

## Programme: BCA

### Program Outcomes (PO's)

**PO1: Computing Knowledge:** Apply mathematics and computing fundamental and domain concepts to find out the solution of defined problems and requirements.

**PO2: Problem-Solving and Decision Making:** Attain problem-solving, decision making and critical thinking skills to provide viable solutions for complex problems.

**PO3: Modern tool usage:** An ability to apply appropriate techniques, resources, and modern IT tools including prediction and modeling to complex activities with an understanding of the limitations.

**PO4: Technical Skill Development** To develop and sharpen their IT/ programming, networking and data management skills required for identifying problems and issues relating to the disciplinary area and field of study/ higher education.

**PO5: Societal Concern:** An ability to apply contextual knowledge to assess societal, legal issues and the consequent responsibilities relevant to the professional practice.

**PO6: Environment and Sustainability:** An ability to understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO7: Ethics:** Exhibiting ethics for regulations, responsibilities and norms in professional computing practices.

**PO8: Individual and team work:** Gain confidence for self and continuous learning to improve knowledge and competence as a member or leader of a team.

**PO9: Communication :** An ability to communicate effectively on engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, and make effective presentations.

**PO10: Life-long learning:** Enlighten knowledge to enhance understanding and building research, strategies in independent learning for continual development as computer applications professional.

### BCA (Syllabus as amended Under National Education Policy 2020)

Semester-I <sup>st</sup>					
Course Code	Course Name	L	T	P	C

BCA-1001	Computer Fundamental & Problem solving Techniques	3	0	0	3
BCA-1002	C Programming	3	0	0	3
BCA-1003	Principle of Management	4	0	0	4
BCA-1004	Business Communication	3	1	0	4
BCA-1005	Mathematics –I	4	0	0	4
BCA-1001P	Computer Laboratory and Practical Work of Office Automation	0	0	3	2
BCA-1002P	Computer Laboratory and Practical Work of C Programming	0	0	3	2
	<b>Total</b>				<b>22</b>
<b>Semester-II<sup>nd</sup></b>					
<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
BCA-2001	Object Oriented Programming Using C++	3	0	0	3
BCA-2002	Internet Technology and Web Design	3	1	0	4
BCA-2003	Organization Behavior	4	0	0	4
BCA-2004	Financial Accounting & Management	3	1	0	4
BCA-2005	Mathematics II	4	0	0	4
BCA-2001P	Computer Laboratory and Practical Work of C++ Programming	0	0	6	3
	<b>Total</b>				<b>22</b>
<b>Semester-III<sup>rd</sup></b>					
<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
BCA-3001	Python Programming	3	0	0	3
BCA-3002	Data Structure Using C & C++	3	0	0	3
BCA-3003	Operating System	3	1	0	4
BCA-3004	Digital Electronics & Computer Organization	3	1	0	4

BCA-3005	Elements of Statistics	3	1	0	4
BCA-3001P	Computer Laboratory and Practical Work of Python	0	0	3	2
BCA-3002P	Computer Laboratory and Practical Work of DS	0	0	3	2
<b>Total</b>					<b>22</b>
<b>Semester-IV<sup>th</sup></b>					
<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
BCA-4001	Computer Graphics & Animation	3	1	0	4
BCA-4002	Database Management System	3	0	0	3
BCA-4003	Software Engineering	3	1	0	4
BCA-4004	Optimization Techniques	3	1	0	4
BCA-4005	Mathematics-III	4	0	0	4
BCA-4001P	Computer Graphics & DBMS Laboratory	0	0	6	3
<b>Total</b>					<b>22</b>
<b>Semester-V<sup>th</sup></b>					
<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
BCA-5001	Knowledge Management	3	1	0	4
BCA-5002	Java Programming and Dynamic Webpage Design	3	0	0	3
BCA-5003	Computer Network	3	1	0	4
BCA-5004	Numerical Methods	3	1	0	4
BCA-5005	Minor Project	0	0	2	2
BCA-5006	Viva-Voice on Summer Training	0	0	2	1
BCA-5002P	Computer Laboratory and Practical Work of Java Programming & Dynamic Webpage Design	0	0	6	3
<b>Total</b>					<b>21</b>

<b>Semester-VI<sup>th</sup></b>					
<b>Course Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
BCA-6001	Information & Cyber Security	4	0	0	4
BCA-6002	Internet Of Things	3	1	0	4
BCA-6003	E-Commerce	4	0	0	4
BCA-6004	Data Science and Machine Learning	3	1	0	4
BCA-6005	Major Project	0	3	6	5
BCA-6006	Presentation/Seminar based on Major Project	0	0	0	1
<b>Total</b>					<b>22</b>

**Table 2: List of Courses**