Study & Evaluation Scheme

of

Bachelor of Technology
(Computer Science & Engineering)
Specialization in
DATA SCIENCE
Under
INDUSTRY HONOR PROGRAM (IHP)
In collaboration with
TCS iON

[Applicable w.e.f. Academic Session - 2021-22]

[As per CBCS guidelines given by UGC]

TEERTHANKER MAHAVEER UNIVERSITY

N.H.-24, Delhi Road, Moradabad, Uttar Pradesh-244001

Website: www.tmu.ac.in

TEERTHANKER MAHAVEER UNIVERSITY
(Established under Govt. of U.P. Act No. 30, 2008)
Delhi Road, Bagarpur, Moradabad (U.P.)

Study & Evaluation Scheme	
SUMMARY	
Institute Name	**COLLEGE OF COMPUTING SCIENCES & INFORMATION TECHNOLOGY**
Programme	***Bachelor of Technology(Computer Science & Engineering) specialization in Data Science under Industry Honor Program in collaboration with TCS iON***
Duration	*Four Years full time(Eight Semesters)*
Medium	*English*
Minimum Required Attendance	*75%*
Credits	
Maximum Credits	*179*
Minimum Credits Required for Degree	*171*

Assessment:					
Evaluation			**Internal**	**External**	**Total**
Theory			40	60	100
Practical/ Dissertations/ Project Reports/ Viva-Voce			50	50	100
Class Test-1	**Class Test-2**	**Class Test-3**	**Assignment(s)**	**Attendance& Participation**	**Total**
Best two out of three					
10	10	10	10	10	40
Duration of Examination			**External**	**Internal**	
			3 Hours	1.5 Hours	

To qualify the course a student is required to secure a minimum of 45% marks in aggregate including the semester end examination and teachers continuous evaluation.(i.e. both internal and external).A candidate who secures less than 45% of marks in a course shall be deemed to have failed in that course. The student should have at least 45% marks in aggregate to clear the semester.

 # Provision for delivery of 25% content through online mode.

 # Policy regarding promoting the students from semester to semester & year to year. No specific condition to earn the credit for promoting the students from one semester to next semester.

 # Maximum Duration: Maximum no of years required to complete the program: N+2 (N=No of years) and for B.Tech(CSE){Data Science} N=4)

Question Paper Structure	
1	*The question paper shall consist of six questions. Out of which first question shall be of short answer type (not exceeding 50 words) and will be compulsory. Question no. 2 to 6 (from Unit-I to*

	V) shall have explanatory answers (approximately 350 to 400 words) along with having an internal choice within each unit.
2	*Question No. 1 shall contain 8 parts from all units of the syllabus with at least one question from each unit and students shall have to answer any five, each part will carry 2 marks.*
3	*The remaining five questions shall have internal choice within each unit; each question will carry 10 marks.*

Evaluation of practical course [From Second Year Onwards]

1 **Practical Courses Internal Evaluation (50 marks)**

EXPERIMENT (30 MARKS)	ATTENDANCE (10 MARKS)	VIVA (10 MARKS)	TOTAL INTERNAL (50 MARKS)

2 **Practical Courses External Evaluation (50 marks)**

The external evaluation would also be done by the External Examiner based on the experiment performed during the examination.

EXPERIMENT (30 MARKS)	FILE WORK (10 MARKS)	VIVA (10 MARKS)	TOTAL EXTERNAL (50 MARKS)

IMPORTANT NOTES:

1	*The purpose of examination should be to assess the CourseOutcomes (CO) that will ultimately lead to of attainment of Programme Specific Outcomes (PSOs). A question paper must assess the following aspects of learning: Remember, Understand, Apply, Analyze, Evaluate & Create (reference to Bloom's Taxonomy).*
2	*Case Study is essential in every question paper (wherever it is being taught as a part of pedagogy) for evaluating higher-order learning. Not all the courses might have case teaching method used as pedagogy.*
3	*There shall be continuous evaluation of the student and there will be a provision of fortnight progress report.*
4	*Progression: There is no restriction to earn minimum credits for progression from semester to semester and year to year.*

Program Structure-B.TECH(CSE) Specialization in Data Science

A. Introduction:

An undergraduate degree programme in computer engineering with specialization in Data Science, aims to provide students with a solid foundation in the underlying principles of computer engineering before students move forward in an area of Artificial Intelligence, Machine Learning and Deep Learning. The course will comprise of a range of learning modes- laboratory work tutorials, lectures, project work and individual research. Engineering bachelor course will take four years for completion. Computer engineering seeks to understand the application of computer science in the form of advanced software. It comprises of the skills like computer programming languages, database utilities, web programming, building machine learning models and others.

Students will develop and gain various skills that are transferable within the engineering world and practical skills that are equally useful in plenty of other sectors. Problem-solving skills are honed, and their interpersonal and communication skills will also improve with the amount of team work that they will be required to do. Students will also learn how to better manage their time and resources and assess the risks involved in a certain project. Other useful skills that they will learn include design, leadership and organizational skills.

The institute emphasis on the following courses ***balanced with core and elective courses***: The curriculum of B.Tech. specialized program emphasizes an intensive, flexible engineering education with 145 credits of core courses (all types), 15 credits of electives and 14 credits of field/internship projects. Total 184 credits are allotted for the B.Tech. degree.

The programme structure and credits for B.Tech. are finalized based on the stakeholders' requirements and general structure of the programme. Minimum number of classroom contact teaching credits for the B.Tech. program will be 160 credits and Project/internship will be of 14 credits. However, the minimum number of the credits for award of B.Tech. degree will be 171 credits. Total credits of classroom contact teaching, out of 184, 75 credits are to be allotted for Professional core courses (PCC), 19 credits are allotted to Basic Science Courses (BSC), 11 credits are allotted to Engineering Science Courses (ESC), 6 credits are allotted to open elective courses (OEC), 17 credits are allotted to Humanities and Social Sciences including Management courses (HSMC), 9 credits are allotted to Professional Elective courses and rest of 20 credits for Laboratory courses(LC).

B.TECH (CSE) Specialization in Data Science : Four-Year (8-Semester) CBCS Programme				
Basic Structure: Distribution of Courses				
S.No.	**Type of Course**	**Credit Hours**	**Total Maximum Credits**	**Minimum credit required**
1	Professional Core Courses (PCC)	25 Courses of 3 Credit Hrs. each (Total Credit Hrs. 25X3)	75	75
2	Professional Elective Courses (PEC)	3 Courses of 3 Credit Hrs. each (Total Credit Hrs. 3X3)	9	9
3	Mandatory Courses (MC)	1 Courses of 3 Credit Hrs. each (Total Credit Hrs. 1X3)	3	3
4	Laboratory Courses (LC)	3 Courses of 2 Credit Hrs. each (Total Credit Hrs. 3X2) 13 Courses of 1 Credit Hrs. each (Total Credit Hrs. 13X1)	19	19
5	Project / Industrial Training/Seminar (PROJ)	1 Courses of 6 Credit Hrs. each (Total Credit Hrs. 1X6) 1 Courses of 4 Credit Hrs. each (Total Credit Hrs. 1X4) 2 Courses of 2 Credit Hrs. each (Total Credit Hrs. 2X2)	14	14
6	Open Elective Courses (OEC)	2 Courses of 3 Credit Hrs. each (Total Credit Hrs. 2X3)	6	51
7	Basic Science Courses (BSC)	4 Courses of 4 Credit Hrs. each (Total Credit Hrs. 4X4) 1 Courses of 3 Credit Hrs. each (Total Credit Hrs. 1X3)	19	
8	Engineering Science Courses (ESC)	2 Courses of 4 Credit Hrs. each (Total Credit Hrs. 2X4) 1 Courses of 3 Credit Hrs. each (Total Credit Hrs. 1X3)	11	
9	Humanities and Social Sciences including Management courses (HSMC)	7 Courses of 3 Credit Hrs. each (Total Credit Hrs. 7X3) 1 Courses of 2 Credit Hrs. each (Total Credit Hrs. 1X2)	23	
10	Value Added Audit Courses (VAAC)	6 Courses of 0 Credit Hrs. each (Total Credit Hrs. 6X0)	0	0
Total Credits			**179**	**171**

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

B. Tech (Honours) Programme:

Additionally, A programme B.Tech with Honours is introduced in order to facilitate the students to choose additionally with the specialized courses of their choices and build their competence in a specialized area. The features of the new programme, include:

1. B.Tech Student in regular stream can opt for B.Tech. (Hons.), provided he/she passed in all courses with minimum aggregate 75% marks upto the end of second semester.
2. For B.Tech. (Hons.), Student needs to earn additional 24 credits (over and above the required minimum 174 credits) relevant to her/his discipline as recommended by the faculty advisor.
3. The students opting for this program have to take four additional courses of their specialization of a minimum of 2 credits each from 3rd to 8th semesters.
4. The faculty advisor will suggest the additional courses to be taken by the students based on their choice and level of their academic competence.
5. The list of such additional courses offered by the NPTEL will be approved by the Honourable Vice Chancellor in the beginning of the academic year to facilitate the registration process.
6. The student can also opt for post graduate level courses.
7. The students have to submit the NPTEL course completion certificate to exam division for considering as B.Tech (Hons)

* Student should have to take permission of registration for the B.Tech. (Hons.) degree from Honourable Vice Chancellor in starting of third semester.

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/AICTE and adopted by our University.

The following is the course module designed for the B.TECH (CSE) program:

Professional Core Course (PCC): Professional core courses of B.TECH (CSE) with specialization in Data Science, will provide a holistic approach to computer education, giving students an overview of the field, a basis to build specialization in the field of artificial intelligence, machine learning and deep learning. These core courses are the strong foundation to establish computer knowledge and provide broad and multi-disciplined knowledge which can be studied further in depth during the last phase of engineering for better understanding of building intelligent models for real life applications.

The core courses will provide more practical-based knowledge, case-based lessons and collaborative learning models. It will train the students to analyze, 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 society at large.

A wide range of core courses provides groundwork in the basic computer disciplines: programming languages, database, web Programming, big data, machine learning, deep learning, 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 computer fields.

We offer 25 professional core courses with 3 credit each from semester III onwards during the B. Tech. program.

Humanities and Social Sciences including Management courses (HSMC): As per the AICTE guidelines of Choice Based Credit System (CBCS) for all Universities, including the private Universities, the ***Humanities and Social Sciences including Management courses*** are actually Ability Enhancement Compulsory Course (AECC) which is 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 7 HSMC courses of 3 credits and 1 of 2 credits in different semesters of engineering course.

Basic Science Course (BSC): Basic Science Course of B.TECH (CSE) program will provide a basic foundation to build the knowledge in the field of engineering and science. The BSC consists of courses like mathematics, physics and chemistry. These BSC courses has been placed in Semester-I, II and III. Total 19 credits have been assigned to BSC with 4 Courses of 4 Credit, 1 Courses of 3 Credit.

Engineering Science Course (ESC): Engineering Science Course of B.TECH (CSE) program will provide a basic foundation of the various field of engineering like Electrical, Electronics, Mechanical and Civil. These ESC courses have been placed in Semester-I & II and total 11 credits has been assigned with 2 Courses of 4 Credit, 1 Course of 3 Credits.

Open Elective Course (OEC): Open Elective is an interdisciplinary additional subject that is compulsory in the seven and eight semester of a program. The score of Generic Elective is counted in your overall aggregate marks under Choice Based Credit System (CBCS). Each Generic Elective paper will be of 3 Credits and students will have the choice of taking 2 OEC: 1 each in Semester VII & VIII. Each student has to take Open Electives from department other than the parent department. Core / Discipline Specific Electives will not be offered as Generic Electives.

Mandatory Course (MC): This is a compulsory course that does not have any choice and will be of 3 credits. Each student of this program has to compulsorily pass the Environment Studies course and acquire 3 credits.

Value Added Course (VAC): A Value Added Course is a non-credit audit course which is basically meant to enhance general ability of students in areas like soft skills, quantitative aptitude and reasoning ability - required for the overall development of a student and at the same time crucial for industry/corporate demands and requirements. The student possessing these skills will definitely develop acumen to perform well during the recruitment process of any premier organization and will have the desired confidence to face the interview. Moreover, these skills are also essential in day-to-day life of the corporate world. The aim is to nurture every student for making effective communication, developing aptitude and a general reasoning ability for a better performance, as desired in corporate world. There shall be four courses of Aptitude in Semester III, IV, V & VI semesters and two courses of Soft Skills in V &VI Semesters and will carry no credit. It will be compulsory for every student to pass these courses with minimum 45% marks to be eligible for the certificate. These marks will not be included in the calculation of CGPI. Students have to specifically register in the specific course of the respective semesters.

Professional Elective Course (PEC): The discipline specific elective courses are chosen to make students specialist or having specialized knowledge of a specific domain. It will be covered from VI semester onward of the program relevant to chosen disciplines of core courses of the program. Each student has to choose three

Program Elective Course (PEC); 1 PEC in Semester-VI of 3 credit, 1 PEC in Semester-VII of 3 credit, 1 PEC in Semester-VIII of 3 credit.

Laboratory Course (LC): The Lab Course (LC) is the laboratory course which student has to take as per the core courses. In computer science and engineering these lab course has the emphasis on technicalities related to enhancing the knowledge in programming languages / Database / web programming. Total 20 LC has to be chosen across the eight semester of with 12 courses of 1 credit and 4 courses of 2 credits.

Project / Industrial Training/ Seminar(PROJ): The project and Industrial training has to be taken as per the guideline issued from time to time. It helps to provide the industrial exposure to the students. They are being able to learn, enhance their skills and utilize the learnt concept to be able to understand the facts practically. Total 14 credits are being assigned with 2 courses of 2 credits in V Semester, 1 course of 4 credits in VII semester, 1 course of 6 credits in VIII semester.

C. Program Outcomes for Engineering:

PO – 1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO – 2	**Problem analysis& Solving:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO – 3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO – 4	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO – 5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO – 6	**Social Interaction & effective citizenship:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO – 7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO – 8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO – 9	**Attitude (Individual and team work):** Function effectively as an individual, and as member or leader in diverse teams, and in multidisciplinary settings.

PO – 10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clean instructions.
PO – 11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO – 12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

D. Programme Specific Outcomes (PSOs)

The learning and abilities or skills that a student would have developedby the end of Four-Year **B.TECH(CSE) Specialization in Data Science:**

PSO – 1	Developing skills for creating computational solutions with emerging technologies, programming languages, mathematical foundations, algorithmic principles and open source platforms to solve complex engineering problems.
PSO – 2	Ability to understand the evolutionary changes in computing by applying standard practices and skills acquired through computer engineering to provide solutions with innovative ideas and interdisciplinary research.
PSO – 3	Ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, lifelong learner and a zest for higher studies and also to act as a good citizen by inculcating in them moral values & ethics.

E. Pedagogy & Unique practices adopted: "Pedagogy is the method and practice of teaching, especially for teaching an academic subject or theoretical concept". In addition to conventional time-tested lecture method, the institute will emphasize on experiential learning:

1. Case Based Learning:Case based learning enhances student skills at delineating the critical decision dilemmas faced by organizations, helps in applying concepts, principles and analytical skills to solve the delineated problems and develops effective templates for business problem solving. Case method of teaching is used as a critical learning tool for effective learning and we encourage it to the fullest.

*2. Role Play&Simulation:*Role-play and simulation are forms of experiential learning. Learners take on different roles, assuming a profile of a character or personality, and interact and participate in diverse and complex learning settings. Role-play and simulation function as learning tools for teams and groups or individuals as they "play" online or face-to-face. They alter the power ratios in teaching and learning relationships between students and educators, as students learn through their explorations and the viewpoints of the character or personality they are articulating in the environment. This student-centered space can enable learner-oriented assessment, where the design of the task is created for active student learning. Therefore, role-play& simulation exercises such as virtual share trading, marketing simulation, etc. are being promoted for the practical-based experiential learning of our students.

*3. Video Based Learning (VBL) & Learning through Movies (LTM):*These days technology has taken a front seat and classrooms are well equipped with equipment and gadgets. Video-based learning has become an indispensable part of learning. Similarly, students can learn various concepts through movies. In fact, many teachers give examples from movies during their discourses. Making students learn few important theoretical concepts through VBL & LTM is a good idea and method. The learning becomes really interesting and easy as

videos add life to concepts and make the learning engaging and effective. Therefore, our institute is promoting VBL & LTM, wherever possible.

***4. Field /Live Projects*:** The students, who take up experiential projects in companies, where senior executives with a stake in teaching guide them, drive the learning. All students are encouraged to do some live project other their regular classes.

5. Industrial Visits: Industrial visit are essential to give students hand-on exposure and experience of how things and processes work in industries. Our institute organizes such visits to enhance students' exposure to practical learning and work out for a report of such a visit relating to their specific topic, course or even domain.

6. MOOCs: Students may earn credits by passing MOOCs as decided by the college. Graduate level programs may award Honors degree provided students earn pre-requisite credits through MOOCs.

University allows students to undertake additional subjects/course(s) (In-house offered by the university through collaborative efforts or courses in the open domain by various internationally recognized universities) and to earn additional credits on successful completion of the same. Each course will be approved in advance by the University following the standard procedure of approval and will be granted credits as per the approval.

Keeping this in mind, University proposed and allowed a maximum of two credits to be allocated for each MOOC courses. In the pilot phase it is proposed that a student undertaking and successfully completing a MOOC course through only NPTEL/ SWAYAM could be given 2 credits for each MOOC course.
For smooth functioning and monitoring of the scheme the following shall be the guidelines for MOOC courses, Add-on courses carried out by the College from time to time.

a) This is recommended for every student to take at least one MOOC Course throughout the programme.
b) There shall be a MOOC co-ordination committee in the College with a faculty at the level of Professor heading the committee and all Heads of the Department being members of the Committee.
c) The Committee will list out courses to be offered during the semester, which could be requested by the department or the students and after deliberating on all courses finalize a list of courses to be offered with 2 credits defined for each course and the mode of credit consideration of the student. The complete process shall be obtained by the College before end of June and end of December for Odd and Even semester respectively of the year in which the course is being offered. In case of MOOC course, the approval will be valid only for the semester on offer.
d) Students will register for the course and the details of the students enrolling under the course along with the approval of the Vice Chancellor will be forwarded to the Examination department within fifteen days of start of the semester by the Coordinator MOOC through the Principal of the College.
e) After completion of MOOC course, Student will submit the photo copy of Completion certificate of MOOC Course to the Examination cell as proof.
f) Marks will be considered which is mentioned on Completion certificate of MOOC Course.

College will consider the credits only in case a student fails to secure minimum required credits then the additional subject(s) shall be counted for calculating the minimum credits required for the award of degree

7. Special Guest Lecture (SGL): Some topics/concepts need extra attention and efforts as they either may be high in difficulty level or requires experts from specific industry/domain to make things/concepts clear for a better understanding from the perspective of the industry. Hence, to cater to the present needs of industry, we organize such lectures, as part of lecture-series and invite prominent personalities from academia and industry from time to time to deliver their vital inputs and provide greater insights.

8. Student Development Program (SDP): Harnessing and developing the right talent for the right industry an overall development of a student is required. Apart from the curriculum teaching various student development programs (training programs) relating to soft skills, interview skills, SAP, Advanced excel training etc. that may be required as per the need of the student and industry trends, are conducted across the whole program. Participation in such programs is solicited through volunteering and consensus.

9. Industry Focused program: Establishing collaborations with various industry partners to deliver the program on sharing basis. The specific courses/contents are to be delivered by industry experts to provide practice based insight to the students.

10. Special Assistance Program for Slow &Fast Learners: The College gets a diverse group of students every year. They differ in terms of their intelligence, efforts and interest. We make efforts to identify them as Slow and fast learners within first three months of their joining. Slow learners are given extra time and sessions to bridge the learning gap under the guidance of faculty coordinator and Fast learners are provided challenging assignments/Projects/Readings and learning opportunity

11. Orientation Program: The Orientation Program is designed keeping in mind the guidelines of UGC & the Council. This Program is for 03 Weeks duration. The Program designed by the College is approved by the office of the Vice Chancellor. The purpose is to make the fresh students comfortable and provide awareness about the college and the university. The Topics covered are multi -faceted encompassing: Academic rules & regulation, Examination rules & regulation, Learning resources, participation in Extra -curricular & extra Mural Activities, Discipline, Conduct, Motivational talks, Industry talks, & Bridge Courses/content etc

12. Mentoring Scheme: Every Student shall be provided with a faculty Mentor to help him /her in their personal & Academic Issues. The mentor maintains a register of al all his/her mentees with complete personal & parents 'details. It is essential to have at least to meet once in a month. The mentor enters the discussions held, advice given and efforts & improvements made by the mentee. This register of the mentor must be counter signed by the HOD once a month and by the Principal once in a semester

13. Career & Personal Counseling: Helps Gain Confidence and Insight. Career Counseling helps a counselee understand the hurdles in his/her career path. This knowledge helps to develop the confidence to overcome these hurdles. It is the duty of a good counselor to provide such insight and confidence to the counselee.

14. Competitive Exam Preparation: It is true that competitive exams are not that easy to face but it is also not something impossible. With proper guidance and hard work of faculties, student's can easily crack any competitive exam such as GATE, Bank Services, Civil Services or any other govt. administrative platform.

15. Extra-curricular Activities: organizing & participation in extracurricular activities will be mandatory to help students develop confidence & face audience boldly. It brings out their leadership qualities along with planning & organizing skills. Students undertake various cultural, sports and other competitive activities within and outside then campus. This helps them build their wholesome personality.

16. Participation in Workshops, Seminars & writing & Presenting Papers: A seminar may have several purposes or just one purpose. For instance, a seminar may be for the purpose of education, such as a lecture, where the participants engage in the discussion of an academic subject for the aim of gaining a better insight into the subject. Other forms of educational seminars might be held to impart some skills or knowledge to the participants.

17. Formation of Student Clubs, Membership & Organizing & Participating events: Computer Science clubs channelize the energies of students and make use of their skills and talents, which

satisfy their instincts and urges and helps in their overall personality development. Through activities of a computer science club, learning of computer science and its applications become joyful. The computer science club caters to freedom for expression, where as the classroom atmosphere leads to conformity and repression. Students organize thought and translate into action.

18. Capability Enhancement & Development Schemes: The development of soft skills has become important in today's fast growing world. The students at the college are taught to communicate and interact at a professional level. The qualities of confidence and critical thinking are developed making the students better at soft skills. Soft skill development courses inculcate ethical attitude towards others and also help in the nurturing of better interpersonal skills. Much of the communication related activities are developed and taught to students who are willing and interested to enhance their skills.

19. Library Visit & Utilization of E-Learning Resources: Student can visit the library from morning 10 AM to evening 8 PM. Library created its resources Database and provided Online Public Access Catalogue (OPAC) through which users can be accessed from any of the computer connected in the LAN can know the status of the book. Now we are in process to move from OPAC to KOHA.

a) Institute Library & Information is subscribing online e-books and e-journals databases (DELNET and EBSCO host E-databases) as per the requirement of the institute and fulfilling AICTE norms. IP based access is given to all computers connected on campus LAN to access e-journals.

b) For the effective utilization of resources, Information Literacy training programs are conducted to the staff and students.

c) Wi-Fi enabled campus

d) Regular addition of latest books and journals

e) Well maintained e-library to access e-resources