

THE NORTHCAP UNIVERSITY (NIRF ENGINEERING WITHIN 100)
BCA WITH SPECIALIZATION IN ANIMATION AND GAMING COURSE STRUCTURE

Sem.	Semester Course Code, Course Name (L-T-P) Credits						Communi-ty Service	GP	Hrs. Per week			Credits
									L	T	P	
1	MAL153 Mathematics-I (3-1-0)4	CLL101 Effective Communication-I (2-0-1)2.5	BCL103 Programming Fundamentals-I (2-0-4)4	BSL102 Principles of Management (2-0-2)3	CHL100 Environmental Studies (3-0-0-)3		BCS101 (35 Hrs)	BCR118 GP – 1 (1-0-0-) 1 Credit	13	1	7	17.5
2	MAL206 Mathematical Statistics (3-1-0)4	CLL102 Effective Communication-II (2-0-1)2.5	CLL120 Human Values & Professional Ethics (2-0-0-)2	BCL104 Programming Fundamentals-II (2-0-4)4	BCL110 Problem Solving and Design Thinking (2-0-2)3	Foreign Language Elective 1 (1-2-0)3	BCS102 (35Hrs) 1 Credit	BCR119 GP- 2 (1-0-0-) 1 Credit	13	3	7	20.5
	Summer Training+ Community Service(70 hrs)											2
3	BCL201 Data Structures (3-0-2)4	BCL203 DBMS (3-0-2)4	PCL102 Psychology for living (2-1-0)3	BCL205 Computer Architecture (3-0-2)4	Open Elective – 1 (3-0-0)3	Program Elective-1 (2-0-4-)4	BCS201 (35 Hrs)	BCR218 GP – 3 (1-0-0) 1 Credit	17	1	10	23
4	BCL202 Computer Networks (3-0-2)4	BCV201 Skill Development -1 (1-0-2)2	BCL204 Operating System (3-0-2)4	Open Elective – 2 (3-0-0)3	Program Elective-2 (2-0-4)4	BCL206 Analysis and Design of Algorithms (3-0-2)4	BCS202 (35 Hrs) 1 Credit	BCR 219 GP-4 (1-0-0-) 1 Credit	16	0	12	23
Summer	Summer Training+ Community Service(70 hrs)											3
5	BSL101 Entrepreneurship (2-0-2)3	BCL303 Introduction to AI & ML (3-0-2)4	BCL305 Software Engineering (3-0-2-)4	Program Elective-3 (2-0-4-)4	BCV301 Skill Development -2 (1-0-2)2	BCD301 Project – 1 Semester at Industry/Startup Project (0-0-8)4	BCS301 (70 Hrs) 1 Credit	BCR318 GP-5 (1-0-0) 1Credit	12	0	20	23
6	Program Elective-4 (2-0-4)4	Open Elective-3 (3-0-0)3	BCD302 Project – 2 Semester at Industry/Startup Project				BCS302 (70 Hrs) 1 Credit	BCR319 GP-6 (1-0-0) 1Credit	06	0	16	15

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			(0-0-12)6									
							Total		77	5	72	127

PROGRAM ELECTIVES

S.No.	Code	Course Name	L-T-P	Credits
BCA with Specialization in Animation and Gaming				
1	BCL211	Foundations of 2D Game Development	2-0-4	4
2	BCL222	Web application development	2-0-4	4
3	BCL311	Basics of 3D Animation	2-0-4	4
4	BCL312	Game Art Essentials	2-0-4	4
BCA with Specialization in Web Application Development				
1	BCL221	UI / UX Design principles	2-0-4	4
2	BCL222	Web application development	2-0-4	4
3	BCL321	Fundamentals of Mobile application development	2-0-4	4
4	BCL322	Software prototyping, usability & testing	2-0-4	4