



Study & Evaluation Scheme

of

Bachelor of Computer Application

[Applicable w.e.f. Academic Session – 2019-20 till revised]

[As per CBCS guidelines given by UGC]

COLLEGE OF COMPUTING SCIENCES & INFORMATION TECHNOLOGY



TEERTHANKER MAHAVEER UNIVERSITY

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Program Structure-BCA

A. Introduction:

High-quality technical education is essential for the digital age and using technology is powerful way to enhance changing requirements of the corporate, business enterprises and society. BCA students should be equipped to work across timezones, languages, and cultures. Employability, innovation, theory to practice connectedness is the central focus of BCA curriculum. The curriculum is designed as such that the students can gain an in-depth learning of the academic disciplines and applied functional areas necessary to meet the requirements of business enterprises and the industry.

The institute emphasis on the following courses ***balanced with core and elective courses***: The curriculum of BCA program emphasizes an intensive, flexible technical education with 64 credits of core courses (all types), 32 credits of electives and 38 credits of field/internship projects. Total 134 credits are allotted for the BCA degree.

The programme structure and credits for BCA are finalized based on the stakeholders' requirements and general structure of the programme. Minimum number of classroom contact teaching credits for the BCA program will be 96 credits (one credit equals 10 hours); 6 credits for comprehensive viva-voce and fieldwork/internship will be of 12 credits. However, the minimum number of the credits for award of BCA degree will be 122 credits. Out of 96 credits of classroom contact teaching, 40 credits are to be allotted for core courses (CC), 24 credits are allotted to ability enhancement courses (AECC), 14 credits are allotted to skill enhancement courses (SEC), 6 credits are allotted to open/generic elective courses (GEC), 6 credits are allotted to open elective courses (OEC), and rest of 6 credits for discipline specific elective courses (DSEC).

BCA : Three-Year (6-Semester) CBCS Programme			
Basic Structure: Distribution of Courses			
S.No.	Type of Course	Credit Hours	Total Credits
1	Core Course (CC)	12 Courses of 3 Credit Hrs. each (Total Credit Hrs. 12X3) 1 Course of 4 Credit Hrs. each (Total Credit Hrs. 1X4)	40
2	Ability-Enhancement Compulsory Course (AECC)	8 Courses of 3 Credit Hrs. each (Total Credit Hrs. 8X3)	24
3	Skill Enhancement Course (SEC)	2 Courses of 3 Credit Hrs. each (Total Credit Hrs. 2X3) 2 Courses of 4 Credit Hrs. each (Total Credit Hrs. 2X4)	14
4	Open/Generic Elective Course (GEC)	2 Courses of 3 Credit Hrs. each (Total Credit Hrs. 2X3)	6
5	Program/Departmental Specific Elective (DSE)	2 Courses of 3 Credit Hrs. each (Total Credit Hrs. 2X3)	6
6	Value Added Course (VAC)	6 Courses of 0 Credit Hrs. each (Total Credit Hrs. 6X0)	0
7	Open Elective Courses (OEC)	2 Course of 3 Credit Hrs. each (Total Credit Hrs. 2X3)	6
8	Laboratory Course (LC)	13 Courses of 2 Credit Hrs. each (Total Credit Hrs. 13X2) 2 Courses of 6 Credit Hrs. each (Total Credit Hrs. 2X6)	38
Total Credits			134





Contact hours include work related to Lecture, Tutorial and Practical (LTP), where our institution will have flexibility to decide course wise requirements.

Course handouts for students will be provided in every course. A course handout is a thorough teaching plan of a faculty taking up a course. It is a blueprint which will guide the students about the pedagogical tools being used at different stages of the syllabus coverage and more specifically the topic-wise complete plan of discourse, that is, how the faculty members treat each and every topic from the syllabus and what they want the student to do, as an extra effort, for creating an effective learning. It may be a case study, a role-play, a classroom exercise, an assignment- home or field, or anything else which is relevant and which can enhance their learning about that particular concept or topic. Due to limited availability of time, most relevant topics will have this kind of method in course handout.

B. Choice Based Credit System (CBCS)

Choice Based Credit System (CBCS) is a versatile and flexible option for each student to achieve his target number of credits as specified by the UGC and adopted by our University.

The following is the course module designed for the BCA program:

Core Course (CC): Core courses of BCA program will provide a holistic approach to technical education, giving students an overview of the field, a basis to build and specialize upon. These core courses are the strong foundation to establish technical knowledge and provide broad multi-disciplined knowledge can be studied further in depth during the elective phase.

The core courses will provide more practical-based knowledge, case-based lessons and collaborative learning models. It will train the students to analyse, decide, and lead-rather than merely know-while creating a common student experience that can foster deep understanding, develop decision-making ability and contribute to the business and community at large.

A wide range of core courses provides groundwork in the basic technology disciplines: programming, software engineering, networking, database, organizational architecture etc.

The integrated foundation is important for students because it will not only allow them to build upon existing skills, but they can also explore career options in a range of industries, and expand their understanding of various business fields.

We offer core courses in semester I, II, III, IV, V & VI during the BCA program. There will be 3 credits for each core course offered.

Ability Enhancement Compulsory Course (AECC): As per the guidelines of Choice Based Credit System (CBCS) for all Universities, including the private Universities, the Ability Enhancement Compulsory Course (AECC) is a course designed to develop the ability of students in communication (especially English) and other related courses where they might find it difficult to communicate at a higher level in their prospective job at a later stage due to lack of practice and exposure in the language, etc. Students are motivated to learn the theories, fundamentals and tools of communication which can help them develop and sustain in the corporate environment and culture. We offer **eight** AECCs in semester I, II, III, IV, V of the program. Each AECC will be of 3 credits.

Skill Enhancement Course (SEC): This course may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge. We offer **four** SECs- one each in II & V Semester and two in VI Semester. Each SEC will be of 3 credits.

Open/Generic Elective Course (GEC): Open/Generic Elective is an interdisciplinary additional subject that is compulsory in the third, fourth and fifth semester of a program. The score of Generic Elective is counted in your overall aggregate marks under Choice Based Credit System (CBCS). Each Generic





Semester-IV

S. No.	Category name	Course Code	Course Name	Periods			Credit	Evaluation Scheme		
				L	T	P		Internal	External	Total
1	CC-9	BCA 402	Software Engineering	2	1	0	3	40	60	100
2	CC-10	BCA 407	Computer Graphics	2	1	0	3	40	60	100
3	CC-11	BCA 416	Database Management System	2	1	0	3	40	60	100
4	Select one out of list DSE - I			2	1	0	3	40	60	100
5	Select one out of list GEC - II			2	1	0	3	40	60	100
6	AECC-7	TMUGE 401	English Communication – IV	2	0	2	3	40	60	100
	OEC-1	Open Elective - I		3	0	0	3	40	60	100
7	LC-7	BCA 454	DBMS Lab	0	0	4	2	50	50	100
8	LC-8	BCA 453	Computer Graphics Lab	0	0	4	2	50	50	100
			Total	15	5	10	25	380	520	900

Departmental Specific Elective - I, Semester- IV

Sr. No.	Course Name Type	Course Code	Course Name
1	DSE-I	BCA 411	Ethical Hacking Fundamental
		BCA 412	Mobile Device and Network Architecture
		BCA 417	Discrete Mathematics
		BCA 418	Enterprise Resource Planning

Generic Elective Courses - II, Semester- IV

Sr. No.	Course Name Type	Course Code	Course Name
1	GEC-II	BCA408	Fundamentals Of Accounting
		BCA 414	Retail Management
		BCA 415	Digital Marketing
		BCA 419	Sales and Production Management





Semester-V

S. No.	Category name	Course Code	Course Name	Periods			Credit	Evaluation Scheme		
				L	T	P		Internal	External	Total
1	CC-12	BCA 512	Core Java Programming	3	1	0	4	40	60	100
2	SEC-2	BCA 519	PHP & MySQL	3	1	0	4	40	60	100
	AECC-8	BCA 515	Entrepreneurship	2	1	0	3	40	60	100
3	Select one out of list DSE- II			2	1	0	3	40	60	100
4	OEC-2	Open Elective - II		3	0	0	3	40	60	100
5	LC-9	BCA 551	Mini Project (Industrial Training)	0	0	12	6	50	50	100
6	LC-10	BCA 555	Core Java Programming Lab	0	0	4	2	50	50	100
7	LC-11	BCA 558	PHP & MySql Lab	0	0	4	2	50	50	100
8	Select one out of list Lab Based on DSE-II			0	0	4	2	50	50	100
			Total	13	04	24	29	400	500	900

Departmental Specific Elective - II, Semester- V

S. No.	Course Name Type	Course Code	Course Name
1	DSE-II	BCA 522	Linux Administration
		BCA 514	Distributed Operating System
		BCA 510	Multimedia And Animation
		BCA 518	Digital Forensics and Investigation
		BCA 524	Gamification

Lab based on Departmental Specific Elective - II (P), Semester- V

S. No.	Course Name Type	Course Code	Course Name
1	DSE-II (P)	BCA 559	Linux Administration Lab
		BCA 560	Distributed Operating System Lab
		BCA 561	Multimedia And Animation Lab
		BCA 562	Digital Forensics and Investigation Lab
		BCA 563	Gamification Lab

