



**BRAINWARE UNIVERSITY**  
**School of Computational & Applied Sciences**  
**Department of Cyber Science & Technology**  
**Programme : Bachelor of Science (Honours) in Advanced Networking and Cyber Security**  
**Programme Structure 2020**  
**(As per UGC CBCS Template)**

**Semester-I**

Course Code	Course Name	Course Type	L - T - P	Credits	Total Marks
HU101	English Communication	AECC-1	3 - 0 - 0	3	100
HU191	English Communication Lab	AECC-1	0 - 0 - 2	1	100
BNCSC101	Computer Fundamentals	CC-1	4 - 0 - 0	4	100
BNCSC191	Computer Fundamentals Lab	CC-1	0 - 0 - 4	2	100
BNCSC102	Hardware and Operating Systems-I	CC-2	4 - 0 - 0	4	100
BNCSC192	Hardware and Operating System-I Lab	CC-2	0 - 0 - 4	2	100
GE**	Generic Elective-1 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-1	4-0-0/ 5-0-0	4/5	200/100
GE**	Generic Elective -1 (Practical/Tutorial)	GE-1	0 - 0 - 4	2/1	
<b>Total</b>				<b>22</b>	<b>800/700</b>

**Semester-II**

Course Code	Course Name	Course Type	L - T - P	Credits	Total Marks
ENV201	Environmental Studies	AECC-2	4 - 0 - 0	4	100
BNCSC201	Computer Networks	CC-3	4 - 0 - 0	4	100
BNCSC291	Computer Networking Lab	CC-3	0 - 0 - 4	2	100
BNCSC202	Hardware and Operating Systems II	CC-4	4 - 0 - 0	4	100
BNCSC292	Hardware and OS II Lab	CC-4	0 - 0 - 4	2	100
GE**	Generic Elective-2 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-2	5 - 1 - 0	4/5	200/100
GE**	Generic Elective -2 (Practical/Tutorial)	GE-2	0-0-4/ 0-1-0	2/1	
<b>Total</b>				<b>22</b>	<b>700/600</b>



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**Semester-III**

Course Code	Course Name	Course Type	L -T -P	Credits	Total Marks
BNCSC301	Switching and Routing	CC-5	4- 0 - 0	4	100
BNCSC391	Switching and Routing Lab	CC-5	0 - 0 - 4	2	100
BNCSC302	Database Management System	CC-6	4- 0 - 0	4	100
BNCSC392	DBMS Lab	CC-6	0 - 0 - 4	2	100
BNCSC303	Computer Organization and Architecture	CC-7	4- 0 - 0	4	100
BNCSC393	Computer Organization and Architecture Lab	CC-7	0 - 0 - 4	2	100
BNCSS391	Shell Programming	SEC-1	2 - 0 - 4	4	100
GE**	Generic Elective-3 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-3	4-0-0/ 5-0-0	4/5	200/100
GE**	Generic Elective -3 (Practical/Tutorial)	GE-3	0-0-4/ 0-1-0	2/1	
<b>Total</b>				<b>28</b>	<b>900/800</b>

**Semester-IV**

Course Code	Course Name	Course Type	L -T -P	Credits	Total Marks
BNCSC401	Linux System Administration	CC-8	4- 0 - 0	4	100
BNCSC491	Linux System Administration Lab	CC-8	0 - 0 - 4	2	100
BNCSC402	Windows Server Administration	CC-9	4- 0 - 0	4	100
BNCSC492	Windows Server Administration Lab	CC-9	0 - 0 - 4	2	100
BNCSC403	Infrastructure Management Services	CC-10	5- 1 - 0	6	100
BNCSS491	Programming in Python	SEC-2	2 - 0 - 4	4	100
GE**	Generic Elective-4 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-4	4-0-0/ 5-0-0	4/5	200/100
GE**	Generic Elective-4 (Practical/Tutorial)	GE-4	0-0-4/ 0-1-0	2/1	
<b>Total</b>				<b>28</b>	<b>800/700</b>



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**Semester-V**

Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
BNCS501	Linux Engineering	CC-11	4-0-0	4	100
BNCS591	Linux Engineering Lab	CC-11	0-0-4	2	100
BNCS502	Windows Server Infrastructure	CC-12	4-0-0	4	100
BNCS592	Windows Server Infrastructure Lab	CC-12	0-0-4	2	100
BNCS501	A. Threat Modeling, Risk Assessment and Management B. Artificial Intelligence in Cyber Security C. Introduction to Modern Technologies	DSEC-1	5-1-0	6	100
BNCS502	A. Voice over Internet Protocol Professional B. Security Specialist C. Security Operations Center (SOC)	DSEC-2	4-0-0	4	100
BNCS592	A. Voice over Internet Protocol Professional Lab B. Security Specialist Lab C. Security Operations Center (SOC) Lab	DSEC-2	0-0-4	2	100
<b>Total</b>				24	700



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**Semester-VI**

<b>Course Code</b>	<b>Course Name</b>	<b>Course Type</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Total Marks</b>
BNCSC601	Hacking Techniques, Tools and Incident Handling	CC-13	4-0-0	4	100
BNCSC691	Hacking Techniques and Incident Handling Lab	CC-13	0-0-4	2	100
BNCSC602	Digital Forensics	CC-14	4-0-0	4	100
BNCSC692	Digital Forensics Lab	CC-14	0-0-4	2	100
BNCSD601	A. Block Chain and Crypto Currency B. Vulnerability Analysis / Penetration Testing	DSEC-3	5-1-0	6	100
BNCSD602	Project	DSEC-4		6	100
BNCSMC681	Industrial Training	MC - 1			100
<b>Total</b>				<b>24</b>	<b>700</b>