

**JAGAN NATH UNIVERSITY**  
**BACHELOR OF COMPUTER APPLICATIONS**  
**COURSE STRUCTURE (BCA)**  
**FIRST SEMESTER**

THEORY PAPERS		No. of Teaching Hours			Marks Allocation			
Code	Subject/Paper	L	T	P	IA	EA	Total	Credits
BCA 101	Computer Fundamentals	3	1	-	30	70	100	4
BCA 102	C Language	3	1	-	30	70	100	4
BCA 103	Mathematics	3	1	-	30	70	100	4
BCA 104	Basics of Internet Programming	3	1	-	30	70	100	4
BCA 105	Communication Skills	4	-	-	30	70	100	4
BCA 106	Principles of Management	3	1	-	30	70	100	4

PRACTICALS/VIVA-VOCE		No. of Teaching Hours			Sessional	Practical	Total	Credits
BCA 107	Lab-1: Computer Fundamentals & PC Computing	-	-	2	30	20	50	1
BCA 108	Lab-2: C language	-	-	2	30	20	50	1
BCA 109	Lab-3: Internet Programming	-	-	2	30	20	50	1
<b>TOTAL</b>		<b>19</b>	<b>5</b>	<b>6</b>	<b>270</b>	<b>480</b>	<b>750</b>	<b>27</b>

**SECOND SEMESTER**

THEORY PAPERS		No. of Teaching Hours			Marks Allocation			
Code	Subject/Paper	L	T	P	IA	EA	Total	Credits
BCA 201	Digital Electronics	4	-	-	30	70	100	4
BCA 202	Computer Organization And Architecture	3	1	-	30	70	100	4
BCA 203	System Analysis & Design	4	-	-	30	70	100	4
BCA 204	Data Structure & Algorithms	3	1	-	30	70	100	4
BCA 205	Linux Environment	3	1	-	30	70	100	4
BCA 206	Environmental Studies	4	-	-	30	70	100	4
PRACTICALS/VIVA-VOCE		No. of Teaching Hours			Sessional	Practical	Total	Credits
BCA 207	Lab-1: Data Structure & Algorithms	-	-	2	30	20	50	1
BCA 208	Lab-2: Linux Environment	-	-	2	30	20	50	1
BCA 209	Lab-3: Personality Development Lab	-	-	2	30	20	50	1
<b>TOTAL</b>		<b>21</b>	<b>3</b>	<b>6</b>	<b>270</b>	<b>480</b>	<b>750</b>	<b>27</b>

### THIRD SEMESTER

THEORY PAPERS		No. of Teaching Hours			Marks Allocation			
Code	Subject/Paper	L	T	P	IA	EA	Total	Credits
BCA 301	Object Oriented Programming using C++	3	1	-	30	70	100	4
BCA 302	Database Management System	3	1	-	30	70	100	4
BCA 303	Front End Design Tool (VB)	3	1	-	30	70	100	4
BCA 304	Managerial Personality Development	4	-	-	30	70	100	4
BCA 305	Technical Communication	3	1	-	30	70	100	4
BCA 306	Discrete Mathematics	3	1	-	30	70	100	4
<b>PRACTICALS/VIVA-VOCE</b>		<b>No. of Teaching Hours</b>			<b>Sessional</b>	<b>Practical</b>	<b>Total</b>	<b>Credits</b>
BCA 307	Lab-1: OOPS Using C++	-	-	2	30	20	50	1
BCA 308	Lab-2: DBMS	-	-	2	30	20	50	1
BCA 309	Lab-3: Front End Design Tool (VB)	-	-	2	30	20	50	1
<b>TOTAL</b>		<b>19</b>	<b>5</b>	<b>6</b>	<b>270</b>	<b>480</b>	<b>750</b>	<b>27</b>

### FOURTH SEMESTER

THEORY PAPERS		No. of Teaching Hours			Marks Allocation			
Code	Subject/Paper	L	T	P	IA	EA	Total	Credits
BCA 401	Operating Systems	3	1	-	30	70	100	4
BCA 402	Computer oriented Numerical & Statistical Methods using C	3	1	-	30	70	100	4
BCA 403	Java Programming	3	1	-	30	70	100	4
BCA 404	Software Engineering	4	-	-	30	70	100	4
BCA 405	Data Mining & Data Warehousing	4	-	-	30	70	100	4
BCA 406	Communication Skills- Scientific & Technical Writing	3	1	-	30	70	100	4
<b>PRACTICALS/VIVA-VOCE</b>		<b>No. of Teaching Hours</b>			<b>Sessional</b>	<b>Practical</b>	<b>Total</b>	<b>Credits</b>
BCA 407	Lab-1: Java	-	-	2	30	20	50	1
BCA 408	Lab-2: S.E. Lab	-	-	2	30	20	50	1
BCA 409	Lab-3: C.T Lab/Seminar	-	-	2	30	20	50	1
<b>TOTAL</b>		<b>20</b>	<b>4</b>	<b>6</b>	<b>270</b>	<b>480</b>	<b>750</b>	<b>27</b>
4-6 weeks training will be held after fourth semester, viva will be conducted in fifth sem.								

### FIFTH SEMESTER

THEORY PAPERS		No. of Teaching Hours			Marks Allocation			
Code	Subject/Paper	L	T	P	IA	EA	Total	Credits
BCA 501	Computer Networks	3	1	-	30	70	100	4
BCA 502	System Software	4	-	-	30	70	100	4
BCA 503	Advanced Internet Programming	3	1	-	30	70	100	4
BCA 504	Advance Java	3	1	-	30	70	100	4
BCA 505	Computer Graphics	3	1	-	30	70	100	4
BCA 506	E-Commerce	4	-	-	30	70	100	4

PRACTICALS/VIVA-VOCE		No. of Teaching Hours			Sessional	Practical	Total	Credits
BCA 507	Lab-1: Advance Internet Programming	-	-	2	30	20	50	1
BCA 508	Lab-2: .Advance Java	-	-	2	30	20	50	1
BCA 509	Summer Project Seminar	-	-	2	30	20	50	1
BCA 510	Industrial Visit	-	-	-	-	-	-	1
<b>TOTAL</b>		<b>20</b>	<b>4</b>	<b>6</b>	<b>270</b>	<b>480</b>	<b>750</b>	<b>28</b>

### SIXTH SEMESTER

THEORY PAPERS		No. of Teaching Hours			Marks Allocation			
Code	Subject/Paper	L	T	P	IA	EA	Total	Credits
BCA 601	Advance Computer Networks	3	1	-	30	70	100	4
BCA 602	Management Information System	4	-	-	30	70	100	4
BCA 603	Artificial Intelligence	3	1	-	30	70	100	4
	<b>Elective (any one)</b>							
BCA 604A	.NET Technology	3	1	-	30	70	100	4
BCA 604B	Fundamental of PHP	3	1	-	30	70	100	4
BCA 604C	Principles of Accounting	3	1	-	30	70	100	4
BCA 604D	Intellectual Property Rights	3	1	-	30	70	100	4
	<b>Elective (any one)</b>							
BCA 605A	Social Implications of IT	3	1	-	30	70	100	4
BCA 605B	Mobile Computing	3	1	-	30	70	100	4
BCA 605C	Cyber Ethics & Crime	3	1	-	30	70	100	4
BCA 605D	Entrepreneurship	3	1	-	30	70	100	4
<b>PRACTICALS/VIVA-VOCE</b>		<b>No. of Teaching Hours</b>			<b>Sessional</b>	<b>Practical</b>	<b>Total</b>	<b>Credits</b>
BCA 606	Lab-1: .NET/PHP Lab	-	-	2	30	20	50	1
BCA 607	Major Project	-	-	4	100	50	150	2
BCA 608	Seminar	-	-	2	30	20	50	1
<b>TOTAL</b>		<b>16</b>	<b>4</b>	<b>8</b>	<b>310</b>	<b>440</b>	<b>750</b>	<b>24</b>
<b>Grand Total of Credits</b>		<b>115</b>	<b>25</b>	<b>38</b>	<b>1660</b>	<b>2840</b>	<b>4500</b>	<b>160</b>

**L=LECTURER, T= TUTORIAL, P=PRACTICAL, IA=INTERNAL ASSESSMENT, EA=EXTERNAL ASSESSMENT**

The student will submit a synopsis at the beginning of the semester for approval from the departmental committee in a specified format ,thereafter he/she will have to present the progress of the work through seminars and progress reports. Seminar related to the project should be delivered one after starting of semester .The progress will be monitored through seminars and progress reports.

**Note;--**

1. The total number of the credits of BCAProgramme are = 160.
2. Each student shall be required to appear for examinations in all courses. However, for the award of the degree a student shall be required to earn minimum of 150 credits .