



Dr. D. Y. Patil Vidyapeeth, Pune

(Deemed to be University)

**Accredited (3rd Cycle) by NAAC with a CGPA of 3.64 on four-point scale at 'A++' Grade and
ISO9001: 2015 Certified University**

Sant Tukaram Nagar Pimpri, Pune – 411018

Centre for Online Learning

Programme Curriculum

Bachelor of Computer Application (BCA)

Bachelor of Computer Application (BCA with Hons.)

Program Structure

Program	Credits	NCrF/ NHEQF Level
Bachelor of Computer Applications (BCA) – 3 Years	120	5.5
Bachelor of Computer Applications with Honours BCA (Honours) – 4 Years	160	6

Summary (Semester Wise)

Semester	Total Credits	Total Courses	Total Marks
I	20	6	500
II	20	6	500
III	20	6	500
IV	20	6	500
V	20	6	500
VI	20	5 Courses + 1 Project	500
BCA Degree	120	35 Course + 1 Project	3000
VII	20	4 Courses + 1 Project	500
VIII	20	3 Courses + 1 Project	500
BCA Hon.	160	42 Courses + 3 Projects	4000

Course Code and Definitions

Course Code	Course Type	BCA		+ BCA (Hons)	
		Courses	Credits	Courses	Credits
DCC	Domain Core Course	24	96	7	32
AEC	Ability Enhancement Courses	5	10	-	-
SEC	Skill Enhancement Courses	1	2	1	4
VAC	Value Added Courses	5	10	1	4
GEC	Generic Elective Course	1	2	-	-
	Total	36	120	9	40

Program Title: Bachelor of Computer Application (BCA)

Program Structure

BCA First Year - Semester – I

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA 101	Computer Organization	4	30	70	100	120
DCC	OBCA 102	Programming Logic with C	4	30	70	100	120
DCC	OBCA 103	Foundation of Applied Mathematics	4	30	70	100	120
DCC	OBCA 104	Introduction to IT	4	30	70	100	120
SEC	OBCA 105	Business English	2	50	-	50	60
VAC	OBCA 106	Environmental Awareness and Disaster Management	2	50	-	50	60
Total Credits			20	Total Marks		500	

BCA First Year - Semester – II

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA 201	Data Structure Using C	4	30	70	100	120
DCC	OBCA 202	Discrete Mathematics	4	30	70	100	120
DCC	OBCA 203	Principles of Database Management Systems	4	30	70	100	120
DCC	OBCA 204	System Analysis and Design	4	30	70	100	120
AEC	OBCA 205	Lab Professional Version Control	2	50	-	50	60
VAC	OBCA 206	Business Ethics and Corporate Governance	2	50	-	50	60
Total Credits			20	Total Marks		500	

BCA Second Year - Semester – III

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA 301	Object Oriented Programming - C++	4	30	70	100	120
DCC	OBCA 302	Advanced Database Management Systems	4	30	70	100	120
DCC	OBCA 303	Operating System	4	30	70	100	120
DCC	OBCA 304	Software Engineering	4	30	70	100	120
AEC	OBCA 305	Lab - OOPS & DBMS	2	50	-	50	60
VAC	OBCA 306	Professional Behavioral Engineering	2	50	-	50	60
Total Credits			20	Total Marks		500	

BCA Second Year - Semester – IV

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA 401	Entrepreneurship & Startup Management	4	30	70	100	120
DCC	OBCA 402	Data Communication and Networks	4	30	70	100	120
DCC	OBCA 403	Web Technology	4	30	70	100	120
DCC	OBCA 404	Introduction to Python	4	30	70	100	120
AEC	OBCA 405	Lab – Web Technology & Python	2	50	-	50	60
VAC	OBCA 406	Business Laws and Regulations	2	50	-	50	60
Total Credits			20	Total Marks		500	



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BCA Specializations

Sr. No.	Specializations
I	AI and Business Analytics
II	Data Science
III	Web Development & Cloud Computing
IV	E-Commerce & Digital Marketing

B.C.A Third Year - Semester – V

Specialization: AI and Business Analytics

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA501	Full Stack Web Development	4	30	70	100	120
DCC	OBCAAI 502	Fundamentals of Artificial intelligence (AI)	4	30	70	100	120
DCC	OBCAAI 503	Big Data Analytics	4	30	70	100	120
DCC	OBCAAI 504	Natural Language Processing (NLP)	4	30	70	100	120
AEC	OBCAAI 505	Lab- Full Stack Web Development	2	50	-	50	60
VAC	OBCAAI 506	Generative AI and Prompt Engineering	2	50	-	50	60
Total Credit			20	Total Marks		500	

B.C.A Third Year - Semester – VI

Specialization: AI and Business Analytics

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCAAI 601	Introduction to Android Development	4	30	70	100	120
DCC	OBCAAI 602	AI for Business Intelligence	4	30	70	100	120
DCC	OBCAAI 603	Computer Vision	4	30	70	100	120
AEC	OBCAAI 604	Lab - Android Development	2	30	70	100	120
GEC	OBEC 605 / OBEC 606	Cybersecurity / Indian Knowledge System	2	50	-	50	60
DSC	OBCAP 607	Project Work - I	4	-	100	100	120
Total Credits			20	Total Marks		500	

B.C.A Third Year - Semester – V

Specialization: Data Science

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCADS 501	Full Stack Web Development	4	30	70	100	120
DCC	OBCADS 502	Object Oriented Analysis and Design	4	30	70	100	120
DCC	OBCADS 503	Big Data Analytics	4	30	70	100	120
DCC	OBCADS 504	Data Mining & Warehousing	4	30	70	100	120
AEC	OBCADS 505	Lab- Full Stack Web Development	2	50	-	50	60
VAC	OBCADS 506	Data Visualization	2	50	-	50	60
Total Credit			20	Total Marks		500	

B.C.A Third Year - Semester – VI

Specialization: Data Science

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCADS 601	Introduction to Android Development	4	30	70	100	120
DCC	OBCADS 602	Cloud Computing	4	30	70	100	120
DCC	OBCADS 603	Fundamentals of Artificial intelligence (AI)	4	30	70	100	120
AEC	OBCADS 604	Lab - Android Development	2	50	-	50	60
GEC	OBEC 605 / OBEC 606	Cybersecurity / Indian Knowledge System (IKS)	2	50	-	50	60
DSC	OBCAP 607	Project Work - I	4	-	100	100	120
Total Credits			20	Total Marks		500	

B.C.A Third Year - Semester – V

Specialization: E-Commerce & Digital Marketing

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCAEC 501	Full Stack Web Development	4	30	70	100	120
DCC	OBCAEC 502	E-Commerce Foundations	4	30	70	100	120
DCC	OBCAEC 503	Social Media Marketing	4	30	70	100	120
DCC	OBCAEC 504	Introduction to Digital Marketing	4	30	70	100	120
AEC	OBCAEC 505	Lab- Full Stack Web Development	2	50	-	50	60
VAC	OBCAEC 506	Online Branding	2	50	-	50	60
Total Credit			20	Total Marks		500	

B.C.A Third Year - Semester – VI

Specialization: E-Commerce & Digital Marketing

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCAEC 601	Introduction to Android Development	4	30	70	100	120
DCC	OBCAEC 602	E-Commerce Analytics	4	30	70	100	120
DCC	OBCAEC 603	Technical SEO & Search Engine Marketing (SEM)	4	30	70	100	120
AEC	OBCAEC 604	Lab - Android Development	2	50	-	50	60
GEC	OBECE 605 / OBECE 606	Cybersecurity / Indian Knowledge System (IKS)	2	50	-	50	60
DSC	OBCAP 607	Project Work - I	4	-	100	100	120
Total Credits			20	Total Marks		500	

B.C.A Third Year - Semester – V

Specialization: Web Development & Cloud Computing

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCAWD 501	Full Stack Web Development	4	30	70	100	120
DCC	OBCAWD 502	DevOps	4	30	70	100	120
DCC	OBCAWD 503	Cloud Architecture & Services	4	30	70	100	120
DCC	OBCAWD 504	Digital Business Management	4	30	70	100	120
AEC	OBCAWD 505	Lab- Full Stack Web Development	2	50	-	50	60
VAC	OBCAWD 506	UI/UX Design Strategy	2	50	-	50	60
Total Credit			20	Total Marks		500	

B.C.A Third Year - Semester – VI

Specialization: Web Development & Cloud Computing

Course Code	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCAWD 601	Introduction to Android Development	4	30	70	100	120
DCC	OBCAWD 602	E-Commerce Analytics	4	30	70	100	120
DCC	OBCAWD 603	Cloud Security	4	30	70	100	120
AEC	OBCAWD 604	Lab - Android Development	2	30	70	100	120
GEC	OBECE 605 / OBECE 606	Cybersecurity / Indian Knowledge System (IKS)	2	50	-	50	60
DSC	OBCAP 607	Project Work- I	4	-	100	100	120
Total Credits			20	Total Marks		500	



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Note

1. After successful completion (passing criteria) of a BCA degree of six semesters, learners can opt for exit with a BCA degree certificate. They can earn 120 credits which can be mentioned in their respective Academic Bank of Credit (ABC) account.
2. After completing, candidates who meet a minimum 75% marks on its equivalent grade will be allowed to continue studies in the fourth year of the undergraduate program leading to the bachelor's degree (Hons). Learners can secure admission in the semester VIIIth of the program.

B.C.A.(Hon.) Fourth Year – Semester – VII

Course Type	Course Code	Course Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA 701	Research Methodology	4	30	70	100	120
DCC	OBCA 702	Global E-Business Strategy	4	30	70	100	120
DCC	OBCA 703	Design Thinking	4	30	70	100	120
VAC	OBCA 704	AI Ethics & Policy	4	30	70	100	120
DCC	OBCARP705	Research Project	4	-	100	100	120
Total Credit			20	Total Marks		500	

B.C.A.(Hon.) Fourth Year – Semester VIII

Course Type	Course Code	Courses Title	Credit	Assessment			Learner's Engagement (Hrs)
				Formative	Summative	Total	
DCC	OBCA 801	New Age Business Management	4	30	70	100	120
DCC	OBCA 802	Innovation and Technology Management	4	30	70	100	120
SEC	OBCA 803	R Programming	4	30	70	100	120
DCC	OBCARP 804	Project Work - II	8	-	200	200	240
Total Credit			20	Total Marks		500	

Note

- After successful completion (passing criteria) of a BCA (Hons) degree of VIII semesters, learners can earn 240 credit points which can be mentioned in their respective Academic Bank of Credit (ABC) account.
- Admission criteria for NHEQF Level 6 of BCA (Hons) degree program (Lateral Entry)
 - Candidates who meet a minimum 75% marks on its equivalent grade at BCA degree program of study from any UGC recognized university.
 - Learners can secure admission based on the submission of documentary evidence including those achieved outside of formal learning or through learning and training in the workplace, through continuing professional development activities, or through independent / self-directed / self- managed learning activities