

Study & Evaluation Scheme

Of

Bachelor of Technology
Computer Science & Engineering
With Specialization in
Data Science
(In Collaboration with iNurture)
(Based on Choice Based Credit System)
[Applicable w.e.f. Academic Session 2020-21]



**COLLEGE OF COMPUTING SCIENCES AND
INFORMATION TECHNOLOGY
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data that is being generated and the evolution in the field of Analytics, Data Science has turned out to be a necessity for companies. To make most out of their data, companies from all domains, be it Finance, Marketing, Retail, IT or Bank. All are looking for Data Scientists. This has led to a huge demand for Data Scientists all over the globe. Thus this degree course help our student to find good and relative job in this field.

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.Tech(DS) : Four-Year (8-Semester) CBCS Programme			
Basic Structure: Distribution of Courses			
S.No.	Type of Course	Credit Hours	Total Credits
1	Basic Science Courses(BSC)	4 Courses of 4 Credit Hrs. each (Total Credit Hrs. 4X4)	16
2	Engineering Science Courses(ESC)	2 Courses of 4 Credit Hrs. each (Total Credit Hrs. 2X4) 2 Courses of 3 Credit Hrs. each (Total Credit Hrs. 2X3)	14
3	Humanities and Social Sciences including Management Courses(HMSC)	4 Courses of 3 Credit Hrs. each (Total Credit Hrs. 4X3) 2 Courses of 2 Credit Hrs. each (Total Credit Hrs. 2X2)	16
4	Professional Core Courses(PCC)	21 Courses of 3 Credit Hrs. each (Total Credit Hrs. 21X3)	63
5	Professional Elective Courses(PEC)	5 Courses of 3 Credit Hrs. each (Total Credit Hrs. 5X3) 1 Courses of 4 Credit Hrs. each (Total Credit Hrs. 1X4)	19
6	Open Elective Courses(OEC)	1 Course of 3 Credit Hrs. each (Total Credit Hrs.1X3)	3
7	Mandatory Courses(MC)	1 Courses of 3 Credit Hrs. each (Total Credit Hrs. 1X3)	3
8	Laboratory Courses(LC)	11 Course of 2 Credit Hrs. each (Total Credit Hrs.11X2) 6 Course of 1 Credit Hrs. each (Total Credit Hrs.6X1)	28
9	Project(PROJ)	1 Course of 10 Credit Hrs. each (Total Credit Hrs. 1X10) 1 Course of 4 Credit Hrs. each (Total Credit Hrs. 1X4) 4 Course of 1 Credit Hrs. each (Total Credit Hrs. 4X1)	18
Total Credits			180




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 B.Tech program:

Basic Science Courses (BSC): Basic Science courses include compulsory courses. Compulsory courses cater to all departments: it consists of Mathematic courses, Physics course, Chemistry course, Physics and Chemistry laboratories. The basic foundation is important for students because it will not only allow them to build upon existing skills, but they can also set the path for good career options. We offer basic science courses in semester I & II during the B.Tech program which common for all B.Tech first year students. There will be total 16 credits for basic science course offered.

Engineering Science Courses (ESC): Engineering Science completely opens the doors to different specializations. The goal of this course is to create engineers of tomorrow who possess the knowledge of all disciplines and can apply their interdisciplinary knowledge in every aspect. Engineering Science Courses including Basic Engineering courses such as Basic Workshop, Engineering Drawing, Engineering Basics of Electrical and Electronics. A strong foundation of engineering skill set is provided through these Engineering Science courses. We offer engineering science courses in semester I & II during the B.Tech program. There will be total 14 credits for engineering science course offered.

Humanities and Social Sciences including Management Courses (HMSC): All the Humanities and Social Science courses should compulsorily be studied by a student. These courses help students to their personal and social development. We offer Humanities and Social Sciences courses in semester I, II, III, IV & VI during the B.Tech program. There will be total 13 credits for Humanities and Social Sciences courses offered.

Professional Core Courses (PCC): Professional Core courses introducing the students to the foundation of engineering topics related to the chosen programme of study comprising of theory and Practical. 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 and collaborative learning models. It will train the students to understand, analyze and implement their knowledge. It help to develop decision-making ability of student and contribute to the industry and community at large. We offer Professional Core courses in semester III, IV, V, VI & VII during the B.Tech program. There will be total 65 credits for Professional Core courses offered.


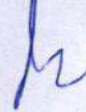
Professional Elective Courses (PEC): Professional elective course can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline or nurtures the student's proficiency/skill. We offer Professional elective courses in semester IV, V, VI, VII & VIII during the B.Tech program. There will be total 20 credits for Professional elective courses offered.

Open Elective Courses (OEC): An open elective course chosen generally from other discipline/ subject, with an intention to seek interdisciplinary exposure. We offer Open elective courses in semester VII & VIII during the B.Tech program. There will be total 3 credits for Open elective courses offered.

Mandatory Courses (MC): This is a compulsory course that does not have any choice and will be in 3 credits. Each student of B.Tech program has to compulsorily pass the course and acquire 3 credits. We offer Mandatory courses in semester Ist during the B.Tech program.

Laboratory Courses (LC): A laboratory oriented course which will provide a platform to students to enhance their practical knowledge and skills by development of small application/project. We offer Laboratory courses in semester I, II, III, IV, V, VI & VII during the B.Tech program. There will be total 28 credits for Open elective courses offered.

Project (PROJ): Every student must do one major project in the 8th Semester. The

**SEMESTER VII**

S. No.	Course Category	Course Code	Course Title	Periods			Credits	Evaluation Scheme		
				L	T	P		Internal	External	Total
1	PCC	IDS701	Advanced Big Data Analytics	3	0	0	3	40	60	100
2	PCC	IDS702	Machine Learning	3	0	0	3	40	60	100
3	PCC	IDS703	Model Validation Techniques	3	0	0	3	40	60	100
4	LC	IDS751	Advanced Big Data Analytics (Lab)	0	0	4	2	50	50	100
5	LC	IDS752	Machine Learning (Lab)	0	0	2	1	50	50	100
6	PROJ	IDS753	Mini Project (Lab)	0	0	2	1	50	50	100
7	PROJ	IDS754	Industrial Training Seminar	0	0	2	1	50	50	100
8	PEC	-	Professional Elective Courses-V	2	1	0	3	40	60	100
9	PEC	-	Professional Elective Courses-VI	2	1	0	3	40	60	100
10	OEC	-	Open Elective Courses - I	3	0	0	3	40	60	100
Total				16	2	10	23	440	560	1000

SEMESTER VIII

S. No.	Course Category	Course Code	Course Title	Periods			Credits	Evaluation Scheme		
				L	T	P		Internal	External	Total
1	PROJ	IDS851	Industry Internship	0	0	20	10	100	100	200
2	PROJ	IDS852	MOOC – Professional Certification Course based on Data Science	0	0	8	4	50	50	100
			Total	0	0	28	14	150	150	300
OR										
1	PROJ	IDS851	Project	0	0	16	8	50	50	100
2	PEC	-	Professional Elective Courses-VII	3	0	0	3	40	60	100
3	OEC	-	Open Elective Courses - II	3	0	0	3	40	60	100
			Total	6	0	16	14	130	170	300

