/	1
GA3006/GA3008	PT & Games/ Creative Art	
Sub-Total		23
Semester IV		
MA 4109	Probability, Statistics and Numerical Techniques	3
CS 4205	Database Management Systems	3
CS 4109	Computer System Architecture	4
CS 4107	Operating System	3
HU4001/	Biological science/	3
BT3001	Language(German/French)	
CS 4206	DBMS Lab.	2
MA 4110	Numerical Techniques Lab.	2
CS 4108	Operating System Lab.	2
GA4002/GA4004	NCC/NSS/	1
GA4006/GA4008	PT & Games/Creative Art	
Sub-Total		23
Second Year Total Credit		46
Total Credit for the Award of Diploma (Computer Science) Engineering Certificate		105
Semester V		
CS 6107	Computer Networks	3
EC 4205	Microprocessor and Microcontroller	3
CS 5101	Formal Language & Automata Theory	4
CS 8101	Artificial Intelligence and Expert Systems	3

	Breadth Elective V	3
CS 6108	Computer Networking Lab.	2
EC 4206	Microprocessor Application Lab	2
CS 8102	Artificial Intelligence Lab.	2
Sub-Total		22
Semester VI		
CS 6105	Compiler Design	3
CS 6011	Computer Graphics and Multimedia	3
CS 6109	Software Engineering	3
CS 6103	System Programming	4
	Breadth Elective VI	3
CS 6106	Compiler Design Lab.	2
CS 6110	Software Engineering Lab.	2
CS 6012	Computer Graphics and Multimedia Lab.	2
Sub-Total		22
Third Year Total Credit		44
Total Credit for the Award of Advance Diploma (Computer Science) Engineering Certificate		149
Semester VII		
CS 5105	Soft Computing	3
	Elective I	3
	Breadth Elective VII	3
CS 5106	Soft Computing Lab	2
CS 7014	Project	4
Sub-Total		15
List of Elective I		
CS7029	Free/Open Source Software	3
CS7117	Optimization Techniques	3
CS7121	Cryptography and Network Security	3
CS7029	Information Security and Assurance	3
CS7101	Principles of Programming Languages	3
CS7107	Digital Image Processing	3
Semester VIII		
CS 8031	Data Mining & Data Warehousing	3
CS 8014	Project	6

	Elective II	3
	Elective III	3
Sub-Total		15
Fourth Year Total Credit		30
Total Credit for the Award of Degree BE-(Computer Science) Engineering		179
List of Elective II		
EC8201	Mobile & Cellular Communication	3
EE4207	Digital Signal Processing	3
CS7033	Multimedia Technology	3
CS8029	Parallel & Distributed Systems	3
CS8111	Natural Language Processing	3
CS8121	Pattern Recognition	3
CS8113	Computational Geometry	3
List of Elective III		
CS8123	Real Time Systems	3
CS8125	Computer Vision	3
CS8127	Computing and Complexity Theory	3
EC4201	VLSI Design	3
CS7127	Software Project Management	3
CS7123	Bio Informatics	3
CS7125	Object Oriented Analysis and Design	3
List of Breadth Elective V		
MSH 1131	Principles of Management	3
PE 5009	Industrial Organization and Management	3
MSH 1125	Organisation Behavior	3
AR 3039	Art and Culture	3
MSH 1113	Environmental Psychology	3
PE 5011	Project Engineering	3
List of Breadth Elective VI		
MSH 1137	Economics	3
PE 6009	Engineering Economy	3
MSH1117	Financial Management	3
List of Breadth Elective VII		

MSH 1159	IPR in Oman	3
MSH 1163	Entrepreneurship and Small Business Management in Oman	3
MSH1161	Business Ethics in Oman	3