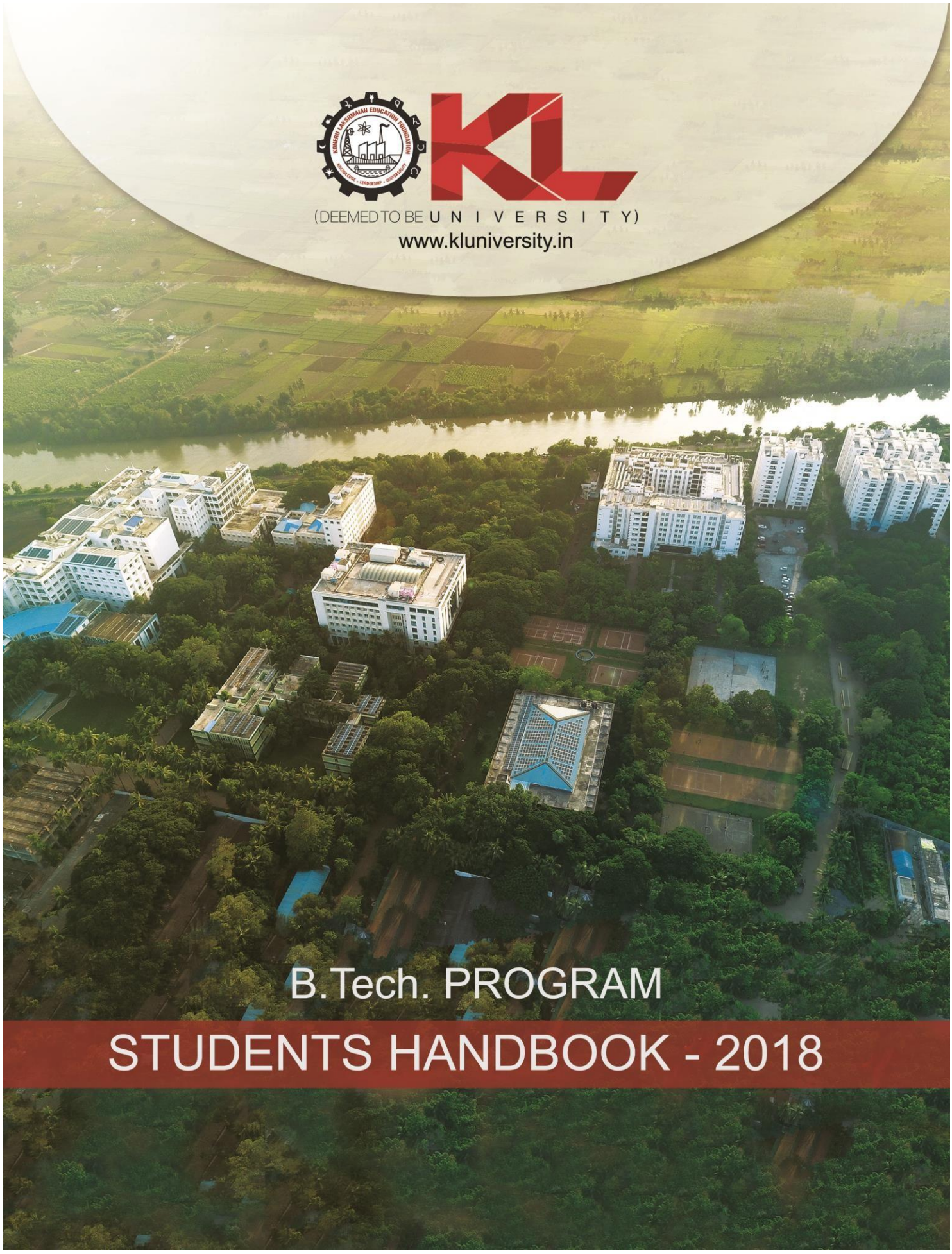

KONERU LAKSHMAIAH EDUCATION FOUNDATION
KL
(DEEMED TO BE UNIVERSITY)
www.kluniversity.in
B.Tech. PROGRAM
STUDENTS HANDBOOK - 2018

(Estd. u/s.3 of the UGC Act, 1956) (NAAC Accredited "A" Grade University)

VISION

To be a globally renowned university.

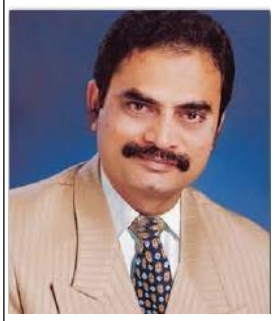
MISSION

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

ज्ञान-विज्ञान विमुक्तये

RECOGNISED BY THE

UNIVERSITY GRANTS COMMISSION (UGC)



Koneru Satyanarayana,

President

Sri Koneru Satyanarayana, BE, FIE, FIETE, MIEEE graduated in Electronics and Communication Engineering in the year 1977. Along with Sri Koneru Lakshmaiah, he is the co-founder of the Institute which was established in the year 1980. He is an educationist of eminence and also an industrialist of great repute. He runs a number of industries in and around Vijayawada.

Dr. M Ramamoorty

Chancellor

Dr. Ramamoorty assumed charge as Chancellor, KLEF with effect from 30th March 2015 after successful career as a Professor in IIT Kanpur and also as first Director General of CPRI.

Dr. Ramamoorty obtained his B.E. (Honors) from Andhra University in 1957 and M.E. from IISc Bangalore in 1959. He obtained his MASc and PhD from Toronto University in 1965 and 1967 respectively.

He was a Commonwealth Fellow at U of T from 1964 to 1967. He then joined IIT Kanpur as a faculty member in the Electrical Engineering Department and became a professor in 1972. He had established the first graduate program in Power Electronics in India in 1968 at IIT Kanpur. He had supervised 12 doctoral projects and was associated with many sponsored research activities with industries like BHEL and Hindustan Steel Limited during his tenure at IIT Kanpur.

Dr.L.S.S Reddy

Vice Chancellor

Dr. L.S.S. Reddy is an eminent Professor in Computer Science and Engineering Department holding Ph.D in Computer Science Engineering from BITS Pilani. Dr. Reddy is an outstanding administrator, a prolific researcher and a forward looking educationist. Dr. Reddy has over 30 years of experience in Teaching, Research and Administration at prestigious institutes like BITS Pilani, CBIT etc.

Dr.L.S.S.Reddy had joined Koneru Lakshmaiah College of Engineering in December 1995 and proved his administrative excellence as a Head of Department of Computer Science and

Engineering. Dr. Reddy was instrumental and a driving force as Principal (2002-2009) in promoting KLCE as one of leading Institutions in India.

Welcome to KLEF!

The President of Koneru Lakshmaiah Education foundation, Er.Koneru Satyanarayana, along with Late Sri.Koneru Lakshmaiah, founded the K L College of Engineering in the Academic year 1980-81. With the mighty vision and restless efforts of Er.Koneru Satyanarayana K L College of Engineering carved a niche for itself through excellence in engineering education, discipline and record numbers of placements and was the leading college in the state of AP. K L College of Engineering achieved NBA Accreditation for all its B.Tech. programs in 2004 and later re-accredited in 2007. K L College of Engineering was transformed into an autonomous engineering college in the year 2006. In 2008 this college received a record grade of 3.76 on a 4 points scale with "A" Grade from NAAC; and in February 2009, the college, through its founding society "Koneru Lakshmaiah Education Foundation" was recognized as Deemed to be University by the MHRD-Govt. of India, Under Section 3 of UGC Act 1956. This Deemed to be University is named as " KLEF".

Location

Vijayawada is located on the banks of river Krishna in the state of Andhra Pradesh and has been historically a cultural, political and educational center. It is also a part of Andhra Pradesh Capital Region. The city is well connected by National Highway and Rail with Chennai (440 km), Hyderabad (275 km), Vizag (385 km) and is a central junction for trains running from North to South India. Daily flights operate from Hyderabad and Bangalore.

KLEF is situated in a spacious 100-acre campus on the banks of Buckingham Canal of river Krishna, eight kilometers from Vijayawada city. Built within a rural setting of lush green fields, the institute is a virtual paradise of pristine nature and idyllic beauty. The campus has been aptly named "Green Fields" and the splendid avenue of trees and gardens bear testimony to the importance of ecology and environment. The campus ambience is most befitting for scholastic pursuits. The KLEF has been situated on a built up area of around 15, 00,000 S. Ft.

TABLE OF CONTENTS

ACRONYMS

Sl No	Acronyms	Full Form
1	KLEF	Koneru Lakshmaiah Education Foundation
2	CET	Common Entrance Test
3	KLEEE	KLEF Engineering Entrance Examination
4	JEE	Joint Entrance Examination
5	BT	Bio Technology
6	CE	Civil Engineering
7	CSE	Computer Science & Enginering
8	ECE	Electronics & Communication Engineering
9	EEE	Electrical & Electronics Engineering
10	ECM	Electronics & Computer Engineering
11	ME	Mechanical Engineering
12	CGPA	Cumulative Grade Point Average
13	SGPA	Semester Grade Point Average
14	LTPS	Lecture Tutorial Practical Skill
15	SEE	Semester-End Examinations
16	SIE	Semester-In Examinations
17	OJET	On-the-job Engineering Training
18	IRP	Industrial Relations and Placements
19	PS	Practice-School
20	OPAC	Online Public Access Catalog
21	QCM	Quality Circle Meeting
22	MOOC	Massive Open Online Course
23	MOU	Memorandum of Understanding
24	OD	On Duty
25	(A,B]	Between A and B excluding value A and including value B
26	COE	Controller of Examinations
27	VLSI	Very Large Scale Integration

History

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ACCREDITATIONS:

- Declared as Deemed to be University u/s 3 of UGC Act 1956.
- Accredited by National Assessment and Accreditation Council (NAAC) of UGC as 'A^{++}' with highest Grade of 3.57 CGPA on 4 point scale.
- Approved by All India Council for Technical Education (AICTE), New Delhi.
- ISO 9001 - 2015 Certified Institution.

FACILITIES:

Central Library: E-Resources

The Central Library is the largest, and holds materials to serve the whole University community. It has materials relevant to the Engineering, Science & Humanities courses offered by the University.

The library system contains more than one lakh and fifty thousand books and periodicals on all subjects related to the teaching and research interests of the University staff and students. The library has over 36,000 electronic journal titles, academic databases and 32.98 lakhs eBooks. Access is available on campus on student computers and remotely.

A new library building will be opened shortly on par with international standard with modern IT facilities.

Every department of the college maintains their library to cater the needs of students and faculty. All foreign and Indian journals are made available in the department library for the convenience of faculty and students.

The libraries render following library services.

- Circulation of library documentary.
- Inter-library loan services.
- Photo copying services.
- Reference service.
- CD-ROM search services.
- Inter Net services.
- OPAC
- WEB OPAC
- Audio visual
- Online lectures

The Data Center

A State-of-the-Art Data center with advanced servers provides highly interactive learning environment with full-fledged hardware and software training facilities.

Hardware:

The configuration of high end stream of servers that provides various services is

Super Computer

HPC Infrastructure (Super Computer):

- 5.3 TERA Flops (CPU + GPU)
- HP SL 230 4* SL230s Gen8, (2 * 2.6 GHz, 32GB RAM, 2x500GB HD, 10G IB HCA) providing -1.3TF
- HP SL 250 2* SL250s Gen8, (2 * 2.6 GHz, 32GB RAM, 2x500GB HD, 10G IB HCA + 2 NVIDIA K20 GPU providing -4TF. Master Node:
- HP DL 380P 1* DL380p Gen8 (2* 2.6Ghz, 64GB RAM, 2x2TB HD, 10G IB HCA).

- Compute Switch (48 Port Low latency switch)QLogic IB QDR 36 Port Switch.
- Intel® Composer XE for Linux.
- The data centers consists of BYOD Servers& Backup Server, **Sun Servers, Dell and HP Blade Servers**, **Apple Server Xserver**

SPECIAL LABORATORIES

The institute is equipped with various Industry Collaborated Labs

S. No	Discipline	Name of the Lab	Research Group Associated
1.	Computer Science & Engineering	CISCO	Computer Networks and security
2.	Computer Science & Engineering	IBM	Software Engineering Knowledge Engineering
3.	Computer Science & Engineering	Microsoft	Embedded Systems Software Engineering Knowledge Engineering
4.	Computer Science & Engineering	Adobe	Web technologies Image processing
5.	Computer Science & Engineering	Oracle	Knowledge Engineering
6.	Electronics & Communication Engineering	NI Lab View	Communications Systems

Physical Education- Sports Facilities:

KL University encourages students to explore their latent talents by providing good games and sports facilities. The institute is equipped with the following.

• Athletic track	1	• Handball Court	1
• Hockey Field	1	• Netball Courts	2
• Badminton Courts	4	• Throw ball courts	2
• Tenni-koit Courts	2	• Beach Volleyball Court	1
• Cricket Field with Net practice	3	• Football Field	1
• Volleyball Courts	2	• Basketball Courts	2
• Tennis Courts	2	• Kabaddi Courts	2
• Kho Kho Court	1	• Table Tennis	6
• Soft Ball	1	• Chess	-
• Archery	1	• Caroms	-

The University had State-of- the - Art Indoor stadium of 30000 sq.ft with:

- 4 wooden Shuttle Courts / Basketball Court
- Yoga and Meditation Center
- Dramatics
- 8 Table Tennis Tables

- Hobby Center
- Gymnasium for Girls
- Gymnasium for Boys
- Multipurpose room with Chess, Carroms etc.
- Power lifting/Weight Lifting

Accommodation- Hostels

- KL University has separate hostels for boys and girls with well furnished rooms and modern amenities. The overall atmosphere is very conducive for the students to concentrate on studies.
- A state- of – the- art kitchen and spacious dining area has been provided for both the hostels.
- Generators have been provided as power back up.
- Emphasis has been laid on hygiene and cleanliness for healthy living. A customized menu caters to the student needs and it keeps changing according to their tastes.
- Teaching staff will have to address academic and personal problems of the students.
- Round-the-clock security, communication, dispensary facilities are also available.

➢ The Girls Hostel

The girl's hostel is within the campus with a capacity of 1192 in 500 rooms. Different rooms accommodating 2 per room, 3 per room with attached toilets as well as A.C. rooms are available. Suite rooms with modern furniture and separate study room are also available.

➢ The Boys Hostel

It is a short walk from the university with a capacity of 2040 in 780 rooms. Different rooms accommodating 2 per room, 3 per room with attached toilets as well as A.C. rooms are available.

➢ Facilities in the Hostels

Protected drinking water, state of the art kitchen, dining hall, newspapers, telephones, toilets and bathrooms are well maintained. Every student in the hostel is provided with a cot, study table, chair and a rack. Fan and light are also provided in each room.

- Gas & Steam based hygienic food preparation
- Palatable regional, national and international cuisines
- Cleanliness and Safety
- STD/ISD Facilities

- Medical Kits and First Aid Boxes
- Soft drinks, snacks, Fruits etc.
- Laundry
- Stationary shop

➢ **Hostel Rules & Regulations**

- Students are hereby informed that while staying in the hostel, it is essential to be responsible in maintaining dignity by upholding discipline. They must be obedient to the hostel warden/floor in – charges.
- Valuable items like jewelry etc., should not be kept with students while staying in the hostel. It is student's own responsibility to safeguard her/his Laptops, Money by locking suitcases and bags. If any loss is found, management will not take any responsibility.
- Student has to intimate to the hostel authorities before you giving police complaint against losses.
- Students are not allowed to indulge in smoking, consumption of Alcohol, Narcotic drugs etc., and defaulters will be strictly viewed upon.
- Students are directed that after locking their rooms they have to hand over the keys to security and can collect them on returning back to the hostel.
- Students must switch off Fans, Lights, Geysers, A/C's etc., before leaving their rooms.
- Visitors are not allowed inside the hostel at any time, however they are allowed into the visitor's hall with the prior permission of the warden. Only family members listed by the parents are allowed to contact the student. Visiting hours are up to 7.30 pm only and after 7.30 pm visitors are required to leave premises.
- Hostel students are not allowed to come into the hostel after 3.00 pm in case morning shift students and 6.00pm for day shift students. Those students who are utilizing computer lab, library etc., after the times specified have to submit the permission slip to the security while entering into the hostel.
- During public holiday outings, those who seek permission to leave the hostel will have to obtain a written permission from warden. Permission will be given only to those students who get permission from parents to leave the hostel during holidays/outings. Moving out of campus without permission are strictly prohibited.
- Strict study hours from 7.30 to10.30 pm shall be maintained in the hostel. The hostellers must be in their allotted rooms during study hours.

- The general complaints of any kind should be noted in the complaint register, which is available at the hostel office. Registered complaints only will be entertained.
- Any health problem should be brought to the notice of Warden/Floor In – charge for necessary treatment.

Transportation:

The institution runs 80 buses covering all the important points in Vijayawada City, Mangalagiri, Guntur & Tenali towns with a total seating capacity of 4000 students in two shifts.

- Transport is available 24 hrs in case of any emergency in the institute / hostels.
- Transportation is available for conducting industrial tours and visits etc.
- Regular transport facility available up to 10 PM.

Health Centre

A full-fledged health center with all the facilities is established to cater to the needs of the students, staff, Faculty and to the general public in the adopted villages. It consists of three doctors (Homoeopathy, Ayurvedic & Allopathy).

Cafeteria

- KL University has a spacious canteen with latest equipment and hygienic environment which provides quality food and prompts service and caters to needs of all the students and the staff.
- A central cafeteria of 1500 Sq.m. is available in the campus. Mini cafes and fast-food centers are available in various blocks.
- The canteen is open from 6:30 a.m. to 8:30 p.m. There is a wide variety of North-Indian and South-Indian cuisine and the students enjoy the pleasure of eating during the breaks. Cool aqua water for drinking is available.

Placements:

K L University has meticulously planned to make all its outgoing students employed. The University had installed the infrastructure, employed well experienced faculty, designed and delivered programs t**h**at help enhancing the communication and soft skills which are required for making the students employable. An excellent system is in place that considers all the issues that make a student employable. The University has been successful for the last 7 years, in employing all the students who have registered and eligible for placement through its offices located across the country. About 50 trained personnel work extensively to make the students ready for recruitment by the Industry.

Counseling & Career Guidance

A special Counseling Cell consisting of professional student counselors, psychologists, senior professors counsels/helps the students in preparing themselves to cope with studies, perform well in the tests & various competitions. This Cell provides its services to the students in getting the solutions for their personal problems and also provides career guidance with the help of Industrial Relations and Placements (IRP) department.

A group of 20 students are allotted to a senior faculty member who counsels them regularly and acts as their mentor.

Social Service Wing

KL University has a social service wing which is used to channelizing the social service activities of the faculty, the staff and the students. It has adopted 5 nearby villages and conducts activities like medical camps, literacy camps and educates the villagers regarding hygiene and health care on a regular basis.

NSS Wing of Institute

Regularly organizes Blood donation camps, Blood grouping camps, Fund collection and distribution to poor children and old age homes, distribution of old clothes and free medicines to slum dwellers, tree plantations, AIDS awareness program, teaching basic computer skills to a target group of 500 people in villages.

Hobby Clubs

Wholly and solely managed by the students, the clubs have in the past contributed much to the cultural life of the campus and to the cultural evolution of the students, A number of student bodies and clubs operate in the campus like music society, dance club, drama society, literary and debating club, English press club, drawing club, painting club, mime club, computer club etc. Students manage entire activities and budget of the organization for the entire semester in advance. Around 4000 students are the active members of the Hobby Clubs.

Life Skills and Inner Engineering

KL University feels that it is its responsibility to mould the students as good human beings contributing to the country and to the society by producing responsible citizens. Along with the regular programs every student admitted into KLU undergoes a one week special life skills /orientation program. Through this program, KLU is producing the students with the

clarity of thoughts and charity at hearts. Strict regularity, implicit obedience, courtesy in speech and conduct, cleanliness in dress and person is expected of each KLU student. Life skills and inner engineering teach a student his/her obligations towards GOD, himself /herself his/her country and fellow human beings. Every student is encouraged to practise his/her own religious faith and be tolerant and respectful towards other religions.

Technical Festival

KLU organizes various programs for the all round development of the students. The technical festival and project exhibition is being organized in the odd semester (October) every year to elicit the innovative ideas and technical skills of the students.

Cultural Festival

The cultural festival in the even semester (February) of every year is the best platform for the students for exhibiting their talents and creativity. Through these festivals KLU is imparting organizational skills, leadership skills, competitive spirit, and team behavior skills to our students. Along with the knowledge, KLU festivals are providing recreation to the student community.

INNOVATION, INCUBATION AND ENTREPRENEURSHIP CENTER

KLU being a pioneering institute supporting Academics and Research in Engineering, Science and Technology is endowed with all the infrastructure and highly experienced faculty, has an Innovation, Incubation and Entrepreneurship Centre (IIE) that comprises of:

- Innovation centre which aims to inculcate a spirit of innovation.
- Incubation centre which aims to incubate the innovations through prototype product development.
- Entrepreneurship Development Centre (EDC) which aims at fostering entrepreneurial skills among the students.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs) AND PROGRAM OUTCOMES (POs)

PROGRAM EDUCATIONAL OBJECTIVES (PEOS) :

To be a globally renowned university, as per our vision, we need to produce quality products (graduates) into the market who have potential strengths to meet all the professional and personal challenges prevailing at global levels and who can serve in all the possible positions of their respective job domains and contribute towards holistic growth of their respective employment providers as well as the nation, world. The graduates must also possess cutting edge R&D skills in their domain areas.

This, is exactly what has been framed into the University's Mission and thereby the Mission has converged into the following **Program Educational Objectives (PEOs)** which are best suited to Undergraduate Engineering programs, and are those that compliment the university vision, mission.

A. Practice engineering in a broad range of industrial, societal and real world applications.
B. Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.
C. Conduct themselves in a responsible, professional, and ethical manner.
D. Participate as leaders in their fields of expertise and in activities that support service and economic development throughout the world.

These PEOs are designed to be attained by all the graduates within 3 to 5 years of their graduation.

PROGRAM OUTCOMES (POs):

PO Number	Description
1. **Engineering Knowledge**	An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization for the solution of complex engineering problems in engineering
2. Problem Analysis	An ability to identify, formulate, research literature, analyze complex engineering problems in mechanical engineering using first principles of mathematics, natural sciences and engineering sciences
3. Design / development of solutions	An ability to design solutions for complex engineering problems and system component or processes that meet the specified needs considering public health & safety and cultural, societal & environment
4. Conduct investigations of complex problems	An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to obtain solutions to engineering problems
5. Modern tool usage	Ability to create, select and apply appropriate techniques, resources and modern engineering activities, with an understanding of the limitations
6. The engineer and society	Ability to 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
7. Environment and sustainability	Ability to demonstrate the knowledge of engineering solutions, contemporary issues understanding their impacts on societal and environmental contexts, leading towards sustainable development

PO Number	Description
8. Ethics	An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice
9. Individual and team work	An ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings
10. Communication	Ability to communicate effectively oral, written reports and graphical forms on complex engineering activities
11. Project management and finance	Ability to demonstrate knowledge and understanding of the engineering and management principles and apply those one's own work, as a member and leader in team, to manage projects and in multi-disciplinary environments
12. Lifelong learning	An ability to recognize the need for and having the preparation and ability to engage independent and life-long learning in broadest context of technological change

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Bio Technology	
PSO 1	Graduates will be able design, perform experiments, analyze and interpret data for investigating complex problems in biotechnology Engineering and related fields.
PSO 2	Graduates will be able to justify societal, health, safety and legal issues and understand his responsibilities in biotechnological engineering practices.
Civil Engineering	
PSO 1	Function as design consultants in construction industry for the design of civil engineering structures.
PSO 2	Provide sustainable solutions to the Civil Engineering Problems.
Computer Science & Engineering	
PSO 1	An ability to design and develop software projects as well as Analyze and test user requirements.
PSO 2	An Ability to gain working Knowledge on emerging software tools and technologies.
Electronics and Communication Engineering	
PSO 1	An ability to Understand the theoretical and mathematical concepts to analyze real time problems.
PSO 2	An Ability to Design and Analyze systems based on the theoretical and Practical Knowledge
Electronics and Computer Engineering	
PSO 1	An ability to solve complex Electronics Engineering problems, using latest hardware and software tools, to arrive cost effective and appropriate solutions in the domain of embedded systems and Internet of Things.
PSO 2	An ability to demonstrate basic knowledge of Web Technologies for development of web based applications along with knowledge and skill related to cyber security.
Electrical and Electronics Engineering	
PSO 1	Knowledge and hands on competence in simulating, developing, Testing, operation and maintenance of Electrical & Electronics systems.
PSO 2	Able to work in multi disciplinary environments with knowledge on Electrical and Electronics domain and in Project Management techniques, environmental issues and Green technologies.
Mechanical Engineering	
PSO 1	An ability to demonstrate the knowledge, skill to analyze the cause and effects on machine elements, processes and systems.
PSO 2	An ability to apply the acquired Mechanical Engineering knowledge for the advancement of society and self.
Petroleum Engineering	
PSO 1	An ability to understand the basic components of petroleum exploration and production operations.
PSO 2	An ability to analyze and design solutions for petroleum engineering operations.

ACADEMIC REGULATIONS FOR B.TECH. PROGRAMS

This document supplements the KLEF rules and regulations to provide assistance to all B.Tech students. It is required that every individual has to abide by these regulations.

Note: The regulations stated in this document are subject to change or can be relaxed / modified without prior notice at the discretion of the Hon'ble Vice Chancellor.

TERMINOLOGY

Academic Council: The Academic Council is the highest academic body of the University and is responsible for the maintenance of standards of instruction, education and examination within the University. Academic Council is an authority as per UGC regulations and it has the right to take decisions on all academic matters including academic research.

Academic Year: It is the period necessary to complete an actual course of study within a year. It comprises of two consecutive semesters i.e., Even and Odd semester.

Audited Course: It is a course of study which neither has evaluation component nor a grade.

Backlog Course: A course is considered to be a backlog course if the student has obtained a failure grade (F).

Basic Sciences: The courses of foundational nature in the areas of Mathematics, Physics, Chemistry, Biology etc., are offered in this category.

Betterment: Betterment is a way that contributes towards improving the students' grade in any course(s). It can be done by either (a) re-appearing or (b) re-registering for the course.

Board of Studies: Board of Studies (BOS) is an authority as defined in UGC regulations, constituted by Vice Chancellor for each of the department separately. They are responsible for curriculum design and update in respect of all the programs offered by a department.

Branch of Study: It is a branch of knowledge, an area of study or a specific program (like Civil Engineering, Mechanical Engineering, Electrical and Electronics Engineering etc.)

Certificate course: It is a course that makes a student gain hands-on expertise and skills required for holistic development. It is a mandatory, non-credited course for the award of degree.

Change of Branch: Change of branch means transfer from one's branch of study to other.

Compulsory course: Course required to be undertaken for the award of the degree as per the program.

Course: A course is a subject offered by the University for learning in a particular semester.

Course Handout: Course Handout is a document, which gives complete plan of the course. It contains the details of the course viz. Course title, Course code, Pre-requisite, Credit structure, team of instructors, Course objectives, Course rationale, Course Outcomes and the relevant syllabus, textbook(s) and reference books, Course delivery plan and session plan, evaluation method, chamber consultation hour, course notices and other course related aspects. In essence, course handout is an agreement between students (learners) and the instructor.

Course Outcomes: The essential skills that need to be acquired by every student through a course.

Credit: A credit is a unit that gives weight to the value, level or time requirements of an academic course. The number of 'Contact Hours' in a week of a particular course determines its credit value. One credit is equivalent to one lecture hour per week or two hours per week of tutorials/ self-learning/ practical/ field work during a semester.

Credit point: It is the product of grade point and number of credits for a course.

Credit Transfer: The procedure of granting credit(s) to a student for course(s) undertaken at another institution.

Cumulative Grade Point Average (CGPA): It is a measure of cumulative performance of a student over all the completed semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

Curriculum: Curriculum incorporates the planned interaction of students with instructional content, materials, resources, and processes for evaluating the attainment of Program Educational Objectives.

Degree: A student who fulfills all the Program requirements is eligible to receive a degree.

Degree with Specialization: A student who fulfills all the Program requirements of her/his discipline and successfully completes a specified set of Professional elective courses in a specialized area is eligible to receive a degree with specialization.

Department: An academic entity that conducts relevant curricular and co-curricular activities, involving both teaching and non-teaching staff and other resources.

Detention in a course: Student who does not obtain minimum prescribed marks in continuous in-semester evaluation and /or minimum prescribed attendance in a course shall be detained in that particular course.

Dropping from the Semester: A student who doesn't want to register for the semester should do so in writing in a prescribed format before commencement of the semester.

Elective Course: A course that can be chosen from a set of courses. An elective can be Professional Elective, Open Elective, Management Elective and Humanities Elective.

Engineering Sciences: The courses belonging to basic evolutionary aspects of engineering from Mechanical Sciences, Electrical Sciences and Computing like Engineering Mechanics, Data structures, Network Theory, Signal Analysis etc...

Evaluation: Evaluation is the process of judging the academic work done by the student in her/his courses. It is done through a combination of continuous in-semester assessment and semester end examinations.

Grade: It is an index of the performance of the students in a said course. Grades are denoted by alphabets.

Grade Point : It is a numerical weight allotted to each letter grade on a 10 - point scale.

Honors Degree: A student who fulfills all the Program requirements of her/his discipline and successfully completes a specified set of additional courses within the same program is eligible to receive an Honors degree.

Humanities Elective: A course offered in the area of Liberal Arts.

Industrial Training: Training program undergone by the student as per the academic requirement in any company/firm. It is a credited course.

Industrial Visit: Visit to accompany/firm as per the academic requirement.

In-Semester Evaluation: Summative assessments used to evaluate student learning, acquired skills, and academic attainment during a course.

Make-up Test: An additional test scheduled on a date other than the originally scheduled date.

Management elective: A course that develops managerial skills and inculcates entrepreneurial skills.

Mini project: Mini Project is a credit-based course that a student has to undergo during his/her academic term, which involves the student to explore in a discipline belonging to their research interest within their program area.

Minor Degree : A student who fulfills all the Program requirements of her/his discipline and successfully completes a specified set of courses from another discipline is eligible to receive a minor degree in that discipline.

Multi- Section Course : Course taught for more than one section.

Open Elective : This is a course of interdisciplinary nature. It is offered across the

University for all programs.

Over loading : Registering for more number of credits than normally prescribed by the Program in a semester.

Practice School : It is a part of the total program and takes one full semester in a professional location, where the students and the faculty get involved in finding solutions to real-world problems. A student can choose Project/Practice School during his/her 7^{th} or 8^{th} semester of his/her Academic Year to meet the final requirements for a degree.

Pre-requisite : A course, the knowledge of which is required for registration into higher level course.

Professional Core : The courses that are essential constituents of each engineering discipline are categorized as Professional Core courses for that discipline.

Professional Elective : A course that is discipline centric. An appropriate choice of minimum number of such electives as specified in the program will lead to a degree with specialization.

Program : A set of courses offered by the Department. A student can opt and complete the stipulated minimum credits to qualify for the award of a degree in that Program.

Program Educational Objectives : The broad career, professional, personal goals that every student will achieve through a strategic and sequential action plan.

Project : Course that a student has to undergo during his/her final year which involves the student to undertake a research or design, which is carefully planned to achieve a particular aim. It is a credit based course.

Project based laboratory : Project Based Laboratory is a student-centric learning methodology that involve students in design, problem-solving, decision making, and investigative activities; gives students the opportunity to work in teams, over extended periods of time; and culminate in realistic products or presentations

Re-Appearing : A student can reappear only in the semester end examination for the Theory component of a course, subject to the regulations contained herein.

Registration : Process of enrolling into a set of courses in a semester/ term of the Program.

Re-Registering : A student desiring to repeat a course is permitted to do so, subject to the regulations contained herein.

Semester: It is a period of study consisting of 15 to 18 weeks of academic work equivalent to normally 90 working days including examination and preparation holidays. The odd Semester starts normally in July and even semester in December.

Semester End Examinations: It is an examination conducted at the end of a course of

study.

Single Section Course: Course taught for a single section.

Social Service: An activity designed to promote *social* awareness and generate well-being; to improve the life and living conditions of the society.

Student Outcomes: The essential skill sets that need to be acquired by every student during her/his program of study. These skill sets are in the areas of employability, entrepreneurial, social and behavioral.

Substitution of Elective course: Replacing an elective course with another elective course as opted by the student.

Summer term: The term during which courses are offered from May to July.Summer term is not a student right and will be offered at the discretion of the University.

Term Paper: A 'term paper' is a research reportwritten by students that evolvestheir course based knowledge, accounting for a grade. Term paper is a written original research work discussing a topic in detail. It is a credit based course.

Under-loading: Registering for lesser number of credits than normally prescribed by the Program in a semester.

Withdraw from a Course: Withdrawing from a Course means that a student can drop from a course within the first two weeks of the odd or even Semester (deadlines are different for summer sessions). However s/he can choose a substitute course in place of it by exercising the option within 5 working days from the date of withdrawal.

CHAPTER 1
ELIGIBILITY CRITERIA FOR ADMISSION INTO B.TECH. PROGRAMS

Candidates should have passed Intermediate or equivalent (10+2) Examination, from recognized school-leaving certificate examination boards; with minimum of CGPA 6.3 or 60% marks and not less than B2 grade or 60% in Mathematics, Physics, and Chemistry in the case of all Engineering programs. In case of Bio Technology, the candidates who have passed with minimum of 6.3 CGPA or 60% of marks or equivalent in Biology, Physics, and Chemistry are also eligible.

Apart from the above, the candidates should have secured a qualifying rank in the engineering admission eligibility test i.e., KLEEE (Entrance Examination conducted by KLEF) (or) CET conducted by various states (or) JEE (Mains/Advanced).

Foreign students who wish to study at the KLEF, must refer to the "Foreign Student Admission Procedures" stated separately and comply with the study requirements of the Ministry of Human Resource Development, Government of India.

CHAPTER 2
ACADEMIC INSTRUCTIONS

2.1 GENERAL BEHAVIOUR

a. Students should speak in English only while on campus with the faculty or among themselves.

b. Students are expected to wish / greet all senior officials of the KLEF with due respect.

c. Students should be courteous and polite in dealing with all Faculty & staff.

d. Students should maintain silence and/or speak in a soft voice in and around the classrooms, library, laboratories, and offices of the Deans, Program Chairs, Senior Officials, faculty rooms and corridors of academic buildings. It must be noted that shouting, talking in loud voice or in chorus, using indecent, abusive and discourteous language anywhere within the institution premises are considered serious acts of indiscipline and are punishable.

e. Students should not loiter during the free time in the university ampus.

f. Students should not issue any public or press statement, send letters to editors, government, public servants or notaries without prior permission and approval of the Registrar of KLEF in writing.

g. Students should keep the status, dignity, prestige and reputation of KLEF high and not engage in anything that might directly or indirectly undermine the standing of the institution.

h. Students must always adhere to a prescribed/decent dress code befitting the dignity of a technical/professional student within the campus.

i. Ragging of any student is a serious act of indiscipline and has been totally banned by the Hon'ble Supreme Court of India. A student found involved in any form of ragging, verbal or physical, inside or outside the institutional campus, hostels, or buses shall be treated as per the anti-ragging rules of the KLEF.

j. Students must not be involved in quarreling or fighting or any indecent verbal or physical activity among themselves, or with staff and faculty or visitors. Direct or indirect involvement in any such activity will be considered as serious breach of discipline and strict disciplinary action will be taken against the students that engage in such activities.

k. Students are not allowed to sit on the steps, boundary walls on the higher floors of any building, or engage in gossiping, making noise or any other such activity.

2.2 KLEF WORKING HOURS

KLEF operates between 7:20 AM to 5:00 PM on all week days.

2.3 LECTURE CLASS ENVIRONMENT

The institute is a community of learners. Students have a responsibility of creating and maintaining an environment that supports effective learning to receive effective instructions in classrooms, laboratories. KLEF expects students to conduct themselves in an orderly and cooperative manner by adhering to University Rules & Regulations.

2.4 LABORATORY ENVIRONMENT

A conducive learning environment in the laboratory is essential and the students are advised to follow the guidelines mentioned below:

a. Always listen carefully to the faculty especially for the safety precautions to take in the laboratories. Accidents resulting in injuries may occur if precautions are not taken.

b. Eating in laboratories is strictly prohibited.

c. Proper dress code is to be followed as prescribed by faculty in each lab.

d. Students should familiarize themselves with the location of all safety equipment which may be available.

e. Follow evacuation procedures quickly and quietly, if needed.

f. Students should always conduct themselves in a responsible and cautious manner. Risky behaviors such as pushing, running, jumping etc., are unwarranted.

g. Only materials required to complete and record the experiment instructions, (e.g. pencils or graph paper, etc.) should be brought into the laboratory.

h. Equipment must be carefully handled to prevent breakage or damage, otherwise appropriate penalties/disciplinary-action may be levied/imposed.

i. Lab station must be cleaned prior to leaving a lab.

j. Any accident, no matter how small or big, must be reported to the concerned faculty immediately.

2.5 REGISTRATION PROCESS

For every course, the student must undertake the registration process prior to commencement of the course-work, based on the following conditions;

a. Registration into a course will be permitted only for such courses, which are offered by KLEF in that semester.

b. A student must clear the pre-requisite(s) if any, to register in to a course.

c. KLEF has the right to refuse registration process if a student does not turn up during the prescribed duration of registration.

d. Registration for add/drop/change of a course shall not be permitted after one week from the scheduled date of commencement of classes.

e. Students can register upto 26 credits in a semester of their choice to meet their program requirements. Students, who wish to register for more credits through Overloading or less credits through Underloading, must seek prior permission from Dean-Academics.

f. Students who have opted for minor degree, Honors degree, can register for more number of credits in a semester through Overloading.

g. KLEF reserves the right to withdraw any elective course offered within one week of the commencement of the semester if adequate number of students have not registered or for any other administrative reasons. In such cases, the students are permitted to register for any other elective course of their choice provided they have fulfilled the eligibility conditions.

h. KLEF reserves the right to cancel the registration of a student from a course or a semester or debar from the degree on disciplinary / plagiarism grounds.

i. A student is solely responsible to ensure that all conditions for proper registration are satisfied. If, there is any clash in the timetable, it should be immediately brought to the notice of the Academic coordinator for necessary corrective action. The registration may be cancelled for a course or the entire semester either by KLEF if any irregularity is found at a later stage.

CHAPTER 3
B.TECH. PROGRAMS ON OFFER

3.1 B.TECH. PROGRAMS

The students are admitted into 4- year full time B. Tech. Programs as enlisted in this section. However, these academic regulations provide various flexibilities in earning a) Honors b) Specialization and c) Minor Degrees listed out in the succeeding sections.

The following B.Tech. Degrees are offered by KLEF.

a. Bachelor of Technology in Biotechnology (BT)
b. Bachelor of Technology in Civil Engineering (CE)
c. Bachelor of Technology in Computer Science & Engineering (CSE)
d. Bachelor of Technology in Electronics and Communication Engineering (ECE)
e. Bachelor of Technology in Electrical and Electronics Engineering (EEE)
f. Bachelor of Technology in Electronics and Computer Engineering (ECM)
g. Bachelor of Technology in Mechanical Engineering (ME)

3.2 B TECH DEGREE REQUIREMENTS

For the award of B.Tech degree a student must successfully:

a. Earn minimum of 170 $\pm$ 5 credits, as stipulated in the curriculum of the respective department.
b. Complete all the mandatory courses (University Core, College Core and Departmental Core) as prescribed in the curriculum of the respective department.
c. Complete a minimum of five Professional Elective Courses, one from each specialization area offered by the respective department.
d. Complete the Induction Courses prescribed for the program.
e. Acquire a minimum of 10 credits through skilling courses
f. Complete 6 credits through open electives courses.
g. Complete one management elective and one foreign language elective.
h. Complete three certificate courses out of which at least one must be a global certification course in discipline domain areas.
i. Complete one certificate course from yoga/ sports & games/ fine arts.
j. Complete the industrial training for a minimum duration of four weeks.

k. Complete term-paper and project/ practice school/ internship for a period of at least one semester.

l. Have taken social service activities for a minimum duration of 40 hours from 3rd semester onwards.

m. Have obtained a minimum CGPA of 5.25 at the end of the program.

n. Finish all the above-mentioned requirements in less than twice the period of the program which includes deceleration period chosen by the student, deceleration imposed by KLEF or debarred from KLEF.

3.3 B.TECH. DEGREE WITH HONORS

A student is eligible for B. Tech. Degree with Honors subject to the following.

a. S/he should have a CGPA of 8.5 or higher at the end of semester 4.

b. S/he must earn 20 additional credits through Advanced courses (Code ending with A) other than the courses required as per the program, by registering for those courses.

c. S/he must acquire the additional credits by overloading during a regular semester or summer term.

d. S/he is eligible for the degree with Honors only if CGPA of 8.5 at the end of 4th semesters or higher is maintained in each subsequent semester without attempting betterment after registering for Degree with Honors.

e. In case a student fails to meet the CGPA requirement for Degree with Honors at any point after registration, s/he will be dropped from the list of students eligible for Degree with Honors and they will receive B.Tech. Degree only. However, the additional courses completed by them will be mentioned in their grade sheet.

The following are the list of B.Tech.(Honors) programs offered by the KLEF

a. Bachelor of Technology (Honors) in Biotechnology (BT)

b. Bachelor of Technology (Honors) in Civil Engineering (CE)

c. Bachelor of Technology (Honors) in Computer Science & Engineering (CSE)

d. Bachelor of Technology (Honors) in Electronics and Communication Engineering (ECE)

e. Bachelor of Technology (Honors) in Electrical and Electronics Engineering (EEE)

f. Bachelor of Technology (Honors) in Electronics and Computer Engineering (ECM)

g. Bachelor of Technology (Honors) in Mechanical Engineering (ME)

3.4 B.TECH. DEGREE WITH SPECIALIZATION

A student is eligible to receive B. Tech Degree with specialization subject to the following:

a. S/he must successfully complete five (5) professional elective courses from a single specialized area.
b. Must acquire six (6) credits in addition to B. Tech Degree requirements (Refer Sec 3.1) by registering into advanced professional (Department Core & Department Elective) courses.
c. Must complete term paper and project (as per the minimum requirements for award of B.Tech. degree) in the same area of specialization.
d. Attain a minimum CGPA of 6.75 at the end of the Program.

Degree with specialization is offered in the following areas:

S. No.	Area of Specialization	Eligible departments
1	Bioinformatics	BT
2	Genetic Engineering	BT
3	Industrial Bio-Technology	BT
4	Medical Bio-Technology	BT
5	Water Resources Engineering	CE
6	Geotechnical Engineering	CE
7	Structural Engineering	CE
8	Transportation Engineering	CE
9	Environmental Engineering	CE
10	Software Engineering	CSE, ECM
11	Computer Communications	ECE, ECM, CSE
12	Computational Sciences	CSE, ECM
13	Big Data Analytics	CSE, ECM
14	Cloud Computing	CSE, ECM
15	Artificial Intelligence	CSE,ECE,ECM, EEE, ME
16	Cyber Security	CSE, ECM
17	Internet of Things	ECM, CSE, ECE
18	Web Technologies	ECM, CSE
19	Embedded Systems	ECM,ECE, CSE, EEE

S. No.	Area of Specialization	Eligible departments
20	Mobile Communications	ECE, ECM
21	Signal & Image Processing	ECE, ECM, EEE
22	VLSI Design	ECE, ECM, EEE
23	Control Systems	EEE, ECE, ECM
24	Energy Systems	EEE, ME
25	Power Electronics	EEE
26	Power Systems	EEE
27	Automobile Engineering	ME
28	Design Specialization	ME
29	Robotics & Mechatronics	ME, ECE, ECM, EEE
30	Strategic Manufacturing Specialization	ME
31	Autotronics	ME
32	Soft computing & Data Analytics	ME, CSE, ECE

3.5 B.TECH. DEGREE WITH A MINOR

A student is eligible for B. Tech. Degree with a Minor, subject to the following.

- Successfully acquire 20 additional credits by registering into courses offered in the category of professional core from another department.
- S/he maintains a CGPA of 7.0 at the time of award of degree.

CHAPTER 4
B.TECH. PROGRAM CURRICULUM

For an academic program the curriculum is the basic framework that will stipulate the credits, category, course code, course title, course delivery (Lectures / Tutorials / Practice / Skill/ Project/ Self Study / Capstone Design etc.), in the Choice Based Credit System. However, all such are essentially designed, implemented and assessed in Outcome Based Education Framework.

4.1 PROGRAM STRUCTURE

a. B.Tech. program is spread over a span of 8 semesters.

b. Each semester is of, approximately 17 $\pm$ 1 week duration and each semester is classified as:

c. Odd Semester (July – December)

d. Even Semester (December – May).

e. KLEF may offer summer term during May and June.

f. All courses are offered under three categories vis-à-vis. even, odd and dual semester courses.

g. Subject to the maximum permissible limit in each course, as specified by the KLEF from time to time, students have independence to choose courses of their own choice prescribed by the KLEF.

h. From 3rd Semester, onwards a student can register for a maximum of 26 credits, other than audited and certificate courses per semester. This is not applicable when student exercises the overloading option (while doing project work/practice school/Minor degree/Honors degree program/specialization).

i. A student can choose Major Project/Practice School only during 7th or 8th semester.

j. Model distribution of credits in B.Tech Program

TYPE	Credits
Humanities and Social Sciences courses	24
Basic Science courses	25
Engineering Science courses	29±4
Professional core courses	40
Professional Elective courses	22
Open Electives	12±3
Project work	14

Cocurricular Activities	1
Skilling Courses	11±1
TOTAL	**175±5**

4.2 COURSE STRUCTURE

a. Every course has a Lecture-Tutorial-Practice-Skill (L-T-P-S) component attached to it.

b. Based upon the L-T-P-S structure the credits are allotted to a course using the following criteria.

- Every Lecture / Tutorial hour is equivalent to one credit.
- Every Practice hour is equivalent to half credit.
- Every skill-based practice hour is equivalent to quarter credit.
- If the calculated value of credit is a fraction, it is rounded to the lower number.

4.3 COURSE CLASSIFICATION

Any course offered under B.Tech. program is classified as:

a. COMPULSORY COURSES

- Basic Sciences
- Engineering Sciences
- Humanities and Social sciences
- Professional core
- Skilling core

b. ELECTIVE COURSES

- Professional Elective
- Open elective
- Management elective
- Humanities and Social science Elective
- Science elective.
- Mathematics Elective

c. Project Courses

- Industrial Training
- Term paper
- Project
- Practice School
- Internship

d. Audit Courses

Any course offered in the University that doesn't fall under the prescribed curriculum can be audited by a student without acquiring any credits but obtaining either "Satisfactory" or "Not Satisfactory" result.

e. Induction Courses:

A student who gets admitted into B.Tech. program must complete a set of Induction courses for a minimum period of 3 weeks and obtain a "Satisfactory" result prior to registering into 1st Semester of the Program.

f. Value-Added courses:

Courses leading to certification and those which are conducted exclusively for employability are referred to as value added courses. Though "Satisfactory" completion of value added courses doesn't acquire any credit but they may be part of the graduation requirement. Refer Section 3.1 for certification courses which fall under the category of Value-added courses.

g. Bridge Courses:

Courses which are required to bridge the continuity among the Basic sciences/Engineering Sciences/professional courses (both core and electives) and are identified through gap analysis carried out using feedback obtained from various academic stakeholders are termed as Bridge Courses. These courses also do not yield any credits but require a "Satisfactory" result to register into the attached professional courses.

4.4 COURSE PRECEDENCE

The following are the guidelines for registering into courses with pre-requisites.

a. Every course can have one or more of its preceding course(s) as pre-requisite(s).
b. To register for a course, the student must successfully be promoted in the course(s) earmarked as pre-requisite(s) for that course.
c. In any course if a student appears for semester end exam or is declared eligible for the same, s/he is deemed to have met the pre-requisite.
d. Professional electives and compulsory core courses can be chosen by the students of the respective disciplines only. However, the students of a particular discipline can register for specialization / minor / compulsory

discipline courses of other disciplines provided they have met the pre-requisite.

e. A student is not permitted to choose an open elective, if it covers more than 30% of content already done by him in any other course that s/he registered/ completed.

f. An elective course may be offered, only if a minimum of 20 students register for the course.

4.5 SUMMER TERM COURSES

The KLEF may offer summer term courses usually in the months of May and June. The following are the guidelines to register in to courses offered in Summer Semester.

a. A student may register for course/s in each summer term by paying the stipulated fee. Students registering for more than one (1) summer course must ensure that there is no clash in the time table.

b. A student can register into a detained course or a not-registered course (course offered in regular semester, but student failed to register due to the non-compliance of pre-requisite condition but has paid the fee.) A student can also register for other than the above two mentioned categories of courses only if they are permitted for acceleration.

c. In any case, a student can register only for a maximum of 12 credits during summer term.

d. Summer course is not a right of the student and will be offered based on availability of faculty and other KLEF resources.

e. Attendance & Promotion policy for summer term is same as compared to the regular semester except for condonation policy. Condonation is not applicable for summer term courses

4.6 AWARD OF DEGREE

A student having cleared all the courses and met all the requirements for the award of degree with

a. $5.25 \leq$ CGPA < 5.75 will be awarded Pass class

b. $5.75 \leq$ CGPA < 6.75 will be awarded Second class

c. $6.75 \leq$ CGPA < 7.75 will be awarded First class

d. CGPA ≥ 7.75 will be awarded First class with Distinction provided the student

has cleared all the courses in first attempt and must have fulfilled all the program requirements in four (4) years duration.

4.7 PRACTICE SCHOOL

The Practice School (PS) program forms an important component of education at K L E F. It is an attempt to bridge the gap between an academic institution and the corporate world. The Program, which would be a simulation of real work environment, requires the students to undergo the rigor of professional environment, both in form and in substance. In the process, it provides an opportunity for the students to satisfy their inquisitiveness about the corporate world provides exposure to practicing professional skills and helps them acquire social skills by being in constant interaction with the professionals of an organization. During Practice School, some of the students may be offered stipend and/or job offer. This program benefits the student to understand what he/she has studied in the class room and what is being practiced in the industry.

Every student is required to undertake On-the-Job-Training (OJIT) in his/her domain area along with day-to-day functions of the company, both at the assistance and the execution level. This will help the student to gain a deeper understanding of the professional work, culture, organizational targets, delivering results, work pressure, etc. of an organization.

Practice School involves task orientation, teamwork, goal orientation and managing the interpersonal relationships. Therefore, it helps students to develop the qualities required for a Graduate and Post Graduate. A good Practice School program undertaken with all the seriousness provides an excellent learning opportunity to the student and also paves the way for job placement.

4.7.1 PRACTICE SCHOOL DURATION

Practice School is offered usually for a period of one semester. Should the need be, a student may put a request through the organization and the Head of the Department to the Dean Academics requesting for extension of the duration.

4.7.2 ELIGIBILITY:

a. The students who are eligible for 7th Semester B.Tech as per the academic rules but having CGPA less 6.75 and with a maximum of two backlogs at the

end of 5th semester can apply for PS-1,2018-2019.

b. Students who have not registered with placement (IRP) can only apply.

c. Students who have registered with placement (IRP) and after getting placement will be allowed in PS-2 (8th Semester)

4.7.3 GUIDELINES

The following guidelines are followed attending Practice-School.

d. Practice School program carries 06 credits for a semester. Therefore, it involves substantial effort and requires seriousness, commitment and dedication from the students. One has to hard work for good experience and better placement opportunities.

e. Students must be disciplined, hardworking and possess attitude to undergo On the Engineering Training (OJET).

f. Students must abide by the rules and regulations of the company and the University.

g. Practice School is not mandatory for the students. However, Practice School experience enhances the opportunities for placement.

h. Some Practice School companies for the selection for Practice School program. In such cases, the notices will be sent to the Departments, PS-Notice Board, PS-Website & SMS regarding schedule of the selections as and when a company is visiting the campus. Interested students shall attend the selection process for the companies.

i. The students who were not selected by the companies in the campus, will be allotted a company by the Director, Practice School. Allotment of company is done basing on the CGPA of the students and the availability of vacancies in the companies of their relevant branch of engineering.

j. Students who have submitted the Registration-cum-Data Form will not guarantee the Practice School. The number of students sent to the practice school purely depends on the number of permissions obtained in various companies for different branches of engineering.

k. At the time of allotment of companies, the students should be ready for opting companies in any location (Hyderabad, Bengaluru, Vizag, Chennai and Vijayawada) depending on the availability of the vacancies in their respective branches.

4.8 Once the students are selected by a company or allotted to a company shall not be allowed either to change the company or to cancel from the practice school.CAREER PLANNING &DEVELOPMENT

A special Counseling Cell consisting of professional student counselors, psychologists, senior professors counsels/helps the students in preparing themselves to cope with studies, perform well in the tests & various competitions. This Cell provides its services to the students in getting the solutions for their personal problems and also provides career guidance with the help of Industrial Relations and Placements (IRP) department.

A group of 20 students are allotted to a senior faculty member who counsels them regularly and acts as their mentor. Refer to chapter 9 for more information on Counselling facilities at KLEF.

CHAPTER 5
ATTENDANCE RULES

5.1 ATTENDANCE POLICY

In several academic studies a strong correlation between attendance in classes and the performance of the student has been found. Therefore, students are expected to maintain full attendance in all courses. However, students may involuntarily have to miss classes due to illness or some family emergency; students are permitted to maintain a minimum attendance of 85% without producing any proof or reason for the absence. In case of medical exigencies, the student/parent should inform the Head of the Department immediately by official email (@kluniversity.in email address). Within a week, starting from the day of absence, the proof of medical exigency must be submitted to the Department's office.

1. Every student is strongly recommended to maintain 100% attendance in all courses. However, a natural contingency for social responsibilities and other situations, a relaxation of 15% is provided in each course, with prior information to HOD through counselor.
2. It is mandated that every student must possess 85% attendance in a course to be eligible for appearing in Sem-End Examination(s). For cases of casual absenteeism, condonation of attendance is not permissible
3. For genuine cases with documentary evidence, the principal of the college can permit a waiver of 10% attendance for emergency situations as mentioned below.
    a. Hospitalization with in-patient records, medical certificate, case file and discharge summary submitted no later than 3 days after the specified rest period in the medical certificate.
    b. Death of immediate family member (Parent/Grand Parent/Brother/Sister) with submission of death certificate immediately after re-attending classes.
    c. Participation in University/State/National/International level co-curricular/extra-curricular events with prior approval.
    d. Any other valid reason as per the discretion of principal

    But student requires approval from the Dean Academics to write the Sem-In Examination(s) / Semester-End Examination.
4. In case of attendance falling marginally below 75% due to severe medical reasons or any other valid reasons, the Principal/Program chair may bring such cases, along with a valid and adequate evidence, to the notice of the Dean Academics. The condonation board formed by Vice-Chancellor under the chairman ship of Dean-Academics will consider any further relaxation in attendance from the minimum 75% condition after going through case by case. A further 10% waiver is at the

discretion of the condonation board, in which case there may be financial penalty levied as condonation fees.

5. The attendance of a student must be calculated from the date of university registration.
6. If the student has registered late, attendance must be counted from the date of semester registration as prescribed in the Academic Calendar.
7. Attendance for the students who are transferred from other institutes and for new admissions, attendance must be considered from the date of admission of the student.
8. A student is eligible to take Sem-In Exams only if (s)he maintains a minimum of 50% attendance in the duration of conduct of classwork relevant to the COs evaluated in those Sem-In Exams. There is no provision of condonation in this regard.

List of ineligible students for exams in each course will be announced by the respective Departments after approval by the Dean Academics one day before the commencement of Sem-In Exam and three days prior in case of Semester-End Examination. The results of students who are ineligible due to shortfall of attendance but took Sem-In Exam/Sem-End Exam (theory/lab) will be withheld until attendance issues are resolved.

Attendance Eligibility Criteria For	**Period of Calculation of Absence**	**Minimum Percentage of Attendance Required**	**Minimum Percentage of Attendance Required with the consent of HoD**
Sem-In Exam-I	From 1st Instruction day to 2 days before the start of Sem-In Exam-I exams	50%	50%
Sem-In Exam-II	After Sem-In Exam I to 2 days before the start of Sem-In Exam-II including Remedial Classes Attendance	50%	50%
Sem-End Exam (Theory & Lab separately)	From 1st Instruction day to the Last Date of Instruction (inclusive)	85%	75%

5.2 ATTENDANCE MARKS

There are no specific marks attached to attendance as such, however, if the Course Coordinator of a course desires to award certain marks, for attendance in a course, s/he can do so based on following guidelines, which thereby must be clearly reflected in the respective course handouts which should duly be approved by Dean Academics. For any course, not more than 5% marks can be allotted for attendance.

The distribution of marks for attendance is [85,88] = 1 mark, [88, 91] = 2 marks, [91, 94] = 3 marks, [94, 97] = 4 marks and [97, 100] = 5 marks, below 85%, even in case of condonation, "0" marks.

The marks, if allotted for attendance will have to be considered for all L-T-P-S components of a course cumulatively but not specifically for theory component for any course.

5.3 ATTENDANCE WAIVER

Students maintaining a CGPA $\geq$ 9.00 and SGPA $\geq$ 9.00 in the latest completed semester get a waiver for attendance in the following semester. Students who thus utilize an attendance waiver will be awarded the marks allocated for attendance based on their performance in an advanced assignment specified by the course coordinator (emerging topics related to the course). S/he can appear in all assessments and evaluation components without being marked ineligible due to attendance-based regulations.

5.4 ATTENDANCE CONDONATION FOR PARTICIPATION IN KLEF/ NATIONAL/ INTERNATIONAL EVENTS

Only those students nominated/sponsored by the KLEF to represent in various forums like seminars/conferences/workshops/competitions or taking part in co-curricular/ extra- curricular events will be given compensatory attendance provided the student applies in writing for such a leave in advance and obtain sanction from the Principal basing on the recommendations of the HOD for academic related requests; or from the Dean Student Affairs for extra-curricular related requests. For participation in the KLEF's placement process the names of students will be forwarded by the placement cell in-charge to the respective Heads of the

Departments.

Students participating in KLEF/National/International events like technical fests, workshops, conferences etc., will be condoned for 9 instructional days per semester. This condonation is not applicable for summer semester.

A sample calculation is given below:

If a course has 45 hours conducted in a semester and 3 hours out of these 45 hours are scheduled during the days of absence for the above specified reasons, the attendance percentage is calculated for this student with a total number of class conducted as 42 instead of 45.

5.5 ELIGIBILITY FOR APPEARING IN SEM-END EXAMINATION

A Student registered for a course is eligible to write the Semester-End Examination for that course unless found ineligible due to one or more of the following reasons:

a. Shortfall of attendance
b. Shortfall of marks in Sem-In Assessment & Evaluation
c. Acts of indiscipline
d. Withdrawal from a course

5.6 ABSENCE IN ASSESSMENT & EXAMINATION

If a student fails to take any formative assessment component (due to ill-health or any valid reason), no second chance will be given and zero marks will be awarded for the same. In cases of excused absence, the instructor may provide an opportunity to the student to reappear in quizzes or assignments or any other internal assessment criteria based on the approval from the Dean Academics on the basis of recommendations made by the concerned Head of the Department.

If a student fails to write Sem-In Exam-I or obtained less than 50% marks in Sem-In Exam-I, he has to attend remedial classes and score a minimum 85% of attendance in remedial classes to be eligible for Make-up test for Sem-In exam-I. Further, the number of remedial classes to be conducted shall be 50% of regular classes held till the Sem-In exam-I. However, there is no make-up test for Sem-In Exam-II or for all the Laboratory exam.

1. A student is in genuine absence for a Sem-In Exam only under the following circumstances:

a. Pre-approved participation in University/State/National/International co-curricular and extra-curricular activities
b. Ill health and medical emergencies for the student leading to hospitalization with certification by the doctor stating inability of student to attend Sem-In exams clearly within the necessary dates.
c. Death of immediate family member

2. The table given below states the procedure to be followed by the students and colleges in case of genuine absence to Sem-In exams:

Reason	**Procedure for Student**	**Procedure for Colleges**	**Supporting Documents**	**Due date for submission of Supporting Documents**
a. Pre-approved participation in University/ State/ National/ International co-curricular and extra-curricular activities	Student must obtain pre-approval from the Principal of the college through recommendation by his/her counsellor and the Head of the Department. A copy of the approved letter must be sent to the counsellor, respective course faculty & Academic Year Coordinator.	HoDs must only recommend and Principals must approve only those events that are listed by the offices of the functionary deans.	1. Letter of approval from Principal of the respective college 2. Participation/Prize certificate obtained from the event	Prior to the conduct of Sem-In Exam.
b. Ill health and medical emergencies for the student leading to hospitalizatio n with certification by the doctor stating inability of student to attend Sem-In exams clearly within the necessary dates.	Parent or guardian must call the counsellor asap informing about absence in the exam due to medical emergency. Student must submit all the mentioned supporting documents to the counsellor within 3 days of conclusion of the recommended rest period by the medical practitioner as suggested in the medical certificate.	The Counsellor must submit all the supporting documents to the department office for approval by the Principal of the college. Principal must only approve if all supporting documents are submitted within stipulated 3 day window and if the exams fall under the dates mentioned in the supporting documents.	1. Medical certificate within relevant dates by a medical practitioner 2. medical prescriptions 3. copies of case file of the illness 4. Discharge summary	Within 3 days of conclusion of the recommended rest period by the medical practitioner as suggested in the medical certificate.
c. Student must attend marriages / engagements in one's own immediate family i.e. Brothers / sisters or self	Student must obtain pre-approval from the Principal of the college through recommendation by his/her counsellor and the Head of the Department. A copy of the approved letter must be sent to the counsellor, respective course faculty & Academic Year	Principal must only approve for marriages or engagements within the student's own family. Principal must verify counsellor's and HoD's recommendation prior to approval.	Wedding/engagement invitation	Prior to the conduct of Sem-In Exam.

Reason	Procedure for Student	Procedure for Colleges	Supporting Documents	Due date for submission of Supporting Documents
	Coordinator.			

3. Compensation for genuine absence in Sem-In exam:

Compensation of marks for Sem-In exam is only valid for theory exams (can only be done for any one sem in exam.) Further this clause is not applicable for Sem-In lab exam(s) and hence cannot be compensated.
The committee formed by Vice-Chancellor under the chairman ship of Dean-Academics will consider and finalize the mode of compensating the marks in applicable cases.

5.7 Remedial Classes:

The following category of students are recommended to attend Remedial classes:

- Students who did not attend or obtain a minimum of 50% marks in the Sem-In exam 1
- Students those for whom CO1/CO2 is(are) not attained in Sem-In Exam 1
- Students ineligible from appearing in Sem-In Exam 1 due to lack of minimum 50% attendance till 2 days prior to commencement of Sem-In Exam 1.
- Any other student may also be permitted to attend remedial classes as per the discretion of the Principal.

The following are the guidelines to conduct remedial classes:

- Remedial classes which are scheduled to be conducted usually one- or two-weeks post conclusion of Sem-In exam 1.
- The number of remedial classes to be conducted shall be 50% of regular classes held till the Sem-In exam-I.
- Remedial classes MUST NOT be scheduled during regular classwork hours.
- The following ALMs are recommended for slow learners:
    - One minute paper
    - Think/Plan/Share
    - Role play
    - Focussed listening and Listening for specifics
    - Just-in time teaching

  Course coordinators may also include alternate Active learning Methods based on the course being taught.

- Supplementary course handouts for remedial classes (Annexure B) duly signed by Course Coordinator and the Head of the Department must be submitted to office of Dean Academics by the mentioned due date.

5.8 UPDATED SEM-IN EXAM 1 MARKS:

A remedial test is conducted for all students who maintain a minimum of 85% attendance in remedial classes and obtain 50% marks in Remedial Formative Assessments (RFA). The marks obtained in the remedial test and the marks obtained in Remedial Formative Assessment are used to uplift the attainment of CO1 and CO2 in Sem-in Exam 1. The following formula shows the updated Sem-In Exam 1 marks for a student who appears in the remedial test.

$$Updated\ SemIn\ Exam\ 1\ Marks = \lceil (0.25 \times (Marks\ Obtained\ in\ SemIn\ Exam\ 1) + 0.75 \times (Marks\ obtained\ in\ Remedial\ Test)) \rceil$$

CHAPTER 6
ASSESSMENT & EVALUATION PROCESS

The assessment in each theory subject consists of two Sem-In Exams (Sem-in Exam-I and Sem-In Exam -II), in-class quizzes/tutorials/home-assignments/Active Learning Methods (continues assessment), and the Semester-End Exanimation(SEE). The distribution of weightage for each assessment step is listed below. The distribution of internal marks in the table below is only a guideline. Instructors at their discretion may apportion some marks for attendance beyond 75%. In such cases, the marks shown for quizzes and assignments will be accordingly be adjusted. Students are advised to consult the course handout to get more detailed information on assessment.

a. The Sem-In tests and the Semester-End Examinations will be conducted as per the Academic Calendar.
b. As per the necessity, the Supplementary examinations will be conducted at the discretion of Dean Academics with the approval of the Vice-Chancellor.
c. Students may have to take more than one examination in a day either during Sem-In exams, Semester-End Examinations /Supplementary examinations.

6.1 SEMESTER-IN EVALUATION

The following guidelines are followed for the Semester-In evaluation.

a. The process of evaluation is continuous throughout the semester.
b. The maximum distribution of marks for Semester-In evaluation does not exceed 60% of aggregate marks of the course.
c. The distribution of weightage for various evaluation components are decided and notified by the course coordinator through the course handout after approval by the Dean Academics, prior to the beginning of the semester.
d. In order to maintain transparency in evaluation, answer scripts are shown to the students for verification, within one week of conduct of exam. If there is any discrepancy in evaluation, the student can request the course-coordinator to re-evaluate.
e. The solution key and scheme of evaluation for all examinations are displayed by the Course-Coordinator in the appropriate web portal of the course, on the day of the conduct of examination.
f. No correction is permitted once the course coordinator submits the

marks/grades to the Dean Academics Office.

g. In case the student is unable to appear for any evaluation component owing to hospitalization, participation in extra/ co-curricular activities representing KLEF/ state/ country; the Dean Academics can permit to conduct of re-examination for such students.

h. A student shall not be eligible to write the Semester-In Examination if s/he does not put up 85% of attendance calculated up to 1 week before the commencement of the stipulated date of Semester-In Examination (unless any special excuse is granted by Dean Academics) and shall be treated as DETAINED and zero marks are awarded for the same.

6.2 SEMESTER END EXAMINATION

The following guidelines are followed for the Semester-In evaluation.

a. The minimum weightage for Semester End Examination is 40% of the aggregate marks.

b. The pattern and duration of such examination are decided and notified by the Course Coordinator through the Course handout, after approval from the Dean Academic.

c. To maintain transparency in evaluation, answer scripts are shown to the students for verification. If there is any discrepancy in evaluation, the student can request the Controller of Examinations to re-evaluate.

6.3.1 EVALUATION FOR THEORY COURSES

The table below gives details about the evaluation components in courses which contain only the lecture components.

Type of Evaluation	Maximum Marks for which the Evaluation is Conducted	Duration	Weighatge
Sem-In Exam-I	50 marks	Refer course handout (Annexure A)	Refer course handout (Annexure A)
Sem-In Exam -II	50 marks	Refer course handout (Annexure A)	Refer course handout (Annexure A)
Quizzes / ALM / Tutorial	Each quiz/ALM/ Tutorial will be conducted for a minimum of 10 marks	Refer course handout (Annexure A)	Refer course handout (Annexure A)
Assignment	In the form of a report, seminar, presentation, quiz, experiment, GD, etc. as defined in the course syllabus/ course plan	Refer course handout (Annexure A)	Refer course handout (Annexure A)

Sem-End Exam	100 marks	3 hours	Refer course handout (Annexure A)

6.3.2 ASSESSMENT OF LABORATORY BASED COURSES

The continuous assessments in laboratory courses will be based on supervision of the students' work, their performance in viva-voce examinations and the quality of their work. The Sem-End Exam for the laboratory courses are conducted by a panel of examiners including experts from outside KLEF as approved by Dean Academics.

Type of Evaluation	Evaluation Component	Marks	Remarks	Weighatge out of 100
Internal	Sem-In Lab Exam -1	30	Sem-In lab exam will have questions framed from the experiments conducted in the lab.	Refer to course Handout (Annexure A)
	Sem-In Lab Exam -2	30	Sem-In lab exam will have questions framed from the experiments conducted in the lab.	
	Continuous Assessment	20 per Lab	Assessment includes marks for record, observation, execution of experiment and viva-voce	
	Mini Project	20	Project evaluation includes weekly reviews, project completion, process management	
External	Report	Refer course Handout (Annexure A)		50
	Lab Experiment			
	Viva-voce			
	External Review	Refer course handout (Annexure A)		
	Paper publication	4 Bonus Marks	Based on National / International publications in reputed / peer-reviewed journals	

NOTE: Check for specific courses or as specified by the Course Coordinator.

6.3.3 *ASSESSMENT OF THEORY COURSES WITH EMBEDDED LABORATORY*

The following table briefs the evaluation components of a theory course with embedded lab.

Type of Evaluation	Evaluation Component	Marks	Remarks	Weightage out of 100
Internal	Sem-In Exam-1	50	refer course handout (Annexure A)	Refer to course Handout (Annexure A)
	Sem-In Exam-1	50	refer course handout (Annexure A)	
	Quizzes / ALM / Tutorial	Each quiz/ALM/ Tutorial will be conducted for a minimum of 10 marks	refer course handout (Annexure A)	
	Lab Continuous Assessment	20 per Lab	Assessment includes marks for record, observation, execution of experiment and viva- voce	
External	Lab Experiment	Refer course Handout (Annexure A)		Refer Course Handout (Annexure A)
	Viva-Voce	Refer course handout (Annexure A)		
	Semester End Exam	100		

6.3.4 *ASSESSMENT OF PROJECT/RESEARCH-BASED SUBJECTS*

All project or research-based subjects must have a defined time-limit for completion. The specific time limits for completion and schedule for monitoring and evaluation of performance of students will be announced by the school each term. The final project report will be evaluated by a panel of examiners including external experts. Student project reports must be as prescribed by the office of Dean Academics. Students conducting their projects outside the campus can participate in project reviews through an online video conferencing tool.

6.3 GRADING PROCESS

At the end of all evaluation components based on the performance of the student, each student is awarded based on absolute/relative grading system. Relative grading is only applicable to a section of a course in which the number of registered students is greater than or equal to 25. Choice of grading system is decided by the Course-Coordinator with due approval of Dean Academics and is specified in the course handout.

6.4.1 ABSOLUTE GRADING

The list of absolute grades and its connotation are given below:

Letter Grade	Grade Point	Percentage of marks
O	10	90 - 100
A+	9	80 - 89
A	8	70 - 79
B+	7	60 - 69
B	6	50 - 59
C	5	46 - 49
F	0	0 – 45
Ab (Absent)	0	Absent

6.4.2 RELATIVE GRADING

a. The following table lists the grades and its connotation for relative grading:

Letter Grade	Grade Point	Grade Calculation
O	10	total marks >= 90% and total marks >= mean + 1.50σ
A^+	9	μ+0.50σ <= total marks < μ+1.50σ
A	8	μ <= total marks < μ+0.50σ
B^+	7	μ-0.50σ <= total marks < μ
B	6	μ-1.00σ <= total marks < μ-0.50σ
C	5	μ-1.25σ <= total marks < μ-1.00σ
D	4	μ-1.50σ <= total marks < μ-1.25σ or ≥46
F	0	total marks <μ-1.50σ or total marks <=45
Ab	0	Absent

μ is the mean mark of the class excluding the marks of those students who scored ≥ 90% and ≤ 46% after rounding the percentages to the next highest integer. σ is the standard

deviation of the marks from the μ.

6.4.3 SGPA & CGPA

The SGPA is the ratio of sum of the product of the number of credit s with the grade points scored by a student in all the courses and the sum of the number of credits of all the courses undergone by a student, in a semester.

$$SGPA(S_i) = \frac{\sum C_i * G_i}{\sum C_i}$$

where *'C_i'* is the number of credits of the ith course and *'G_i'* is the grade point scored by the student in the ith course.

The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a program,

$$CGPA(S_i) = \frac{\sum C_i * S_i}{\sum C_i}$$

where 'S'$_i$ is the SGPA of the ith semester and *'C_i'* is the total number of credits in that semester.

a. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.
b. CGPA can be converted to percentage of marks: 10 X CGPA - 7.5
c. A student get in less than 46% of overall score and 40% in the semester end examination will be considered to have earned "F" grade. Combined Theory and Lab courses the student should get independently 40% in both theory and lab components else treated as failed in both. A student who obtains 'F' grade has to reappear for all the components of Semester End examination.
d. Audit/Certificate courses are graded as satisfactory or non-satisfactory only.
e. At the end of each semester, the KLEF issues grade sheet indicating the SGPA and CGPA of the student. However, grade sheet will not be issued to the student if he/she has any outstanding dues.

6.4.4 ILLUSTRAION OF COMPUTAION OF SGPA AND CGPA

Computation of SGPA and CGPA Illustration for SGPA

COURSE	CREDITS	GRADE LETTER	GRADE POINT	CREDIT POINT (Credit x Grade)
Course 1	**3**	A	**8**	3 X 8 = 24
Course 2	**4**	B+	**7**	4 X 7 = 28
Course 3	**3**	B	**6**	3 X 6 = 18
Course 4	**3**	O	**10**	3 X 10 = 30
Course 5	**3**	C	**5**	3 X 5 = 15
Course 6	**4**	B	**6**	4 X 6 = 24
	20			139

Thus, SGPA =139/20 =6.95

Illustration for CGPA

Item	**Semester**					
	I	II	III	IV	V	VI
Credits	20	22	25	26	26	25
SGPA	6.9	7.8	5.6	6.0	6.3	8.0

Thus,

$$CGPA = \frac{(20*6.9+22*7.8+25*5.6+26*6.0+26*6.3+25*8.0)}{(20+22+25+26+26+25)} = 6.73$$

6.4 BETTERMENT

A student may reappear for semester end examination for betterment only in the theory part of the course for improving the grade, subject to the condition that, the student has passed the course, his/her CGPA is ≤ 6.75 and the grade in the respective course to be equal to or lower than "C". In the case of reappearing, the better of the two grades is considered.

A Student can re-register in any course in any semester during the program for improvement of grade if the current grade in the course is equal to lower than B^+ and with due approval from Dean Academics in accord of academic regulations.

A student cannot reappear for semester end examination in courses like Industrial Training, courses with their L-T-P-S Structure like 0-0-X-X, Project, Practice School and Term Paper.

A student is not eligible for award of B.Tech. degree with Honors, B.Tech. degree with distinction, in case s/he takes up the betterment option.

6.5 COURSE BASED DETENTION POLICY

A student is marked as detained in a course based on the below guidelines.

a. In any course, a student must maintain a minimum attendance as per the attendance policy referred in Chapter 5.1 and 5.4 and must secure a minimum of 50% marks in Semester-In Assessments & other Examinations to eligible for appearing in the Sem-End examination, failing to fulfill these conditions will deem such student to be detained in that course. He/she is ineligible to take semester end exam.

- A student, who fails in a course and not having minimum 50% marks (30 marks out of 60 marks) in Sem-In internal examinations is deemed to be detained. In such case the student should re-register for the same course.
- However, A student, whose internal marks falls between 40% to 50% with approval from Dean Academics, will be given a chance to write Semester-End Examinations. In case he/s fails to get 46% of overall score, he/she is detained in that course. In such a case the student has to re-register into the same course or an alternate as suggested by the Head of the Department and approved by Dean Academics.
- A student satisfying minimum attendance requirement and fails in a course but having a more than 50% of Sem-In internal is eligible for re-appearing for supplementary examinations.

CHAPTER 7
PROMOTION

7.1 CHANGE OF BRANCH

A student admitted to a particular Branch of the B.Tech. program will normally continue studying in that branch until the completion of the program. However, in special cases the KLEF may permit a student to change from one branch to another after the second semester, provided s/he has fulfilled admission requirement for the branch into which the change is requested.

The rules governing change of branch are as listed below:

a. Top 1% (based on CGPA until 2nd semester) students will be permitted to change to any branch of their choice.
b. Apart from students mentioned in clause (a) above, those who have successfully completed all the first and second semester courses and with CGPA ≥ 8 are also eligible to apply, but the change of Branch in such case is purely at the discretion of the KLEF.
c. All changes of Branch will be effective from third semester. Change of branch shall not be permitted thereafter.
d. Change of branch once made will be final and binding on the student. No student will be permitted, under any circumstances, to refuse the change of branch offered.
e. Students in clause a and b may be permitted subject to the availability of seats in the desired branch.

7.2 CREDIT TRANSFER

7.2.1 CREDIT TRANSFER BETWEEN KLEF AND OTHER INSTITUTION

a. Credit transfer from other institutions to KLEF or vice versa is permitted only for under graduate program.
b. Credit transfer from KLEF to other institutions: Student studying in KLEF can take transfer to another institution under the following conditions:
    - KLEF has signed MOU with the institution.
    - However, a student, after seeking transfer from KLEF can return to KLEF after a semester or year. Based on courses done in the other institution, equivalent credits shall be awarded to such students.

c. Credit transfer from another institution to KLEF: A student studying in another institution can take transfer to KLEF under the following conditions:

- When a student seeks transfer, equivalent credits will be assigned to the student based on the courses studied by the student.
- The student, when transferred from other institutions, has to stick to the rules and regulations of KLEF.
- To graduate from KLEF, a student must study at least half of the minimum duration prescribed for a program at KLEF.

7.2.2 CREDIT TRANSFER THROUGH MOOCS:

Under graduate students can get credits for MOOCs courses recommended by KLEF up to a maximum of 20% of their minimum credits required for graduation. The discretion of allocation of MOOCs courses equivalent to the courses in the curriculum lies with the office of the Dean Academics.

A student may also be permitted to obtain 20 credits through MOOCs in addition to the minimum credits required for graduation. These 20 credits can also be utilized to acquire a Minor degree or a Honors degree if the courses are pronounced equivalent to those specified for the respective degrees by the office of the Dean Academics. These additional credits through MOOCs if to be considered for CGPA/Minor/Honors degree must be approved by Dean Academics prior to enrollment in the respective MOOCs.

Students acquiring additional credits for Honors/Minor degree must adhere to the rules governing the award of the respective degree, otherwise, a student applying for registering into additional credits through MOOCs must possess a minimum CGPA of 7.5 till that semester.

7.3 COURSE CREDIT

A credit is a unit that gives weight to the value, level or time requirements of an academic course. The number of 'Contact Hours' in a week of a particular course determines its credit value. One credit is equivalent to one lecture hour per week or one tutorial hour per week or two hours per week of practical/ field work or four hours per week of skilling during a semester.

7.4 PROMOTION POLICY

A student shall be eligible for provisional promotion for registration of courses in the next semester subject to the following criterion:

A student is eligible for provisional promotion to next semester if he/she must have secured at least

- A student should earn a minimum of 25 credits to register for third semester.
- A student should earn a minimum of 60 credits to register for V semester
- A student should earn a minimum of 120 credits to register for VII semester

7.5 RE-EVALUATION

Students desirous of seeing their Semester-End Examination answer scripts have to apply online to the COE for the same within the timeframe as declared by the COE by paying the prescribed fee. Student applications must be forwarded by the Head of the Department and the Principal of the School and then re-evaluation fees are to be paid. The application along with the attached fee receipt must be submitted to the office of the COE.

There is no provision for re-evaluation in case of Lab/Practical/skilling exams, student project, viva-voce exam or seminar/design/mini-project courses.

The final grades awarded to each course shall be announced by the COE and the same will be made available to students through the website/notice boards.

7.6 ACADEMIC COUNSELING BOARD (ACB)

Academic Counseling Board is constituted by the Dean Academics, for each program separately. This board shall comprise of the Chairman, Board of Studies, of the relevant program, two (2) Professors and two (2) Associate Professors.

A student will be put under Academic Counseling Board in the following circumstances:

- Has CGPA of less than 6.00.
- Has ‘F’ grade in at least 3 courses.

The students under Academic Counseling Board may not be allowed to register for all regular courses in the semester, based on the recommendation of Academic

Counseling Board and decision of Dean Academics.

7.7 BACKLOG COURSES

A course is considered to be a backlog if the student has obtained 'F' grade in the course.

7.8 RUSTICATION

A student may be rusticated from the KLEF on disciplinary grounds, based on the recommendations of any empowered committee, by the Vice Chancellor.

7.9 AWARD OF MEDALS

KLEF awards Gold and silver medals to the top two (2) students based on CGPA. However,

a. the grade obtained by betterment, will not be considered for this award.
b. s/he must have obtained first class with distinction for the award of Gold or Silver medal.

7.10 ACADEMIC CIRCLE MEETING

Two Academic Circle Meetings (ACM) are conducted in every semester. After the conduct of the Sem-In Examination – 1 there shall be a ACM meeting. And after the Sem-In Examination – 2 also a meeting with each batch of students is conducted and feedback on teaching quality is collected directly from the students. The purpose of this meeting is to review course progress on an ongoing process. Students can provide feedback on every course and faculty. Students can comment on the syllabus coverage, materials availability, teaching quality, balance between numerical and theory explanation, other relevant suggestions to improve the teaching/learning process.

CHAPTER 8
LIBRARY

The Central Library has materials relevant to the Engineering, Science & Humanities courses offered by KLEF. The library system contains more than one lakh and fifty thousand books and periodicals on all subjects related to the teaching and research interests of KLEF staff and students. The library has over 15,000 electronic journal titles, academic databases and 5000 eBooks. Access is available on campus on student computers and remotely.

The library renders following services.

- Circulation
- Inter-library loan
- Reprography
- Reference
- Digital content
- OPAC
- WEB OPAC
- Study & Discussion rooms

Working Hours	: Week Days	: 7 a.m. – 10 p.m.
	: Holidays	: 9 a.m. – 5 p.m.
	: Circulation	: 7 a.m. – 6 p.m.
	: Reprography	: 9 a.m. – 6 p.m.

CHAPTER 9
STUDENT COUNSELLING

Guidelines for effective counselling for students on academic and non-academic activities Student counselling ensures that every student gets to know the academic structure of the University and utilize maximum opportunities that the institute offers to fulfil their career and personal life goals. The objective of "Student Counselling / Mentoring Service" is to provide friendly support to the students for their well-being during their stay in the campus and for their personal and professional development by 3600. Student counselling promotes the development of students in the following aspects:

Academic: It disseminates information about different academic programs of the Institute and provides efficient time management and learning skills. It also addresses academic issues of students, e. g. inadequate academic performance, fall of attendance, lack of basic IT skills and language skills of students, particularly from non-English background. Besides, counselling helps students to take proper direction as they leave the campus, viz. higher education in a specialized field (both in India and abroad), job (different types of career options), entrepreneurship, etc.

Co-Curricular & Extra-Curricular: It strives to develop talents in students and encourages them to discover their extra-curricular interests/hobbies, viz. sports, fine-arts, etc.

Personal: It provides a cushion against homesickness and assists in adjusting to the new environment by providing personalized guidance. The following Orientation/training programs could be organized:

a. Counselling for Academic Excellence - Closely monitoring the Academic Progress of the students
b. Orientation Program for new students to acquaint them with the Institute
c. Awareness on Anti-ragging, gender sensitization, etc.
d. Stress and time management
e. Health care and hygiene
f. Career counselling
g. Motivational lectures by eminent speakers.

Counselling service is taken up by a Faculty Member @ 1:15 (Or 1:20) ratio (faculty: students) and ably supported by other Faculty Members, staff and senior students.

Every student should approach his/her mentor only, for any of his/ her requirements. One slot of 50 minutes duration per week is provided in the time-table for counselling.

Annexure - A

K L Deemed to be University

Department of XXXX

Course Handout Template for Y18 Admitted Batches

A.Y.20XX-XX, ODD/EVEN Semester

Course Title :

Course Code :

L-T-P-S Structure :

Credits :

Pre-requisite :

Course Coordinator :

Team of Instructors :

Teaching Associates :

Course Objective:

Course Rationale:

COURSE OUTCOMES (COs):

CO No	Course Outcome (CO)	PO/PSO	Blooms Taxonomy Level (BTL)
CO1		PO2	2
CO2		PO3, PO4	4
CO3		PO3, PO5	5
CO4		PSO1	5
CO5 (Only for lab components)		PO6	3

COURSE OUTCOME INDICATORS (COIs):

Course Outcome No.	Highest BTL	COI-1 (BTL1)	COI-2 (BTL2)	COI-3 (BTL3)	COI-4 (BTL4)	COI-5 (BTL5)	COI-6 (BTL3)
CO 1							
CO 2							
CO 3							
CO 4							
CO5							

PROGRAM OUTCOMES & PROGRAM SPECIFIC OUTCOMES (POs/PSOs)

SYLLABUS:
TEXT BOOKS:

REFERENCE BOOKS:

WEB REFERNCES/MOOCS:

COURSE DELIVERY PLAN:

Sess. No.	CO	COI	Topic (s)	Book No[CH No][Page No]	Teaching-Learning Methods	Evaluation Components
				R BOOK [1], CH 1.1-1.5, Page no 3-13		
				T BOOK [1], CH 4.2-4.5, Page no 123-133		
				W REF [1], Topic name.		

SESSION WISE TEACHING – LEARNING PLAN

SESSION NUMBER: 01
Session Outcome: 1.
2.
3.

Time (min)	Topic	TL	Teaching - Learning Methods	Active Learning Methods
10				
10				
10				
10				
5				
minutes Total Contact Session + 5 minutes for Attendance and Transition activities = 50 Minutes				

SESSION NUMBER: 02
Session Outcome: 1.
2.
3.

me (min)	Topic	BTL	Teaching - Learning Methods	Active Learning Methods
20				
10				
5				
minutes Total Contact Session + 5 minutes for Attendance and Transition activities = 50 Minutes				

⋮

SESSION NUMBER: 52

Session Outcome: 1.
2.

ne (min)	Topic	BTL	Teaching - Learning Methods	Active Learning Methods
10	Recap of the previous class			
10				
10				
10				
5	Summary & Conclusions			
minutes Total Contact Session + 5 minutes for Attendance and Transition activities = 50 Minutes				

PRACTICAL COMPONENT

List of Experiments supposed to finish in Open Lab Sessions:

Lab session no	List of Experiments	CO-Mapping
1	Weekly Experiment/Exercise - I	CO1
2	Develop a set of programs to implement below sorting techniques and analyse its time complexities a. Insertion Sort b. Shell sort c. Selection Sort	CO1
3		CO5
4		CO2
5		CO2
6		CO5
7		CO3
8		CO3
9		CO5
10		CO4
11		CO4
12		CO5
13		CO5

List of Projects:

Project no	Project Title	CO-Mapping
1	Weekly Experiment/Exercise - I	CO5

LIST OF TUTORIALS:

Tutorial session no	Topics	CO-Mapping

WEEKLY HOMEWORK ASSIGNMENTS/ PROBLEM SETS/OPEN ENDEDED PROBLEM-SOLVING EXERCISES etc.

Week	Assignment	Topic	Details	CO
2	A01	Orthographic Projections	Flat surfaces, Curved Surfaces, Complex Solid Models	CO1

4				
6				

COURSE TIME TABLE

Course Conduct

Theory Lecture	6 Sections | 72 Students each | Class Room | Course Coordinator	3 Lectures per week
Practical	6 Sections | 72 Students each | 3 Batches | 3 Instructors | 77 Computers	1 P per week | each 2 hrs. 70 minutes Experiment | 30 minutes Evaluation for 25 students per instructor

	Hour	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Day	**Component**	**9:00-9:50**	**9:50-10:40**	**11:00-11:50**	**11:50-12:40**	**12:40-1:30**	**1:30-2:20**	**2:20-3:10**	**3:20-4:10**	**4:10-5:00**
Mon	Theory	S1, S11								
	Lab	S4, S13, S23								
Tue	Theory									
	Lab									
Wed	Theory									
	Lab									
Thu	Theory									
	Lab									
Fri	Theory									
	Lab									
Sat	Theory									
	Lab									

REMEDIAL CLASSES:

Supplement course handout, which may perhaps include special lectures and discussions that would be planned, and schedule notified accordingly.

SELF-LEARNING:

Assignments to promote self-learning, survey of contents from multiple sources.

S.No	**Topics**	**CO**	**ALM/Home Assignment**	**References/MOOCS**

DELIVERY DETAILS OF CONTENT BEYOND SYLLABUS:

Content beyond syllabus covered (if any) should be delivered to all students that would be planned, and schedule notified accordingly.

S.No	**Advanced Topics, Additional Reading, Research papers and any**	**CO**	**POs & PSOs**	**ALM**	**References/MOOCS**

EVALUATION PLAN:

Evaluation Type	Evaluation Component	Weightage/Marks		Assessment Dates	Duration (Hours)	CO1	CO2	CO3	CO4	CO5
Blooms Taxonomy Level										
In-Semester Summative Evaluation Total = 0 %	**Sem-In Exam-I**	Weightage	10	Test 1 Dates	2	4.2	4.2			1.6
		Max Marks	50M			21	21			8
	Sem-In Exam -II	Weightage		Test 2 Dates	2					
		Max Marks	50M					21	21	8
	Surprise Quiz	Weightage			20 Min					
		Max Marks	40M			10	10	10	10	
	Lab Sem-In Exam	Weightage		Lab Sem-In Exam Dates	1 ½					
		Max Marks	40M							40
Formative Evaluation Total = 0 %	**Tutorial**	Weightage		Continuous Evaluation						
		Max Marks	100M			25	25	25	25	
	ALMs	Weightage		Continuous Evaluation						
		Max Marks	120M			30	30	30	30	
	Home Assignment + Textbook	Weightage		Continuous Evaluation						
		Max Marks	40M			10	10	10	10	10
	Lab Continuous Evaluation	Weightage		Continuous evaluation						
		Max Marks	100M							100
	Project/Skill	Weightage		Continuous evaluation						
		Max Marks	100M			25	25	25	25	
	Attendance	Weightage		Continuous evaluation						
		Max Marks	5M							
End-Semester Summative Evaluation Total = 0 %	**SE Lab Expt.**	Weightage		Lab External	1 ½					
		Max Marks	40M	Dates						25
	SE Lab Proj.	Weightage		Lab External	1 ½					
		Max Marks	40M	Dates						25
	Semester End Exam	Weightage		**End Sem Exam Dates**	**3 hrs**					
		Max Marks	100M			25	25	25	25	

EVALUATION COMPONENTS (WEIGHTAGES) OF INTERNAL & EXTERNAL MARKS

<table>
<tr><th colspan="2" rowspan="2">Type of the Course</th><th colspan="3">INTERNAL 60%</th><th colspan="4">EXTERNAL 40%</th></tr>
<tr><th colspan="2">Components</th><th>Weightage</th><th colspan="2">Components</th><th>Weightage</th></tr>
<tr><td colspan="2" rowspan="6">Purely Laboratory Based Course</td><td colspan="2">Semester in Exam-I</td><td>10</td><td rowspan="3">Exam</td><td>Viva</td><td>7</td></tr>
<tr><td colspan="2">Semester in Exam-II</td><td>10</td><td>Exercise</td><td>20</td></tr>
<tr><td colspan="2" rowspan="2">Lab Weekly exercise</td><td rowspan="2">15</td><td>Report</td><td>5</td></tr>
<tr><td colspan="2">External Review</td><td>8</td></tr>
<tr><td colspan="2" rowspan="2">Mini /Capstone Project</td><td rowspan="2">20</td><td colspan="3">Plus</td></tr>
<tr><td rowspan="2">Paper publication</td><td>National</td><td>4</td></tr>
<tr><td colspan="2">Attendance</td><td>5</td><td colspan="2">or
International</td><td>6</td></tr>
<tr><td colspan="2" rowspan="6">Purely Theory Based Course</td><td colspan="2">Semester in Exam-I</td><td>17.5</td><td colspan="3" rowspan="6">End Semester Exam</td><td rowspan="6">40</td></tr>
<tr><td colspan="2">Semester in Exam-II</td><td>17.5</td></tr>
<tr><td colspan="2">ALMs</td><td>10</td></tr>
<tr><td colspan="2">Surprise Quiz (min 2) (online)</td><td>3</td></tr>
<tr><td colspan="2">Home Assignment and Textbook. (Min. 5 Assignments etc.)</td><td>5+2</td></tr>
<tr><td colspan="2">Attendance</td><td>5</td></tr>
<tr><td rowspan="6">Theory Course Embedded with Laboratory</td><td rowspan="2">Lab Part</td><td colspan="2">In Semester Exam</td><td>8</td><td rowspan="2">Exam</td><td>Viva</td><td>4</td></tr>
<tr><td colspan="2">Lab Weekly exercise</td><td>14</td><td rowspan="2">Exercise</td><td rowspan="2">12</td></tr>
<tr><td rowspan="4">Theory Part</td><td colspan="2">Semester in Exam-I</td><td>10</td><td colspan="3" rowspan="4">End Semester Exam</td><td rowspan="4">24</td></tr>
<tr><td colspan="2">Semester in Exam-II</td><td>10</td></tr>
<tr><td colspan="2">ALM (LTC, in-class Quiz, etc.)</td><td>8</td></tr>
<tr><td colspan="2">Home Assignment and Textbook. (Min. 3 Assignments etc.)</td><td>3+2</td></tr>
<tr><td>Both</td><td colspan="2">Attendance</td><td>5</td></tr>
<tr><td colspan="2" rowspan="5">Skill based course (8hrs / week)</td><td colspan="2">Semester in Exam-I</td><td>10</td><td colspan="3">Review for Project</td><td>15</td></tr>
<tr><td colspan="2">Semester in Exam-II</td><td>10</td><td colspan="3">Report</td><td>10</td></tr>
<tr><td rowspan="3">Continuous Evaluation</td><td>Lab Exercise</td><td rowspan="2">25</td><td colspan="3">Presentation</td><td>5</td></tr>
<tr><td></td><td colspan="3">Exercise</td><td>5</td></tr>
<tr><td>Project</td><td>10</td><td colspan="3">Questions &Answers</td><td>5</td></tr>
<tr><td colspan="2">Attendance</td><td>5</td></tr>
<tr><td colspan="2" rowspan="4">Technical Proficiency Course</td><td colspan="2">Semester in Exam-I</td><td>10</td><td colspan="3" rowspan="2">End Semester Exam (online MCQ)</td><td rowspan="2">30</td></tr>
<tr><td colspan="2">Semester in Exam-II</td><td>10</td></tr>
<tr><td colspan="2">Continuous(weekly) Test (40 MCQ)</td><td>35</td><td colspan="3">Viva</td><td>10</td></tr>
<tr><td colspan="2">Attendance</td><td>5</td></tr>
</table>

ATTENDANCE POLICY

Every student is expected to be responsible for regularity of his/her attendance in class rooms and laboratories, to appear in scheduled tests and examinations and fulfill all other tasks assigned to him/her in every course. For Promotion, a Minimum of 50% of internal marks must be obtained. In every course, student has to maintain a minimum of 85% attendance to be eligible for appearing in Semester end examination of the course, for cases of medical issues and other unavoidable circumstances the students will be condoned if their attendance is between 75% to 85% in every course, subjected to submission of medical certificates, medical case file and other needful documental proof to the concerned departments.

DETENTION POLICY

In any course, a student has to maintain a minimum of 85% attendance and must secure a minimum of 50% marks in In-Semester Examinations to be eligible for appearing to the Semester End Examination, failing to

fulfill these conditions will deem such student to have been detained in that course.

PLAGIARISM POLICY

Use of unfair means in any of the evaluation components will be dealt with strictly, and the case will be reported to the examination committee.

COURSE TEAM MEMBERS, CHAMBER CONSULTATION HOURS AND CHAMBER VENUE DETAILS:

Each instructor will specify his / her chamber consultation hours during which the student can contact him / her in his / her chamber for consultation.

S.No.	Name of Faculty	Chamber Consultation Day (s)	Chamber Consultation Timings for each day	Chamber Consultation Room No:	Signature of Course faculty
1					
2					
3					
4					
5					

GENERAL INSTRUCTIONS

Students should come prepared for classes and carry the text book(s) or material(s) as prescribed by the Course Faculty to the class.

NOTICES

Most of the notices are available on the LMS platform.
All notices will be communicated through the institution email.
All notices concerning the course will be displayed on the respective Notice Boards.

Signature of COURSE COORDINATOR:

Signature of Department Prof. Incharge Academics & Vetting Team Member:

HEAD OF DEPARTMENT:

Approval from: DEAN-ACADEMICS
(Sign with Office Seal)

Annexure - B

K L Deemed to be University

Department of XXXX

Supplement to Course Handout for Remedial Classes (Slow Learners)

A.Y.20XX-XX, ODD/EVEN Semester

Course Title :

Course Code :

L-T-P-S Structure :

Credits :

Team of Instructors :

COURSE OUTCOMES (COs):

CO No.	CO Description	BTL
CO1		2
CO2		4
CO5		3

REQUIRED/SUPPLEMENTAL MATERIALS:

Lecture notes and additional material related to CO1 and CO2 will be shared by the faculty to the students. Students may access this opportunity to ensure thorough understanding of the concepts.

REMEDIAL CLASSES DELIVERY PLAN:

Sess. No.	CO	COI	Topic (s)	Teaching-Learning Methods	Assessment Components (ALMs)
1					
2					
3					
4					
5					
6					
7	CO5		Lab components that require special attention for slow learners	Hands-on	Similar to Lab Continuous evaluation

REMEDIAL CLASSES TIME TABLE

	1	2	3	4	5	6	7	8	9
Dates	**9:00-9:50**	**9:50-10:40**	**11:00-11:50**	**11:50-12:40**	**12:40-1:30**	**1:30-2:20**	**2:20-3:10**	**3:20-4:10**	**4:10-5:00**
	RS1(Room No), RS11								
	RS2								

RS1, RS2 ..etc are new sections formed exclusively for remedial classes.

SUGGESTED REMEDIAL CLASSES ASSESSMENT PLAN TO ANALYSE STUDENT PERFORMANCE:

Remedial Formative Assessment is done for a total weightage of 50M and the Summative evaluation is done for a total weightage of 50M.

Assessment Component	**Weightage/Marks**		**Assessment Dates**	**Duration (Hours)**	**CO1**	**CO2**	**CO5**
ALMs & Quizzes	Weightage	35	Continuous Evaluation		17.5	17.5	
	Max Marks	60M			30	30	
Home Assignment	Weightage	15	Continuous Evaluation		7.5	7.5	
	Max Marks	40M			20	20	
Remedial Test	Max Marks	50M	Summative Evaluation for X-X-X-X courses		20	20	10
			Summative Evaluation for X-X-0-0 courses		25	25	0

REMEDIAL CLASSES ATTENDANCE POLICY

In any course, for remedial classes, a student must maintain a minimum of 85% attendance to be eligible for appearing in Remedial Test.

$$Updated\ SemIn\ Exam\ 1\ Marks = \lceil (0.25 \times (Marks\ Obtained\ in\ SemIn\ Exam\ 1) + 0.75 \times (Marks\ obtained\ in\ Remedial\ Test)) \rceil$$

METHODS OF CONTACTING INSTRUCTOR:

Sl No	**Faculty Name**	**Email Address**	**In-Person Contact**	
			Contact Room No.	**Consultancy Hours**

SIGNATURE OF COURSE COORDINATOR **HEAD OF DEPARTMENT**

CHAPTER 10																		
2018-19 COURSE STRUCTURE																		
B TECH										**Credits**								
SNO	**COURSE CODE**	**COURSE NAME**	**L**	**T**	**P**	**S**	**Cr**	**Pre requisites**	**OFFERED TO**	**BT**	**CE**	**CSE**	**ECE**	**ECM**	**EEE**	**ME**
HUMANITIES & SOCIAL SCIENCES																		
1	18UC1101	Basic English	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
2	18UC1202	English Proficiency	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
3	18UC2103	Professional Communication Skills	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
4	18UC2204	Aptitude Builder -1	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
5	18UC3105	Aptitude Builder -2	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
6	18UC3206	Campus to Corporate	0	0	4	0	2	NIL	BT, CSE, ECE, ECM, EEE	2		2	2	2	2	
7	18UC0007	Indian Heritage and Culture*	2	0	0	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0	0	0	0	0	0	0
8	18UC0008	Indian Constitution*	2	0	0	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0	0	0	0	0	0	0
9	18UC0009	Ecology & Environment*	2	0	0	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE,	0	0	0	0	0	0	0

									ME								
10	18UC0010	Universal Human Values & Professional Ethics*	2	0	0	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0	2	0	0	0	0	0
11	18UC0011	Entrepreneurship	2	0	0	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE	0	0	0	0	0	0	0
Total Credits										12	12	12	12	12	12	10
BASIC SCIENCES																
1	18SC1103	Single Variable Calculus and Matrix Algebra	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	3	3	3	3	3	3	3
2	18MT1201	Multivariate Calculus	3	0	2	0	4	NIL	CE, CSE, ECE, ECM, EEE, ME		4	4	4	4	4	4
3	18SC1105	Logic and Reasoning	0	0	2	0	1	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	1	1	1	1	1	1	1
4	18SC1104	Foundations of Computational Mathematics	0	0	2	0	1	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	1	1	1	1	1	1	1
5	18BT1001	Biology for Engineers	2	0	0	0	2	NIL	CE, CSE, ECE, ECM, EEE, ME		2	2	2	2	2	2
6	18MT2001	Basic Mathematics	3	0	0	0	3	NIL	BT	3						
7	18MT2011	Biostatistics	2	1	0	0	3	NIL	BT	3						
8	18MT2007	Transform & Discrete Mathematics	2	1	0	0	3	NIL	CE		3					
9	18PH1001	Physics for Civil Engineers	3	0	2	0	4	NIL	CE		4					
10	18CY1001	Engineering Chemistry	3	0	2	0	4	NIL	BT, CE, CSE, ECE, ECM, EEE	4	4	4	4	4	4	
11	18MT2101	Probability and Statistics	2	1	0	0	3	NIL	CSE			3				
12	18PH1010	Physics Elective (Mechanics)	3	0	2	0	4	NIL	ME							4
13	18CY1002	Solid State Chemistry	3	0	2	0	4	NIL	ME							4

14	18MT2102	Theory of Differential Equations in Engineering and Mechanics	2	0	2	0	3	NIL	ME							3
15	18PH2007	MATERIALS FOR MECHANICAL ENGINEERING APPLICATIONS	2	0	2	0	3	NIL	ME							3
SCIENCE ELECTIVE - 1																	
1	18PH1005	PHYSICS	3	0	2	0	4	NIL	CSE, ECE	4		4				
2	18PH1004	SOLID STATE PHYSICS	3	0	2	0	4	NIL	EEE,ECE,ECM				4	4	4	
SCIENCE ELECTIVE - 2																	
1	19CY1101	ENGINEERING CHEMISTRY	3	0	2	0	4	NIL	BT,EEE,CE,ECE, CSE,ECM							
2	19PH2007	MATERIALS FOR MECHANICAL ENGINEERING APPLICATIONS	2	0	2	0	3	NIL	ME,PE							
SCIENCE ELECTIVE - 3																	
1	19EE2205	CIRCUITS AND ELECTRONICS	3	0	2	0	4	NIL	ME,PE							
2	19EE2101	ELECTRICAL CIRCUITS	3	0	2	0	4	NIL	EEE							
Total Credits										19	22	22	19	19	19	25
ENGINEERING SCIENCES																
1	18SC1101	Problem Solving and Computer Programming	3	0	2	0	4	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	4	4	4	4	4	4	4
2	18SC1202	Data Structures	3	0	2	0	4	NIL	BT, CE, CSE, ECE, ECM, EEE	4	4	4	4	4	4	
3	18EC1002	Engineering Graphics & Design for Electronics and Computer Engineers	0	0	4	0	2	NIL	CSE, ECE, ECM, EEE			2	2	2	2	
4	18EE1003	Workshop Practice for Electrical and Electronics Engineers	0	0	4	0	2	NIL	ECE, EEE				2		2	

5	18CS2004	Object Oriented Programming	2	0	2	0	3	NIL	ECE, EEE				3		3	
6	18EC1101	Digital System Design	3	0	2	0	4	NIL	CSE, ECE, ECM			4	4	4		
7	18EC3110	ELECTRONIC WORKSHOP-II (ELECTRONIC SYSTEM DESIGN WORKSHOP)	1	0	2	2	2.5	NIL	ECE				2.5			
8	18EC2214	ELECTRONIC WORKSHOP-III (IOT APPLICATIONS)	1	0	0	4	2	19SC1101	ECE				2			
9	18EC2115	IT WORKSHOP-I (HTML,XML,WEB DESIGN)	1	0	2	0	2	NIL	ECE				2			
10	18EE2105	ELECTRICAL CIRCUIT THEORY	3	1	0	0	4	NIL	ECE				4			
11	18BT1002	Engineering Graphics&Design for Biotechnologists	0	0	4	0	2	NIL	BT	2						
12	18BT1003	Workshop Practices for Biotechnologists	0	0	4	0	2	NIL	BT	2						
13	18PH1001	Engineering Physics	3	0	2	0	4	NIL	BT	4						
14	18ES2101	Process Engineering Principles	2	1	0	0	3	NIL	BT	3						
15	18ES2103	Biochemical Thermodynamics	3	1	0	0	4	NIL	BT	4						
16	18ES2102	Transport processes in Biological systems	3	0	2	0	4	NIL	BT	4						
17	18CE1201	Engineering Mechanics	3	0	0	0	3	NIL	CE		3					
18	18ME1101	Engineering Graphics & Design	0	0	4	0	2	NIL	CE		2					
19	18ME1202	Workshop Practice	0	0	4	0	2	NIL	CE		2					
20	18CE2102	Solid Mechanics	3	0	2	0	4	18CE1201	CE		4					
21	18CE2103	Fluid Mechanics	3	0	2	0	4	NIL	CE		4					
22	18CE2205	Engineering Geology	3	0	2	0	4	NIL	CE		4					
23	18CE3105	AI & ML Applications in Civil Engineering	1	0	0	4	2	NIL	CE		2					
24	18SC2009R	Object Oriented Programming	3	0	2	6	5.5	18SC1101	CSE, ECM			5.5		5.5		

25	18SC2009O	Object Oriented Programming	2	0	4	6	5.5	18SC1101	CSE, ECM							
26	18 CS1003	Workshop Practice for Computer Engineers	0	0	4	0	2	NIL	CSE, ECM			2		2		
27	18SC2008	Discrete Mathematics	2	1	0	0	3	NIL	CSE, ECM			3		3		
28	18ES2204	Data Science	2	0	2	0	3	NIL	ECM					3		
29	18ME1201	Mechanics and Materials-I	3	0	2	0	4	18PH1010	ME							4
30	18ME1002	Engineering Graphics for Mechanical Engineers	0	0	4	0	2	NIL	ME							2
31	18ME1003	Workshop Practices for Mechanical Engineers	0	0	4	0	2	NIL	ME							2
32	18ME1204	Introduction to Computational Thinking and Data Sciences	2	0	2	0	3	NIL	ME							3
33	18ME2205	Numerical Computation for Mechanical Engineers	2	0	2	0	3	NIL	ME							3
34	18EE2205	Circuits and Electronics	3	0	2	0	4	NIL	ME							4
35	18EE1201	Network Theory	3	0	2	0	4	NIL	EEE						4	
36	18EE3201	Electrical Engineering Measurements	3	0	0	0	3	NIL	EEE						3	
37	18EE1202	Electromagnetic Fields	3	1	0	0	4	NIL	EEE						4	
38	18MT1004	Probability& Numerical Methods	2	1	0	0	3	NIL	EEE						3	
Total Credits										27	29	24.5	29.5	27.5	29	22
PROFESSIONAL CORE COURSES																
1	18BT2105	BIOCHEMISTRY	3	0	2	0	4	NIL	BT	4						
2	18BT2106	MICROBIOLOGY	3	0	2	0	4	NIL	BT	4						
3	18BT2107	BIOANALYTICAL TECHNIQUES	3	0	2	0	4	NIL	BT	4						
4	18BT2109	IMMUNOLOGY	3	0	2	0	4	NIL	BT	4						

5	18BT3110	BIOINFORMATICS	3	0	2	0	4	NIL	BT	4						
6	18BT3111	GENETIC ENGINEERING	3	0	2	0	4	NIL	BT	4						
7	18BT3112	FERMENTATION TECHNOLOGY	3	0	2	0	4	NIL	BT	4						
8	18BT3113	BIOCHEMICAL REACTION ENGINEERING	3	0	2	0	4	NIL	BT	4						
9	18BT3201	PLANT BIOTECHNOLOGY	3	0	2	0	4	NIL	BT	4						
10	18BT3202	DOWNSTREAM PROCESSING	3	0	2	0	4	NIL	BT	4						
11	18CE2104	Surveying	3	0	2	0	4	NIL	CE		4					
12	18CE2105	Construction Materials & Concrete Technology	3	0	2	0	4	NIL	CE		4					
13	18CE2201	Structural Analysis	3	1	0	0	4	NIL	CE		4					
14	18CE2202	Building Planning, Drawing & Construction Management	3	0	2	0	4	NIL	CE		4					
15	18CE2203	Hydraulics and Hydraulic Machines	3	0	2	0	4	NIL	CE		4					
16	18CE2204	Environmental Engineering	3	0	2	0	4	NIL	CE		4					
17	18CE3101	Design of Reinforced Concrete Structures	3	0	2	0	4	18CE2201	CE		4					
18	18CE3102	Water Resources Engineering	3	1	0	0	4	NIL	CE		4					
19	18CE3103	Transportation Engineering	3	0	2	0	4	NIL	CE		4					
20	18CE2206	Soil Mechanics	3	0	2	0	4	NIL	CE		4					
21	18CE3201	Quantity Surveying Estimation & Valuation	3	0	2	0	4	NIL	CE		4					
22	18CE3202	Advanced Structural Analysis	3	1	0	0	4	NIL	CE		4					
23	18CE3104	Foundation Engineering	3	0	2	0	4	NIL	CE		4					
24	18CE3203	Design of Steel Structures	3	1	0	0	4	18CE2201	CE		4					
25	18CE4101	Form Work	3	0	0	0	3	NIL	CE		3					
26	18CS2111R	Microprocessors	3	0	2	0	4	18EC1	CSE			4				

								202									
27	18CS2111O	Microprocessors	2	0	4	0	4	18EC1202	CSE								
28	18CS2102R	Operating Systems	3	0	2	2	4.5	18EC1202	CSE, ECM			4.5					
29	18CS2102A	Operating Systems	4	0	4	2	6.5	18EC1202	CSE, ECM								
30	18CS2103R	Software Engineering	2	1	0	0	3	NIL	CSE			3					
31	18CS2103A	Software Engineering	3	1	2	0	5	NIL	CSE								
32	18CS2204	Computer Networks and Security	3	0	2	0	4	NIL	CSE			4					
33	18CS2204A	Computer Networks and Security	4	2	0	0	6	NIL	CSE								
34	18CS2205	Database Management Systems	2	1	2	2	4.5	18SC1202	CSE			4.5					
35	18CS2205A	Database Management Systems							CSE								
36	18CS2206	Artificial Intelligence	2	0	2	4	4	18SC2008	CSE, ECM			4					
37	18CS2206A	Artificial Intelligence	3	0	4	0	5	18SC2008	CSE, ECM								
38	18CS2207	ANALYSIS & DESIGN OF ALGORITHMS	3	0	2	0	4	18SC1202	CSE			4					
39	18CS2207S	ANALYSIS & DESIGN OF ALGORITHMS	3	0	2	4	5	18SC1202	CSE								
40	18CS2207A	ANALYSIS & DESIGN OF ALGORITHMS(ADVANCED)	4	0	4	4	7	18SC1202	CSE								
41	18CS2207P	ANALYSIS & DESIGN OF ALGORITHMS(PEER MENTOR)	4	0	4	4	7	18SC1202	CSE								
42	18CS3108	Automata Theory & Compiler Design	3	1	0	0	4	18SC2008	CSE			4					
43	18CS3108A	Automata Theory & Compiler Design	4	1	2	0	6	18SC2008	CSE								
44	18CS3108P	Automata Theory & Compiler	4	1	2	0	6	18SC2	CSE								

		Design						008									
45	18CS3109	DISTRIBUTED COMPUTING	3	0	2	0	4	18CS2102R	CSE			4				
46	18CS3109A	DISTRIBUTED COMPUTING(ADVANCED)	4	0	4	0	6	18CS2102R	CSE							
47	18CS3109P	DISTRIBUTED COMPUTING(PEER MENTOR)	4	0	4	0	6	18CS2102R	CSE							
48	18CS3210	Entreprise Programming	2	0	2	4	4	18SC2009R	CSE			4				
49	18CS3210A	Entreprise Programming	4	0	4	4	7	18SC2009R	CSE							
50	18EC1202	COMPUTER ORGANIZATION & ARCHITECTURE	3	0	0	0	3	NIL	CSE, ECE, ECM			3	3	3		
51	18CS3211R	DATA SCIENCE	2	0	2	4	4	NIL	CSE			3				
52	18CS3211A	DATA SCIENCE	3	0	4	4	6	NIL	CSE							
53	18EC1101	Digital System Design	3	0	2	0	4	NIL	EEE						4	
54	18EC2103	ANALOG ELECTRONIC CIRCUIT DESIGN	3	0	2	0	4	NIL	ECE, ECM,EEE				4	4	4	
55	18EC2104	COMMUNICATION SIGNALS & SYSTEM DESIGN	3	1	0	0	4	NIL	ECE				4			
56	18EC2205	EMBEDDED CONTROLLERS	2	0	3	2	4	NIL	ECE, ECM, EEE				4	4	4	
57	18EC2206	ANALOG AND DIGITAL COMMUNICATION	3	0	3	0	4.5	NIL	ECE				4.5			
58	18EC2207	DIGITAL SIGNAL PROCESSING	3	0	2	0	4	NIL	ECE				4			
59	18EC3109	DATA NETWORKS AND PROTOCOLS	3	0	2	0	4	NIL	ECE, ECM				4	4		
60	18EC2112	ELECTROMAGNETIC FIELDS & APPLICATIONS	3	1	0	0	4	NIL	ECE				4			
61	18EC2213	STATISTICS, AI, ANN-Basic Course	3	0	0	2	3.5	NIL	ECE				3.5			
62	18CS2102	Operating Systems	3	0	2	2	4.5	NIL	ECM					4.		

															5		
63	18EM2101	Processors and Controllers	3	0	2	0	4	NIL	ECM					4		
64	18CS2103	Software Engineering	2	1	0	0	3	NIL	ECM					3		
65	18CS2205	Database Management Systems	2	1	2	2	4.5	NIL	ECM					4.5		
66	18EM2201	Web application Development	2	0	2	2	3.5	NIL	ECM					3.5		
67	18EC2208	VLSI Design	2	0	3	2	4	NIL	ECM					4		
68	18EM3201	Signal Processing	2	1	2	0	4	NIL	ECM,EEE					4	4	
69	18ME2106	Measurements and Instrumentation	2	0	2	0	3	NIL	ME							3
70	18ME2107	Thermal-Fluids Engineering-I	3	0	2	0	4	NIL	ME							4
71	18ME2108	Mechanics and Materials-II	3	0	2	0	4	18ME 1201	ME							4
72	18ME2109	Kinematics and Dynamics of Machines	3	0	2	0	4	NIL	ME							4
73	18ME2110	Machine Drawing	0	0	4	0	2	18ME 1002	ME							2
74	18ME2211	Design and Manufacturing-I	3	0	2	0	4	18ME 1201	ME							4
75	18ME2212	Thermal-Fluids Engineering-II	2	0	2	0	3	18ME 2107	ME							3
76	18ME2213	Vibrations and Controls	3	0	0	0	3	18ME 2109	ME							3
77	18ME3114	Machine Design	3	2	0	0	5	18ME 2108	ME							5
78	18ME3115	Design and Manufacturing-II	2	0	2	0	3	18ME 2211	ME							3
79	18ME3116	Robotics and Controls	3	0	0	0	3	NIL	ME							3
80	18ME3117	Product Design and Development	0	0	0	12	3	NIL	ME							3
81	18ME3218	Engineering Management	3	0	0	0	3	NIL	ME							3
82	18ME3219	Heat Transfer	3	0	2	0	4	18ME	ME							4

								2107									
83	18EE2101	Electrical Circuits	3	1	0	0	4	18EE1201	EEE						4		
84	18EE2102	DC Machines and Transformers	3	0	2	0	4	NIL	EEE						4		
85	18EE2103	Electrical Power Generation, Transmission & Distribution	3	1	0	0	4	NIL	EEE						4		
86	18EE2201	AC Rotating Machines	3	0	2	0	4	18EE2102	EEE						4		
87	18EE2202	Control Systems	3	0	2	0	4	NIL	EEE						4		
88	18EE2203	Power System Analysis & Stability	3	1	0	0	4	18EE2103	EEE						4		
89	18EE3101	Power Electronics	3	0	2	0	4	18EE2101	EEE						4		
90	18EE3102	Power System Protection & Control	3	0	2	0	4	18EE2203	EEE						4		
Total Credits										40	59	46	35	42.5	48	48	
SKILLING COURSES																	
1	18SC1106	Technical Skill - 1 (Coding)	0	0	0	6	1.5	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
2	18SC1207	Technical Skill - 2 (Coding)	0	0	0	6	1.5	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
3	18TS1001	Skilling for Engineers-1(Medical Lab Technology)	0	0	0	8	2	NIL	BT	2							
4	18TS1002	Skilling for Engineers-2 (Process Engineering Tools)	0	0	0	8	2	NIL	BT	2							
5	18BT3150	Technical Proficiency & Training -1 (Genomics)	1	0	0	0	1	NIL	BT	1							
6	18TS1003	Skilling for Engineers-3 (Animal Cell Culture)	0	0	0	8	2	NIL	BT	2							
7	18BT3250	Technical Proficiency & Training-	1	0	0	0	1	NIL	BT	1							

		2 (Bioprocessing)															
8	18TS1004	Skilling for Engineers-4 (Advanced Instrumentation)	0	0	0	8	2	NIL	BT	2						
9	18TS2101	Field Survey	0	0	0	4	1	NIL	CE		1					
10	18TS2102	Practical Approaches in Building Planning & Construction	0	0	0	4	1	NIL	CE		1					
11	18TS2103	Exploration of Structural Elements	0	0	0	4	1	NIL	CE		1					
12	18TS2104	Road Safety Audit	0	0	0	4	1	NIL	CE		1					
13	18TP3101	Technical Proficiency & Training -1	0	0	0	4	1	NIL	CE		1					
14	18TP3202	Technical Proficiency & Training -2	0	0	0	4	1	NIL	CE		1					
15	18TS305	Technical Proficiency & Training -1	0	0	0	4	1	NIL	CSE			1				
16	18TS306	Technical Proficiency & Training -2	0	0	0	4	1	NIL	CSE			1				
17	18TS307	Technical Skilling (PFSD + Comp.Coding)	0	0	0	4	1	NIL	CSE			1				
18	18TS307P	Technical Skilling (PFSD + Comp.Coding)	0	0	0	12	3	NIL	CSE							
19	18TS401	SKILLING FOR ENGINEERS-1 (IT CODING/HARDWARE CODING)	0	0	0	6	1.5	NIL	ECE				1.5			
20	18TS402	SKILLING FOR ENGINEERS-2 (IT CODING/TECHNICAL SKILLING)	0	0	0	6	1.5	NIL	ECE				1.5			
21	18TS403	SKILLING FOR ENGINEERS-3 (IT CODING/TECHNICAL SKILLING)	0	0	0	4	1	NIL	ECE				1			
22	18TS404	SKILLING FOR ENGINEERS-4 (IT CODING/TECHNICAL SKILLING)	0	0	0	4	1	NIL	ECE				1			

23	18TS405	Technical Proficiency & Training -1	0	0	0	4	1	NIL	ECE				1			
24	18TS406	Technical Proficiency & Training -2	0	0	0	4	1	NIL	ECE				1			
25	18TS601	Technical Skill - 3	0	0	0	8	2	NIL	EEE						2	
26	18TS602	Technical Skill - 4	0	0	0	8	2	NIL	EEE						2	
27	18TS605	Technical Proficiency & Training-1	0	0	0	4	1	NIL	ECM						1	
28	18TS502	Technical Proficiency & Training-2	0	0	0	4	1	NIL	ECM					1		
29	18T506	Skilling for Engineers-5(IOT PROGRAMING USING PYTHON0	0	0	0	4	1	NIL	ECM					1		
30	18TS606	Technical Proficiency & Training-2	0	0	4	0	2	NIL	EEE						2	
31	18TS702	Skilling for Engineers-2 (Artificial Intelligence)	0	0	0	6	1.5	NIL	ME							1.5
32	18TS703	Skilling for Engineers-3 (Problem Solving techniques in Thermal)	0	0	0	6	1.5	NIL	ME							1.5
33	18TS704	Skilling for Engineers-4 (Problem Solving techniques in Design)	0	0	0	6	1.5	NIL	ME							1.5
34	18TS705	Technical Proficiency & Training-1(Data Analytics)	0	0	0	4	1	NIL	ME							1
35	18TS706	Technical Proficiency & Training -2(Machine Learning)	0	0	0	4	1	NIL	ME							1
Total Credits										13	9	6	10	5	10	9.5
TERM PAPER & PROJECT																
1	18IE2246	INDUSTRIAL TRAINING	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
2	18IE3247	TERM PAPER	0	0	4	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE,	2	2	2	2	2	2	2

									ME								
3	18IE4048	PROJECT (PART I)	0	0	0	24	6	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	6	6	6	6	6	6	6
4	18IE4049	PROJECT (PART II)	0	0	0	24	6	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
5	18IE4050	PRACTICE SCHOOL	0	0	0	24	6	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
6	18IE4051	SUMMER INTERNSHIP	0	0	0	24	6	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	6	6	6	6	6	6	6
7	18PR3080	MID-GRADE CAPSTONE PROJECT	0	0	4	0	2	NIL	CSE, ECM			2		2		
Total Credits										16	16	18	16	18	16	16
FLEXI-CORE																
1	FC-1	FLEXI-CORE-1					4		BT, ECE, ECM	4			4	4		
2	FC-2	FLEXI-CORE-2					4		BT, ECE, ECM	4			4	4		
3	FC-3	FLEXI-CORE-3					4		ECE	4			4			
Total Credits										12	0	0	12	8	0	0
OPEN ELECTIVES																
1	OE-1	OPEN ELECTIVE-1	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	3	3	3	3	3	3	3
2	OE-2	OPEN ELECTIVE-2	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	3	3	3	3	3	3	3
3	OE-3	OPEN ELECTIVE-3	3	0	0	0	3	NIL	ECE, ME,CSE			3	3			3
4	OE-4	MANAGEMENT ELECTIVE	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE,	3	3	3	3	3	3	3

									ME								
5	OE-5	FOREIGN LANGAUGE ELECTIVE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	2	2	2	2	2	2	2
Total Credits										11	11	14	14	11	11	14
PROFESSIONAL ELECTIVES																
1	PE-1	PROFESSIONAL ELECTIVE-1					3		BT, CE, CSE, ECM, EEE, ME	3	3	3		3	3	3
2	PE-1	PROFESSIONAL ELECTIVE-1					3.5		ECE				3.5			
3	PE-2	PROFESSIONAL ELECTIVE-2					3		BT, CE, CSE, ECE, ECM, EEE, ME	3	3	3	3	3	3	3
4	PE-3	PROFESSIONAL ELECTIVE-3					3		BT, CE, CSE, ECE, ECM, EEE, ME	3	3	4	3	3	3	3
5	PE-4	PROFESSIONAL ELECTIVE-4					3		BT, CE, CSE, ECE, ECM, EEE, ME	3	3	3	3	3	3	3
6	PE-5	PROFESSIONAL ELECTIVE-5					3		BT, CE, CSE, ECE, ECM, EEE, ME	3	3	3	3	3	3	3
7	PE-6	PROFESSIONAL ELECTIVE-6					3		CE, ECE, CSE, ECM, ME			3	3	3		3
Total Credits										15	15	19	18.5	18	15	18
COUNSELLING & CO CIRCULAR ACTIVITY																
1	18GN1101	Counseling -1	0	0	1	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0	0	0	0	0	0	0
2	18GN1202	Counseling -2	0	0	1	0	0	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0	0	0	0	0	0	0
3	18GN2103	Counseling -3	0	0	1	0	0	NIL	BT, CE, CSE,	0	0	0	0	0	0	0

									ECE, ECM, EEE, ME								
4	18GN1107	Cocurricular Activity -1	0	0	0	2	0.5	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0.5	0.5	0.5	0.5	0.5	0.5	0.5
5	18GN1208	Cocurricular Activity -2	0	0	0	2	0.5	NIL	BT, CE, CSE, ECE, ECM, EEE, ME	0.5	0.5	0.5	0.5	0.5	0.5	0.5
9	18GN2109	Cocurricular Activity -3	0	0	0	2	0	NIL	BT, CE, CSE, ECM, EEE, ME	0	0	0		0	0	0
Total Credits										1	1	1	1	1	1	1
Grand Total Credits										**166**	**174**	**162.5**	**167**	**162**	**161**	**163.5**
FLEXI CORE																	
1	18BT1201	CELL BIOLOGY	4	0	0	0	4	NIL	BT	4						
2	18BT2108	MOLECULAR BIOLOGY	4	0	0	0	4	NIL	BT	4						
3	18BT3251	MOLECULAR GENETICS	4	0	0	0	4	NIL	BT	4						
4	18BT4159	APPLIED BIOINFORMATICS	4	0	0	0	4	NIL	BT	4						
5	18BT3255	MICROBIAL TECHNOLOGY	3	0	0	0	3	NIL	BT	3						
6	18BT3264	HEALTHCARE BIOTECHNOLOGY	3	0	0	0	3	NIL	BT	3						
7	18EC2208	VLSI DESIGN	3	0	2	0	4	NIL	ECE, ECM				4	4		
8	18EC4111	WIRELESS COMMUNICATIONS	3	0	2	0	4	NIL	ECE, ECM				4	4		
9	18EC3016	RF SYSTEM DESIGN	3	0	2	0	4	NIL	ECE				4			
10	18EC3017	BIOMEDICAL ELECTRONICS & IOT FOR HEALTHCARE	3	0	2	0	4	NIL	ECE				4			
11	18EC3018	ELECTRONICS INSTRUMENTS & AUTOMATION	3	0	2	0	4	NIL	ECE				4			

12	18EC3019	SYSTEM ENGINEERING, OPERATION RESEARCH & DESIGNING	3	0	2	0	4	NIL	ECE				4			
13	18EC3020	ELECTRICAL TECHNOLOGIES & SOLAR POWER SYSTEMS	3	0	2	0	4	NIL	ECE				4			
14	18EC3021	ADVANCE COURSE IN SOFT-COMPUTING (AI, ANN, FUZZY LOGIC & GENETIC ALGORITHMS)	3	0	2	0	4	NIL	CSE, ECE			4	4			

PROFESSIONAL ELECTIVES - DEPARTMENT WISE _ STREAM WISE																	
DEPARTMENT OF BIOTECHNOLOGY																	
GENETIC ENGINEERING																	
1	18BT3251	Molecular Genetics	3	0	0	0	3	18BT3111	BT								
2	18BT3252	Transgenic Technology	3	0	0	0	3	18BT3111	BT								
3	18BT3253	Molecular Expression Technology	3	0	0	0	3	18BT3111	BT								
4	18BT3254	Genomics and Proteomics	3	0	0	0	3	18BT3111	BT								
5	18BT4150	Molecular markers and Diagnostics	3	0	0	0	3	18BT3111	BT								
6	18BT4151	Gene and the Environment	3	0	0	0	3	18BT3111	BT								
7	18BT4152	Microbial Genetics	3	0	0	0	3	18BT3111	BT								
8	18BT4153	DNA Forensics	3	0	0	0	3	18BT3111	BT								
INDUSTRIAL BIOTECHNOLOGY																	

1	18BT3255	Microbial Technology	3	0	0	0	3	18BT2106	BT							
2	18BT3256	Pharmaceutical Biotechnology	3	0	0	0	3	18BT2106	BT							
3	18BT3257	Metabolic Engineering	3	0	0	0	3	18BT2106	BT							
4	18BT3258	Bioresource Technology	3	0	0	0	3	18BT2106	BT							
5	18BT4154	Bioprocess Economics and Plant Design	3	0	0	0	3	18BT2106	BT							
6	18BT4155	Enzyme Engineering	3	0	0	0	3	18BT2106	BT							
7	18BT4156	Bioprocess Validation and cGMP	3	0	0	0	3	18BT2106	BT							
8	18BT4157	Food Technology	3	0	0	0	3	18BT2106	BT							
9	18BT4158	Pharmacovigilance and Safety	3	0	0	0	3	18BT2106	BT							
BIOINFORMATICS																
1	18BT3259	PERL and Bioperl programming	3	0	0	0	3	18BT3110	BT							
2	18BT3260	Biomedical Informatics	3	0	0	0	3	18BT3110	BT							
3	18BT3261	Molecular Modelling and Drug Design	3	0	0	0	3	18BT3110	BT							
4	18BT3262	Structural Biology	3	0	0	0	3	18BT3110	BT							
5	18BT4159	Systems Biology	3	0	0	0	3	18BT3110	BT							
6	18BT4160	Applied Bioinformatics	3	0	0	0	3	18BT3110	BT							
7	18BT4161	Python and R Programming	3	0	0	0	3	18BT3110	BT							

8	17BT4162	Data Base Management System	3	0	0	0	3	18BT3110	BT								
MEDICAL BIOTECHNOLOGY																	
1	18BT3263	Stem cell technology	3	0	0	0	3	18BT1201	BT								
2	18BT3264	Healthcare Biotechnology	3	0	0	0	3	18BT1201	BT								
3	18BT3265	Cancer Biology	3	0	0	0	3	18BT1201	BT								
4	18BT3266	Neurobiology	3	0	0	0	3	18BT1201	BT								
5	18BT4163	Bioelectronics & Biosensors	3	0	0	0	3	18BT1201	BT								
6	18BT4164	Tissue Engineering	3	0	0	0	3	18BT1201	BT								
7	18BT4165	Virology	3	0	0	0	3	18BT1201	BT								
8	18BT4166	Nanobiotechnology	3	0	0	0	3	18BT1201	BT								
DEPARTMENT OF CIVIL ENGINEERING																	
STRUCTURAL ENGINEERING																	
1	18CE3211	PRE-FABRICATED STRUCTURES	3	0	0	0	3	NIL	CE								
2	18CE3221	Masonary Structures	3	0	0	0	3	NIL	CE								
3	18CE3231	Prestressed Concrete	3	0	0	0	3	NIL	CE								
4	18CE4141	Bridge Engineering	3	0	0	0	3	NIL	CE								
5	18CE4151	Sustainable Construction Technologies	3	0	0	0	3	NIL	CE								
6	18CE4161	Construction Project Planning&Systems	3	0	0	0	3	NIL	CE								
GEOTECHNICAL ENGINEERING																	

1	18CE3212	GEOSYNTHETICS AND REINFORCED SOIL STRUCTURES	3	0	0	0	3	NIL	CE							
2	18CE3222	FOUNDATION ENGINEERING	3	0	0	0	3	NIL	CE							
3	18CE3232	GROUND IMPROVEMENT TECHNIQUES	3	0	0	0	3	NIL	CE							
4	18CE4142	ROCK MECHANICS	3	0	0	0	3	NIL	CE							
5	18CE4152	GEOTECHNICAL EARTHQUAKE ENGINEERING	3	0	0	0	3	NIL	CE							
6	18 CE 4162	Design of Earth Retaining Structures	3	0	0	0	3	NIL	CE							
ENVIRONMENTAL ENGINEERING																
1	18CE3213	Sustainable Engineering & Technology	3	0	0	0	3	NIL	CE							
2	18CE3223	Environmental Impact Assessment and Life Cycle Analyses	3	0	0	0	3	NIL	CE							
3	18CE3233	Rural Water Supply and Onsite Sanitation Systems	3	0	0	0	3	NIL	CE							
4	18CE4143	Solid and Hazardous Waste Management	3	0	0	0	3	NIL	CE							
5	18CE4153	Air and Noise Pollution and Control	3	0	0	0	3	NIL	CE							
6	18CE4163	Environmental Geo-technology	3	0	0	0	3	NIL	CE							
HYDRAULICS																
1	18CE3214	River Engineering	3	0	0	0	3	NIL	CE							
2	18CE3224	Urban Water Hydrology and Hydraulics	3	0	0	0	3	NIL	CE							
3	18CE3234	Water Resources Field Methods	3	0	0	0	3	NIL	CE							
4	18CE4144	Design of hydraulic structures	3	0	0	0	3	18CE2203	CE							
5	18CE4154	Groundwater Hydrology	3	0	0	0	3	NIL	CE							

6	18CE4164	Water Quality Engineering	3	0	0	0	3	NIL	CE								
TRANSPORTATION ENGINEERING																	
1	18CE3215	Intelligent Transportation Systems	3	0	0	0	3	NIL	CE								
2	18CE3225	Pavement Materials &Design	3	0	0	0	3	NIL	CE								
3	18CE4145	Traffic Engineering and Management	3	0	0	0	3	NIL	CE								
4	18CE4155	Urban Transportation Planning.	3	0	0	0	3	NIL	CE								
5	18CE4165	Railway Engineering Airport Planning and Design	3	0	0	0	3	NIL	CE								
6	18CE3235	Soil Stabilization Techniques	3	0	0	0	3	NIL	CE								
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING																	
Software Engineering																	
1	18CS3037	WEB ENGINEERING	2	0	2	0	3	18SC2009R	CSE,ECM								
2	18CS3037S	WEB ENGINEERING	2	0	2	4	4	18SC2009R	CSE,ECM								
3	18CS3037A	WEB ENGINEERING	3	0	4	4	6	18SC2009R	CSE,ECM								
4	18CS3037P	WEB ENGINEERING	3	0	4	4	6	18SC2009R	CSE,ECM								
5	18CS3038	SOFTWARE VERIFICATION & VALIDATION	2	0	2	0	3	18CS2103R	CSE,ECM								
6	18CS3038P	SOFTWARE VERIFICATION & VALIDATION	3	0	4	0	5	18CS2103R	CSE,ECM								
7	18CS3230S	Continuous Delivery & DevOps	2	0	2	4	4	18CS2103R	CSE,ECM								
8	18CS3230A	Continuous Delivery & DevOps	3	0	4	4	6	18CS2103R	CSE,ECM								

9	18CS3230P	Continuous Delivery & DevOps	3	0	4	4	6	18CS2103R	CSE,ECM								
10	18CS3233	UI & UX Design	2	0	2	0	3	NIL	CSE,ECM								
11	18CS3233P	UI & UX Design	3	0	4	0	5	NIL	CSE,ECM								
12	18CS3131	Design Patterns	2	0	2	0	3	18SC2009R	CSE,ECM								
13	18CS3131P	Design Patterns	3	0	4	4	6	18SC2009R	CSE,ECM								
14	18CS3236	Software Project Management	3	0	0	0	3	18CS2103R	CSE,ECM								
Computational Science																	
1	18 CS 3139	Modeling & Simulation for Sciences	2	0	2	0	3		CSE,ECM								
2	18 CS 3140	Optimization & Game Theory	2	0	2	0	3		CSE,ECM								
3	18 CS 3141	Graphics & Visualization	2	0	2	2	3.5		CSE,ECM								
4	18 CS 3242	Parallel Algorithms	2	0	2	0	3		CSE,ECM								
5	18 CS 3243	SCIENTIFIC COMPUTING	2	0	2	0	3		CSE,ECM								
6	18 CS 3244	Advanced Computational Complexity & Algorithms	2	0	2	0	3		CSE,ECM								
7	18 CS 3245	Digital Media Processing	2	0	2	0	3		CSE,ECM								
8	18 CS 3046	DISCRETE EVENT SIMULATION	3	0	2	0	4		CSE,ECM								
9	18 CS 3047	Rendering & Animation	2	0	2	0	3		CSE,ECM								
Cloud Computing																	
1	18CS3251	CLOUD COMPUTING	2	0	2	0	3	18CS2102R	CSE,ECM								
2	18CS3251S	CLOUD COMPUTING	2	0	2	4	4	18CS2	CSE,ECM								

								102R									
3	18CS3251A	CLOUD COMPUTING (ADVANCED)	3	0	4	4	6	18CS2 102R	CSE,ECM								
4	18CS3251P	CLOUD COMPUTING(PEER MENTOR)	3	0	4	4	6	18CS2 102R	CSE,ECM								
5	18CS3254	ADVANCED OPERATING SYSTEMS	2	0	2	0	3	18CS2 102R	CSE,ECM								
6	18CS3254P	ADVANCED OPERATING SYSTEMS(PEER MENTOR)	3	0	4	0	5	18CS2 102R	CSE,ECM								
7	18CS3253S	Cloud System Infrastructure	2	0	2	4	4	18CS3 109	CSE,ECM								
8	18CS3253A	Cloud System Infrastructure	3	0	4	4	6	18CS3 109	CSE,ECM								
9	18CS3253P	Cloud System Infrastructure	3	0	4	4	6	18CS3 109	CSE,ECM								
10	18CS3242	Parallel Algorithms	2	0	2	0	3	18CS3 109	CSE,ECM								
11	18CS3242P	Parallel Algorithms	3	0	4	0	5	18CS3 109	CSE,ECM								
12	18CS3150	Advanced Computer Architecture	2	0	2	0	3	18CS3 109	CSE,ECM								
13	18CS3150P	Advanced Computer Architecture	3	0	4	0	5	18CS3 109	CSE,ECM								
14	18CS3248	Edge Computing	3	0	0	0	3	18CS3 109	CSE,ECM								
BIG DATA ANALYTICS/DATA SCIENCE																	
1	18CS3262	DATA VISUALIZATION	2	0	2	0	3	18CS3 211R	CSE,ECM								
2	18CS3262S	DATA VISUALIZATION	2	0	2	4	4	18CS3 211R	CSE,ECM								
3	18CS3262A	DATA VISUALIZATION(ADVANCED)	3	0	4	4	6	18CS3 211R	CSE,ECM								

4	18CS3262P	DATA VISUALIZATION(PEER MENTOR)	3	0	4	4	6	18CS3211R	CSE,ECM							
5	18CS3159	DATA WAREHOUSING & MINING	2	0	2	0	3	18CS2205	CSE,ECM							
6	18CS3159P	DATA WAREHOUSING & MINING(PEER MENTOR)	3	0	4	0	5	18CS2205	CSE,ECM							
7	18CS3065S	Big Data Analytics-PE3	2	0	2	4	4	18CS2205	CSE,ECM							
8	18CS3065A	Big Data Analytics-PE3	3	0	4	4	6	18CS2205	CSE,ECM							
9	18CS3065P	Big Data Analytics-PE3	3	0	4	4	6	18CS2205	CSE,ECM							
10	18CS3064	Big Data Optimization-PE4	2	0	2	0	3	18CS2205	CSE,ECM							
11	18CS3064P	Big Data Optimization-PE4	3	0	4	0	5	18CS2205	CSE,ECM							
12	18CS3260	Graph & Web Analytics-PE5	2	0	2	0	3	18CS3211	CSE,ECM							
13	18CS3260P	Graph & Web Analytics-PE5	3	0	4	0	5	18CS3211	CSE,ECM							
14	18CS3158	Advanced Databases-PE6	3	0	0	0	3	18CS2205	CSE,ECM							
Artificial Intelligence																
1	18CS3166	MACHINE LEARNING	2	0	2	0	3	18CS2206	CSE,ECM							
2	18CS3166S	MACHINE LEARNING	2	0	2	4	4	18CS2206	CSE,ECM							
3	18CS3166A	MACHINE LEARNING(ADVANCED)	3	0	4	4	6	18CS2206	CSE,ECM							
4	18CS3166P	MACHINE LEARNING(PEER MENTOR)	3	0	4	4	6	18CS2206	CSE,ECM							
5	18CS3270	SOFT COMPUTING	2	0	2	0	3	18CS2206	CSE,ECM							

6	18CS3270P	SOFT COMPUTING(PEER MENTOR)	3	0	4	0	5	18CS2206	CSE,ECM							
7	18CS3074S	Deep Learning-PE3	2	0	2	4	4	18CS2206	CSE,ECM							
8	18CS3074A	Deep Learning-PE3	3	0	4	4	6	18CS2206	CSE,ECM							
9	18CS3074P	Deep Learning-PE3	3	0	4	4	6	18CS2206	CSE,ECM							
10	18CS3167	Natural Language Processing-PE4	2	0	2	0	3	18CS2206	CSE,ECM							
11	18CS3167P	Natural Language Processing-PE4	3	0	4	0	5	18CS2206	CSE,ECM							
12	18CS3168	Perception & Computer Vision-PE5	2	0	2	0	3	18CS2206	CSE,ECM							
13	18CS3168P	Perception & Computer Vision-PE5	3	0	4	0	5	18CS2206	CSE,ECM							
14	18CS3272	Cognitive Computing-PE6	3	0	0	0	3	18CS2206	CSE,ECM							
Cyber Security Specialization																
1	18CS3175	CRYPTANALYSIS & CYBER DEFENCE	2	0	2	0	3	18CS2204	CSE,ECM							
2	18CS3175S	CRYPTANALYSIS & CYBER DEFENCE	2	0	2	4	4	18CS2204	CSE,ECM							
3	18CS3175A	CRYPTANALYSIS & CYBER DEFENCE	3	0	4	4	6	18CS2204	CSE,ECM							
4	18CS3175P	CRYPTANALYSIS & CYBER DEFENCE	3	0	4	4	6	18CS2204	CSE,ECM							
5	18CS3279	NETWORK SECURITY	2	0	2	0	3	18CS2204	CSE,ECM							
6	18CS3279P	NETWORK SECURITY	3	0	4	0	5	18CS2204	CSE,ECM							
7	18CS3176S	Digital Forensics	2	0	2	4	4	18CS3175	CSE,ECM							

8	18CS3176A	Digital Forensics	3	0	4	4	6	18CS3175	CSE,ECM								
9	18CS 3176P	Digital Forensics	3	0	4	4	6	18CS3175	CSE,ECM								
10	18CS 3278	Database & System Security	2	0	2	0	3	18CS2205	CSE,ECM								
11	18CS 3278P	Database & System Security	3	0	4	4	6	18CS2205	CSE,ECM								
12	18CS 3084	Blockchain & Cryptocurrencies	2	0	2	0	3	18CS3175	CSE,ECM								
13	18CS 3084P	Blockchain & Cryptocurrencies	3	0	4	4	6	18CS3175	CSE,ECM								
14	18CS 3281	Secure Software Engineering	3	0	0	0	3	18CS2103	CSE,ECM								
Gaming and UXD																	
1	17CS3140	PROGRAMMING FOR GAME DEVELOPMENT	2	0	2	0	3	18SC1101	CSE,ECM								
2	17CS3140S	PROGRAMMING FOR GAME DEVELOPMENT	2	0	2	4	4	18SC1101	CSE,ECM								
3	17CS3140A	PROGRAMMING FOR GAME DEVELOPMENT(ADVANCED)	3	0	4	4	6	18SC1101	CSE,ECM								
4	17CS3140P	PROGRAMMING FOR GAME DEVELOPMENT(PEER MENTOR)	3	0	4	4	6	18SC1101	CSE,ECM								
5	18CS3233	UI & UX DESIGN	2	0	2	0	3	NIL	CSE,ECM								
6	18CS3233P	UI & UX DESIGN(PEER MENTOR)	3	0	4	0	5	NIL	CSE,ECM								
7	18CS3286	AR & VR Application Development -PE3	2	0	2	4	4	18SC1101	CSE,ECM								
8	18CS3286A	AR & VR Application Development -PE3	3	0	4	4	6	18SC1101	CSE,ECM								
9	18CS3286P	AR & VR Application Development -PE3	3	0	4	4	6	18SC1101	CSE,ECM								

10	18CS3287	Digital Media Processing -PE4	2	0	2	0	3	NIL	CSE,ECM								
11	18CS3288	Principles of Game Design-PE5	3	0	0	0	3	NIL	CSE,ECM								
12	18CS3289	Business of games & entrepreneurship-PE6	3	0	0	0	3	NIL	CSE,ECM								
IOT Soecialization																	
1	18EM5101	Sensors and Actautors	3	0	0	0	3	18CS2204	CSE,ECM								
2	18EM5107	Fundamentals of Internet of Things	2	0	2	2	3.5	18CS2204	CSE,ECM								
3	18EM5108	IoT Application Development using Python	3	0	0	0	3	18CS2204	CSE,ECM								
4	18EM5109	Wireless and Mobile Communication	3	0	0	0	3	18CS2204	CSE,ECM								
5	18EM5214	Wireless Sensor Networks	3	0	0	0	3	18CS2204	CSE,ECM								
6	18EM5215	Cloud Computing for IoT Engineers	3	0	0	0	3	18CS2204	CSE,ECM								
7	18CS3285	Cloud Computing for IoT Engineers	2	0	2	0	3	18CS3251	CSE,ECM								
8	18CS3285S	Cloud Computing for IoT Engineers	2	0	2	4	4	18CS3251	CSE,ECM								
9	18CS3285A	Cloud Computing for IoT Engineers	3	0	4	4	6	18CS3251	CSE,ECM								
10	18CS3285P	Cloud Computing for IoT Engineers	3	0	4	4	6	18CS3251	CSE,ECM								
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING																	
EMBEDDED CONTROLLERS, IOTS & POWER ELECTRONICS																	
1	18EC3051	Wireless sensor Networks & IOT Applications	3	0	0	0	3	NIL	ECE								
2	18EC3052	Solar Photo-Voltaic cells & Solar Power Arrays	3	0	0	0	3	NIL	ECE								
3	18EC3053	Electronic Systems for Renewable	3	0	0	0	3	NIL	ECE								

		Energy & Smart Grid															
4	18EC3054	IOT Applications & Smart Cities	3	0	0	0	3	NIL	ECE								
5	18EC3055	Systems for Smart Cities & Smart Villages	3	0	0	0	3	NIL	ECE								
VLSI & MICRO - ELECTRONICS																	
1	18EC3061	Low Power VLSI	3	0	0	0	3	NIL	ECE,ECM								
2	18EC3062	Algorithms for VLSI Design Automation	3	0	0	0	3	NIL	ECE,ECM								
3	18EC3063	ASIC & FPGA Chip Design	3	0	0	0	3	NIL	ECE,ECM								
4	18EC3064	VLSI Sub-system Design and Design for Testability	3	0	0	0	3	NIL	ECE,ECM								
5	18EC3065	Semiconductor Memories & MEMS	3	0	0	0	3	NIL	ECE,ECM								
6	18EC3066	Analog & Digital IC Applications	3	0	0	0	3	NIL	ECE,ECM								
AUTOMATION & ROBOTICS																	
1	18EC3071	Control Systems & Introduction to Robotics	3	0	0	0	3	NIL	ECE								
2	18EC3072	Autonomous Vehicles & Automotive Electronics	3	0	0	0	3	NIL	ECE								
3	18EC3073	Advanced Robotics	3	0	0	0	3	NIL	ECE								
4	18EC3074	Computer Vision & Applications	3	0	0	0	3	NIL	ECE								
5	18EC3075	Human Machine Interface & Brain Machine Interface	3	0	0	0	3	NIL	ECE								
6	18EC3076	Designing Automation Systems & Assistive Robotic Systems	3	0	0	0	3	NIL	ECE								
SIGNAL PROCESSING																	
1	18EC3081	Speech Signal Processing	3	0	0	0	3	NIL	ECE								
2	18EC3082	Digital Image Processing	3	0	0	0	3	NIL	ECE								
3	18EC3083	Bio Medical Image Analysis	3	0	0	0	3	NIL	ECE								
4	18EC3084	Statistical Signal Processing	3	0	0	0	3	NIL	ECE								

5	18EC3085	Adaptive Signal Processing	3	0	0	0	3	NIL	ECE							
6	18EC3086	Detection and Estimation of Signals	3	0	0	0	3	NIL	ECE							
7	18EC3087	Bio Medical Signal Analysis	3	0	0	0	3	NIL	ECE							
COMMUNICATION & WIRELESS																
1	18EC3091	Information Theory & Coding	3	0	0	0	3	NIL	ECE							
2	18EC3092	4G Wireless Technologies & Cellular Communications	3	0	0	0	3	NIL	ECE							
3	18EC3093	Satellite Communications	3	0	0	0	3	NIL	ECE							
4	18EC3094	Optical Communication & Network	3	0	0	0	3	NIL	ECE							
5	18EC3095	Wireless Technologies (WCDMA, GPRS, GSM, UMTS)	3	0	0	0	3	NIL	ECE							
DATA COMMUNICATION & NETWORKS																
1	18EC4051	TCP/IP & Other Protocol Suite	3	0	0	0	3	NIL	CSE,ECE,ECM							
2	18EC4052	VoIP Systems & Broad Band Networks	3	0	0	0	3	NIL	CSE,ECE,ECM							
3	18EC4053	5G Mobile, Wireless Technologies & IEEE 802 Standards	3	0	0	0	3	NIL	CSE,ECE,ECM							
4	18EC4054	Cloud-Computing & Network Security	3	0	0	0	3	NIL	CSE,ECE,ECM							
5	18EC4055	IP Multimedia Sub-System & Emerging Technologies							CSE,ECE,ECM							
RF, MICROWAVE & RADARS																
1	18EC4061	Microwave Engineering	3	0	0	0	3	NIL	ECE							
2	18EC4062	Antenna Design & Wave Propagation	3	0	0	0	3	NIL	ECE							
3	18EC4063	Radar Engineering & Navigational Aids	3	0	0	0	3	NIL	ECE							
4	18EC4064	Modern Antennas, Millimeter Waves & Applications	3	0	0	0	3	NIL	ECE							

5	18EC4065	Electronic Warfare, EMI & EMC	3	0	0	0	3	NIL	ECE								
DATA-COMPUTING & APPLICATION TOOLS																	
1	18EC4071	Machine Learning	3	0	0	0	3	NIL	ECE								
2	18EC4072	Data Sciences & Big-Data	3	0	0	0	3	NIL	ECE								
3	18EC4073	Pattern Recognition	3	0	0	0	3	NIL	ECE								
4	18EC4074	Block-Chain & Cyber Security	3	0	0	0	3	NIL	ECE								
5	18EC4075	Video Surveillance	3	0	0	0	3	NIL	ECE								
INSTRUMENTATION & BIO-MEDICAL ELECTRONICS																	
1	18EC4081	Automated Vehicles & Avionics	3	0	0	0	3	NIL	ECE								
2	18EC4082	Calibrations and Designing Advanced Instruments	3	0	0	0	3	NIL	ECE								
3	18EC4083	Biological & Cyber-Physical Systems	3	0	0	0	3	NIL	ECE								
4	18EC4084	Electronic Instruments & Biomedical Applications	3	0	0	0	3	NIL	ECE								
5	18EC4085	Electronic Instrumentation &Automation	3	0	0	0	3	NIL	ECE								
6	18EC4086	Automated Vehicles & Avionics	3	0	0	0	3	NIL	ECE								
LIST OF OPEN ELECTIVES																	
1	18BT40A1	IPR & PATENT LAWS	3	0	0	0	3	NIL	CE, CSE, ECE, ECM, EEE, ME								
2	18CE40A2	ENVIRONMENTAL POLLUTION CONTROL METHODS	3	0	0	0	3	NIL	BT, CSE, ECE, ECM, EEE, ME								
3	18CE40A3	SOLID AND HAZARDOUS WASTE MANAGEMENT	3	0	0	0	3	NIL	BT, CSE, ECE, ECM, EEE, ME								
4	18CE40A4	REMOTE SENSING & GIS	3	0	0	0	3	NIL	BT, CSE, ECE, ECM, EEE, ME								
5	18CE40A5	DISASTER MANAGEMENT	3	0	0	0	3	NIL	BT, CSE, ECE, ECM, EEE, ME								
6	18CS40A6	FUNDAMENTALS OF DBMS	3	0	0	0	3	NIL	BT, CE,								

									ECE,EEE, ME,PE								
7	18CS40A7	FUNDAMENTALS OF SOFTWARE ENGINEERING	3	0	0	0	3	NIL	BT, CE, ECE,EEE, ME,PE								
8	18CS40A8	FUNDAMENTALS OF INFORMATION TECHNOLOGY	3	0	0	0	3	NIL	BT, CE, ECE,EEE, ME,PE								
9	18EC40A9	IMAGE PROCESSING	3	0	0	0	3	NIL	BT, CE, CSE,EEE, ME,PE								
10	18EM40B1	LINUX PROGRAMMING	3	0	0	0	3	NIL	BT, CE, ECE, EEE, ME,PE								
11	18EM40B2	E-COMMERCE	3	0	0	0	3	NIL	BT, CE, ECE, EEE, ME,PE								
12	18EE40B3	RENEWABLE ENERGY SOURCES	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM,ME,PE								
13	18ME40B4	ROBOTICS	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE								
14	18ME40B5	MECHATRONICS	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE								
15	18ME40B6	OPERATIONS RESEARCH	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE								
16	18PH40B7	NANO MATERIALS & TECHNOLOGY	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
17	18PE40B8	SUBSEA ENGINEERING	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
18	18PE40B9	OIL AND GAS MANAGEMENT	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
19	18GN40C1	SELF-DEVELOPMENT	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
20	18GN40C2	INDIAN CULTURE AND	3	0	0	0	3	NIL	BT, CE, CSE,								

		HISTORY							ECE, ECM, EEE, ME								
21	18GN40C3	EMOTIONAL INTELLIGENCE	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
22	18GN40C4	PROFESSIONAL ETHICS AND VALUES	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
23	18GN40C5	BEHAVIOURAL SCIENCES	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
24	18GN40C6	GENDER SENSITIZATION	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
LIST OF MANAGEMENT ELECTIVES																	
1	18MB4051	PARADIGMS IN MANAGEMENT THOUGHT	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
2	18MB4052	INDIAN ECONOMY	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
3	18MB4053	MANAGING PERSONAL FINANCES	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
4	18MB4054	BASICS OF MARKETING FOR ENGINEERS	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
5	18MB4055	ORGANIZATION MANAGEMENT	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
6	18MB4056	RESOURCES SAFETY AND QUALITY MANAGEMENT	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								

7	18MB4057	ECONOMICS FOR ENGINEERS	3	0	0	0	3	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
LIST OF FOREIGN LANGUAGES																	
1	18FL3051	ARABIC LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
2	18FL3052	BENGALI LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
3	18FL3053	CHINESE LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
4	18FL3054	FRENCH LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
5	18FL3055	GERMAN LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
6	18FL3056	HINDI LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
7	18FL3057	ITALIAN LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
8	18FL3058	JAPANESE LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
9	18FL3059	KANNADA LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME							
10	18FL3060	RUSSIAN LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE,							

									ME								
11	18FL3061	SIMHALI LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								
12	18FL3062	SPANISH LANGUAGE	2	0	0	0	2	NIL	BT, CE, CSE, ECE, ECM, EEE, ME								

M.TECH COURSE STRUCTURE

FIRST YEAR (FIRST SEMESTER)

S.No	Course Code	Course Title	Periods			Credits
			L	T	P	
1	18 BT 5101	Mathematics and Biostatistics	3	2	0	4
2	18 BT 5102	Biochemical Engineering	3	0	2	4
3	18 BT 5103	Molecular Biology and	3	0	2	4
4	18 BT 5104	Applied Bioinformatics	3	0	2	4
5		Elective- I	3	0	0	3
6		Elective- II	3	0	0	3
7	18 IE 5149	Seminar	0	0	4	2
		Total Credits				**24**

FIRST YEAR (SECOND SEMESTER)

S.No	Course Code	Course Title	Periods			Credits
			L	T	P	
1	18 BT 5205	Plant and Animal Biotechnology	3	0	2	4
2	18 BT 5206	Immuno technology	3	0	2	4
3	18 BT 5207	Bioreactor modeling and Simulation	3	2	0	4
4	18 BT 5208	Downstream Processing	3	0	2	4
5		Elective-III	3	0	0	3
6		Elective-IV	3	0	0	3
7	18 IE 5250	Term Paper	0	0	4	2
		Total Credits				**24**

SECOND YEAR (FIRST & SECOND SEMESTER)

S.No	Course Code	Course Title	Periods			Credits
			L	T	P	
1	18 IE 6050	Dissertation	0	0	72	36
		Total Credits				**84**

ELECTIVE COURSES

S.No	Course Code	Course Title	Periods			Credits
			L	T	P	
Elective-1						
1	18 BT 51A1	Protein Engineering	3	0	0	3
2	18 BT 51A2	Enzyme Technology	3	0	0	3
3	18 BT 51A3	Medical Biotechnology	3	0	0	3
4	18 BT 51A4	Stem cell technology	3	0	0	3

5	18 BT 51A5	Molecular Modeling and Drug Design	3	0	0	3
Elective-2						
6	18 BT 51B1	Food Technology	3	0	0	3
7	18 BT 51B2	Transport phenomenon in bioprocess	3	0	0 3	
8	18 BT 51B3	Bio mining	3	0	0	3
9	18 BT 51B4	Bioprocess validation and cGMP	3	0	0	3
Elective-3						
10	18 BT 52C1	Perl programming and Bioperl	3	0	0	3
11	18 BT 52C2	Bioprocess Technology	3	0	0	3
12	18 BT 52C3	Environmental Biotechnology	3	0	0	3
13	18 BT 52C4	Nano Technology	3	0	0	3
14	18 BT 52C5	IPR and Patent Laws	3	0	0	3
Elective-4						
15	18 BT 52D1	Regulatory affairs & Clinical trials	3	0	0	3
16	18 BT 52D2	Bioprocess economics and plant design	3	0	0	3
17	18 BT 52D3	Genomics and Proteomics	3	0	0	3
18	18 BT 52D4	Bio catalysis and enzyme	3	0	0	3

SCHOOL OF ARCHITECTURE

SEMESTER I

SL. No	COURSE CODE	COURSE TITLE	L	T	P	S	Cr	CH
THEORY								
1	18 AR 1101	History of Architecture and Culture - I	3	0	0	0	3	3
2	18 AR 1102	Theory of Architecture	3	0	0	0	3	3
3	18UC0009	Ecology & Environment	2	0	0	0	2	2
STUDIO								
4	18UC1101	Basic English	0	0	4	0	2	4
5	18 AR 1151	Architectural Drawing - I	0	2	4	0	4	6
6	18 AR 1152	Art Studio	0	2	4	0	4	6
7	18 AR 1153	Basic Design	0	8	2	0	9	10
8	18 GN 1101	Counseling-I	0	0	1	0	0	1
9	18GN1107	Co-Curricular Activity-1	0	0	0	2	0.5	2
		TOTAL	**8**	**12**	**15**	**2**	**27.5**	**37**

SEMESTER II

SL. No	COURSE CODE	COURSE TITLE	L	T	P	S	Cr	CH
THEORY								
1	18 AR 1205	History of Architecture and Culture - II	3	0	0	0	3	3
2	18 AR 1233	Theory of Design	3	0	0	0	3	3
3	18UC1202	English Proficiency	0	0	4	0	2	4
STUDIOs								
4	18 AR 1264	Model Making Workshop	0	2	2	0	3	4
5	18 AR 1254	Building Construction - I	0	2	4	0	4	6
6	18 AR 1255	Architectural Drawing - II	0	2	4	0	4	6
7	18 AR 1256	Architectural Design – I	0	8	2	0	9	10
8	18 GN 1202	Counseling-2	0	0	1	0	0	1
9	18GN1208	Co-Curricular Activity-2	0	0	0	2	0.5	2
		TOTAL	**6**	**14**	**17**	**2**	**28.5**	**39**

SEMESTER III

SL. No	COURSE CODE	COURSE TITLE	L	T	P	S	Cr	CH
THEORY								
1	18 AR 2109	History of Architecture and Culture - III	3	0	0	0	3	3
2	18 AR 2110	Climate and Built Environment	3	0	0	0	3	3
3	18 AR 2134	Building Materials - I	3	0	0	0	3	3
4	18 AR 2104	Mechanics of Structures – I	3	0	0	0	3	3
STUDIO								
5	18 AR 2165	Computer Aided Visualization	0	2	2	0	3	4
6	18 AR 2157	Building Construction - II	0	4	0	0	4	4
7	18 AR 2158	Architectural Design - II	0	8	0	0	8	8
8	18UC2103	Counseling-3	0	0	1	0	0	1
9	18UC2103	Professional Communication skills	0	0	4	0	2	4
10	18GN2109	Co-Curricular Activity-3	0	0	0	2	0.5	2
		TOTAL	**12**	**14**	**7**	**2**	**29.5**	**35**

SEMESTER IV

SL. No	COURSE CODE	COURSE TITLE	L	T	P	S	Cr	CH
THEORY								
1	18 AR 2235	Building Materials - II	3	0	0	0	3	3
2	18 AR 2215	Site Analysis and Planning	3	0	0	0	3	3
3	18 AR 2208	Mechanics of Structures - II	3	0	0	0	3	3
STUDIO								
4	18 AR 2267	Surveying and Leveling	0	0	4	0	2	4
5	18 AR 2259	Architectural Design - III	0	8	0	0	8	8
6	18 AR 2268	Building Construction III	0	4	0	0	4	4
7	18 AR 2266	Advanced Computer Aided Visualization	0	2	2	0	3	4
8	18 GN 2204	Counseling-4	0	0	1	0	0	1
9	18UC2204	Aptitude Builder- 1	0	0	4	0	2	4
10	18GN2210	Co-Curricular Activity-4	0	0	0	2	0.5	2
		TOTAL	**9**	**14**	**11**	**2**	**28.5**	**36**

SEMESTER V

SL. No	COURSE CODE	COURSE TITLE	L	T	P	S	Cr	CH
THEORY								
1	18 AR 3137	Introduction to Landscape Architecture	3	0	0	0	3	3
2		Elective – I	3	0	0	0	3	3
3	18 AR 3139	Evolution of Modern Architecture	3	0	0	0	3	3
4	18 AR 3113	Design of Structures - I	3	0	0	0	3	3
5	18 AR 3138	Building Services - I	3	0	0	0	3	3
STUDIO								
6	18 AR 3160	Architectural Design - IV	0	8	0	0	8	8
7	18 AR 3169	Building Construction IV	0	4	0	0	4	4
8	18 GN 3105	Counseling-5	0	0	1	0	0	1
9	18UC3105	Aptitude Builder- 2	0	0	4	0	2	4
10	18GN3111	Co-Curricular Activity-5	0	0	0	2	0	2
		TOTAL	**15**	**12**	**5**	**2**	**29**	**34**

SEMESTER VI

SL. No	COURSE CODE	COURSE TITLE	L	T	P	S	Cr	CH
THEORY								
1	18 AR 3223	Human Settlement and Planning	3	0	0	0	3	3
2		Elective - II	3	0	0	0	3	3
3	18 AR 3236	Building Bye-Laws & Codes of Practice	3	0	0	0	3	3
4	18 AR 3218	Design of Structures - II	3	0	0	0	3	3
5	18 AR 3240	Building Services - II	3	0	0	0	3	3
THEORY CUM STUDIO								
6	18 AR 3242	Advanced Building Construction and Materials	3	0	2	0	3	5
STUDIO								
7	18 AR 3261	Architectural Design - V	0	8	0	0	8	8
8	18 GN 3206	Counseling-6	0	0	1	0	0	1
9	18UC0008	Indian Constitution	0	0	2	0	0	2
10	18GN3212	Co-Curricular Activity-6	0	0	0	2	0	2
11	18 UC 0010	Universal Human Values & Professional Ethics	1	0	2	0	2	3
		TOTAL	**19**	**8**	**7**	**2**	**28**	**36**

SEMESTER VII								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
THEORY								
1	18 AR 4141	Advanced Building Services	3	0	0	0	3	3
2		Elective - III	3	0	0	0	3	3
3		Elective - IV	3	0	0	0	3	3
4	18 AR 4122	Design of Structures - III	3	0	0	0	3	3
THEORY CUM STUDIO								
5	18 AR 4124	Estimation, Costing and Specification	2	0	4	0	4	6
STUDIO								
6	18 AR 4162	Architectural Design - VI	0	8	0	0	8	8
7	18 AR 4170	Working Drawing - I	0	4	0	0	4	4
8		Management Elective	3	0	0	0	3	3
		TOTAL	**17**	**12**	**4**	**0**	**31**	**33**

SEMESTER VIII								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
THEORY								
1	18 AR 4229	Building Construction and Management	3	0	0	0	3	3
2	18 AR 4243	Advanced Structural Design and Systems	3	0	0	0	3	3
3		Elective - V	3	0	0	0	3	3
4		Elective - VI	3	0	0	0	3	3
STUDIO								
5	18 AR 4272	Pre Thesis Seminar (Dissertation)	0	4	0	0	4	4
6	18 AR 4263	Architectural Design - VII	0	8	0	0	8	8
7	18 AR 4228	Urban Design	3	0	0	0	3	3
8	18UC 3206	Campus to corporate	0	0	4	0	2	4
9		University Elective -Foreign Language	2	0	0	0	2	2
		TOTAL	**17**	**12**	**4**	**0**	**31**	**33**

SEMESTER IX								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 IE 5148	Practice School / Practical Training	0	0	40	0	20	40
		TOTAL	**0**	**0**	**40**	**0**	**20**	**40**

SEMESTER X								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
THEORY								
1	18 AR 5244	Professional Practice and Ethics	3	0	0	0	3	3
STUDIO								
2	18 IE 5250	Architectural Thesis	0	0	36	0	18	36
		TOTAL	**3**	**0**	**36**	**0**	**21**	**39**

TOTAL NO OF CREDITS FOR COMPLETION OF DEGREE : 274

LIST OF ELECTIVES								
SEMESTER V								
ELECTIVE - I								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 AR 31A1	Set Design	3	0	0	0	3	3
2	18 AR 31A2	Vernacular Architecture	3	0	0	0	3	3
SEMESTER VI								
ELECTIVE - II								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 AR 32B1	Energy Efficient Architecture	3	0	0	0	3	3
2	18 AR 32B2	Architectural Journalism and Photography	3	0	0	0	3	3
SEMESTER VII								
ELECTIVE - III								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 AR 41C1	Green Building	3	0	0	0	3	3
2	18 AR 41C2	Sustainable Building Design	3	0	0	0	3	3
		Management Elective	3	0	0	0	3	3
3	11 HS 201	Emotional Intelligence	3	0	0	0	3	3
4	11 HS 206	Behavioural Science	3	0	0	0	3	3
5	11 HS 206	Self Management	3	0	0	0	3	3

ELECTIVE - IV								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 AR 41C3	Furniture Design and Product Design	3	0	0	0	3	3
2	18 AR 41C4	Interior Design	3	0	0	0	3	3

SEMESTER VIII								
ELECTIVE - V								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 AR 42D1	Housing	3	0	0	0	3	3
2	18 AR 42D2	Architectural Conservation	3	0	0	0	3	3
		University Elective -Foreign Language						
3	18FL3054	French language	2	0	0	0	2	2
4	18FL3055	German language	2	0	0	0	2	2

ELECTIVE - VI								
SL. No	**COURSE CODE**	**COURSE TITLE**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18 AR 42D3	Industrial Building System	3	0	0	0	3	3
2	18 AR 42D4	Intelligent Buildings	3	0	0	0	3	3

L – Lecture period **T-** Tutorial Period **P**- Practical period **S**- Skill period **C** – Credits

Note: Elective cannot be taken twice by a student.

BACHELOR OF COMPUTER APPLICATIONS(BCA)

SEMESTER - I

Sl No	Course Code	Course Title	L	T	P	S	Cr	CH
1	18UC1101	Basic English	0	0	4	0	2	4
2	15MT1105	Fundamentals of Mathematics	3	0	2	0	4	5
3	18SC1105	Logic and Reasoning	0	0	2	0	2	2
4	18UC0009	Ecology & Environment	2	0	0	0	2	2
5	18CA1101	Fundamentals of Information Technology	2	0	4	0	4	6
6	18CA1102	Programming in C	3	0	2	6	5.5	11
7	18CA1103	Computer Organization	3	0	0	0	3	3
8	18GN1101	Counselling-1	0	0	1	0	0	1
9	18GN1107	Co curricular Activity-1	0	0	0	2	0.5	2
		Total	13	0	13	8	23	36

SEMESTER - II

Sl No	Course Code	Course Title	L	T	P	S	Cr	CH
1	18UC1202	English Proficiency	0	0	4	0	2	4
2	15MT1208	Computer-Oriented Statistical Methods	3	0	2	0	4	5
3	18MB4055	Organization Management	3	0	0	0	3	3
4	18CA1204	Computer Networks	3	0	2	0	4	5
5	18CA1205	OOP through Java	3	0	2	4	5	9
6	18CA1206	Data Structures Using C	3	0	2	4	5	9
7	18GN1202	Counselling-2	0	0	1	0	0	1
8	18GN1208	Co curricular Activity-2	0	0	0	2	0.5	2
		Total	15	0	13	10	23.5	38

SEMESTER - III

Sl No	Course Code	Course Title	L	T	P	S	Cr	CH
1	18UC3206	Campus To Corporate	0	0	4	0	2	4

2	18UC0010	Universal Human Values and Professional Ethics	1	0	2	0	2	3
3	18CA2107	Principles of Virtualization & Cloud Technology	3	0	2	4	5	9
4	18CA2108	Operating Systems	3	0	2	0	4	5
5	18CA2109	DBMS	2	1	2	0	4	5
6	18CA2110	Web Technologies	3	0	2	4	5	9
7	18GN2103	Counselling-3	0	0	1	0	0	1
8	18GN2109	Co curricular Activity-3	0	0	0	2	0.5	2
		Total	12	1	15	10	22.5	38

SEMESTER - IV

Sl No	Course Code	Course Title	L	T	P	S	Cr	CH
1	18UC2204	Aptitude Builder – 1	0	0	4	0	2	4
2	18CA2211	Software Engineering	2	0	2	0	3	4
3	18CA2212	Fundamentals of Information Security	2	2	0	0	4	4
4	18CA2213	Ethical Hacking	2	2	2	0	5	6
5	18CA2214	Cryptography	3	1	0	0	4	4
6	18CA2215	Fundamentals of Data Centre	2	1	0	0	3	3
7	18CA2216	Fundamentals of Cloud Storage	3	2	0	0	5	5
8	18SC1106	Technical Skill – 1 (Coding)	0	0	0	6	1.5	6
9	18GN2204	Counselling-4	0	0	1	0	0	1
10	18GN2210	Co curricular Activity-4	0	0	0	2	0.5	2
		Total	14	8	9	8	28	39

SEMESTER - V

Sl No	Course Code	Course Title	L	T	P	S	Cr	CH
1	18UC3105	Aptitude Builder – 2	0	0	4	0	2	4
2	18CA3117	Computer Forensics	2	2	2	0	5	6
3	18CA3118	Virtualization & Cloud Security	3	2	0	0	5	5
4	18CA3119	IT Governance, Risk & Information Security Management	3	2	0	0	5	5
5	18CA3120	Server Operating System	2	2	2	0	5	6
6	18FL3054	French Language	2	0	0	0	2	2

7	18SC1207	Technical Skill – 2 (Coding)	0	0	0	8	2	8
8	18GN3105	Counselling-5	0	0	1	0	0	1
9	18GN3111	Co curricular Activity-5	0	0	0	2	0	2
10	18CA3121	* Internship	0	0	0	0	2	0
		Total	12	8	9	8	28	39

Note : *Internship – taken by the students after their IV semester end exams and before V semester registration. Duration of the internship is 6 weeks and its credits will be included in V semester.

SEMESTER - VI

Sl No	Course Code	Course Title	L	T	P	S	Cr	CH
1	18CA3222	Introduction to Wireless & VOIP technologies	2	0	2	0	3	4
2	18CA3223	Introduction to Windows Azure	2	0	2	0	3	4
3	18CA3224	Big Data	4	0	0	0	4	4
4	18IE4048	PROJECT	0	0	18	0	9	18
5	18GN3206	Counselling-6	0	0	1	0	0	1
		Total	8	0	23	0	19	31

Cumulative Credits 23+23.5+22.5+28+28+19 =144

DEPARTMENT OF PHARMACY

SEMESTER I

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH1101	Human Anatomy and Physiology I	3	1	3	0	5.5	7
18PH1102	Pharmaceutical Analysis	3	1	3	0	5.5	7
18PH1103	General Pharmaceutics	3	1	3	0	5.5	7
18PH1104	Pharmaceutical Inorganic Chemistry	3	1	3	0	5.5	7
18UC1101	Basic English	0	0	4	0	2.0	4
18PH1106RB	#Remedial Biology	2	0	2	0	3.0	4
18PH1106RM	$Remedial Mathematics	2	1	0	0	3.0	3
18GN1101	Counseling I	0	0	1	0	0.5	1
18GN1107	Co curricular Activity I	0	0	0	2	0.5	2
	Total	14	$ 5 /# 4	$ 17 /# 19	2	28.0	$ 38 /# 39

#Applicable only for the students who have studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology (RB) course.

$Applicable only for the students who have studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM) course**.**

SEMESTER II

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH1207	Human Anatomy and Physiology II	3	1	3	0	5.5	7
18PH1208	Pharmaceutical Organic Chemistry I	3	1	4	0	6.0	8
18PH1209	Biochemistry	3	1	4	0	6.0	8
18PH1210	Pathophysiology	3	1	0	0	4.0	4
18PH1211	Computer Applications in Pharmacy	3	0	2	0	4.0	5
18UC0009	Ecology & Environment	3	0	0	0	3.0	3
18UC1202	English Proficiency	2	0	0	0	2.0	2
18GN1202	Counseling II	0	0	1	0	0.5	1
18GN1208	Co curricular Activity II	0	0	0	2	0.5	2

SEMESTER III

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH2113	Pharmaceutical Organic Chemistry II	3	1	4	0	6	8
18PH2114	Physical Pharmaceutics I	3	1	4	0	6	8
18PH2115	Pharmaceutical Microbiology	3	1	4	0	6	8
18PH2116	Pharmaceutical Engineering	3	1	4	0	6	8
18UC2103	Professional Communication skill	0	0	4	0	2	4
18GN2103	Counseling III	0	0	1	0	0	1
18GN2109	Co curricular Activity III	0	0	0	2	0.5	2
	Total	12	4	21	2	26.5	39

SEMESTER IV

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH2217	Pharmaceutical Organic Chemistry III	3	1	0	0	4.0	4
18PH2218	Medicinal Chemistry I	3	1	3	0	5.5	7

18PH2219	Physical Pharmaceutics II	3	1	3	0	5.5	7
18PH2220	Pharmacology I	3	1	3	0	5.5	7
18PH2221	Pharmacognosy and Phytochemistry I	3	1	3	0	5.5	7
18UC2204	Aptitude builder I	0	0	4	0	2.0	4
18GN2204	Counseling IV	0	0	1	0	0.5	1
18GN2210	Co curricular Activity IV	0	0	0	2	0.5	2
	Total	15	5	17	2	29	39

SEMESTER V

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH3122	Medicinal Chemistry II	3	1	0	0	4	4
18PH3123	Industrial Pharmacy I	3	1	4	0	6	8
18PH3124	Pharmacology II	3	1	4	0	6	8
18PH3125	Pharmacognosy and Phytochemistry II	3	1	4	0	6	8
18PH3126	Pharmaceutical Jurisprudence	3	1	0	0	4	4
18UC3105	Aptitude builder II	0	0	4	0	2	4
18GN3105	Counseling V	0	0	1	0	0.5	1
18GN3111	Co curricular Activity V	0	0	0	2	0.5	2
	Total	15	5	17	2	29.0	39

SEMESTER VI

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH3227	Medicinal Chemistry III	3	1	3	0	5.5	7
18PH3228	Pharmacology III	3	1	3	0	5.5	7
18PH3229	Herbal Drug Technology	3	1	3	0	5.5	7
18PH3230	Biopharmaceutics and Pharmacokinetics	3	1	0	0	4.0	4
18PH3231	Pharmaceutical Biotechnology	3	1	0	0	4.0	4
18PH3232	Quality Assurance	3	1	0	0	4.0	4
18UC3205	Campus to Corporate	0	0	4	0	2.0	4
18GN3206	Counseling VI	0	0	1	0	0.0	1
18GN3212	Co curricular Activity VI	0	0	0	2	0.5	2
	Total	18	6	14	2	31.0	40

SEMESTER VII

Course code	Name of the course	No. of Hours				Total Credits	CH
		L	T	P	S		
18PH4133	Instrumental Methods of Analysis	3	1	4	0	6	8
18PH4134	Industrial Pharmacy II	3	1	0	0	4	4
18PH4135	Pharmacy Practice	3	1	0	0	4	4
18PH4136	Novel Drug Delivery System	3	1	0	0	4	4
18PH4137	Practice School*	0	0	12	0	6	12
18UC0010	Universal Human Values and Professional Ethics	1	0	2	0	2	3
	Total	13	4	18	0	26	35

*Non University Examination (NUE)

SEMESTER VIII

Course code	Name of the course		No. of Hours				Total Credits	CH
			L	T	P	S		
18PH4238		Biostatistics and Research Methodology	3	1	0	0	4	4
18PH4239		Social and Preventive Pharmacy	3	1	0	0	4	4
18PH4240ET	Elective -I	Pharma Marketing Management	3	0	0	0	3	3
18PH4242ET		Pharmacovigilance						
18PH4243ET		Quality Control and Standardization of Herbals						
18PH4246ET		Cosmetic Science						
18PH4248ET		Advanced Instrumentation Techniques						
18PH4241ET	Elective-II	Pharmaceutical Regulatory Science	3	0	0	0	3	3
18PH4244ET		Computer Aided Drug Design						
18PH4245ET		Cell and Molecular Biology						
18PH4247ET		Experimental Pharmacology						
18PH4249ET		Dietary Supplements and Nutraceuticals						
18PH4250PW		Project Work	12	0	0	0	6	12
		Total	24	4	0	0	22	28

BACHELOR OF SCIENCE - MULTIMEDIA

SEMESTER I

S. No	Course code	Course Name	L	T	P	S	Cr	CH
1	18UC1101	Basic English	0	0	4	0	2	4
2	18UC0009	Ecology & Environment	2	0	0	0	2	2
3	18GN1101	Counseling 1	0	0	1	0	0	1
4	18GN1107	Co curricular Activity 1	0	0	0	2	0.5	2
5	18BM1101	Digital Literacy	3	0	0	0	3	3
6	18BM 1102	Introduction to Visual Communication	3	0	0	0	3	3
7	18BM 1103	Design Basics	3	0	2	0	4	5
8	18BM 1104	Drawing Basics	2	0	6	0	5	8
9	18BM 1105	Basics of Photography	2	0	6	0	5	8

SEMESTER II

S No	Course code	Course Name	L	T	P	S	Cr	CH
1	18UC1202	English Proficiency	0	0	4	0	2	4
2	18LN1206/ 18LN1207	Language -Telugu/French	2	0	0	0	2	2
3	18UC0010	Universal Human Values & Professional Ethics	2	0	0	0	2	2
4	18GN1202	Counseling 2	0	0	1	0	0	1
5	18GN1208	Co Curricular Activity 2	0	0	0	2	0.5	2
6	18SC1105	Logic & Reasoning	0	0	2	0	1	2
7	18BM1201	Introduction to film studies	2	0	0	0	2	2
8	18BM1203	Basics of Graphic Design	1	0	4	0	3	5
9	18BM1202	Drawing – Advanced	0	2	6	0	4	8
10	18BM1105	Photography Advance	0	2	6	0	4	8

SEMESTER III

S No	Course code	Course Name	L	T	P	S	Cr	CH
1	18UC2103	Professional Communication Skills	0	0	4	0	2	4
2	18GN2103	Counseling 3	0	0	1	0	0	1
3	18GN2109	Co curricular Activity 3	0	0	0	2	0.5	2
4	18BM2101	Writing for Media	3	0	0	0	3	3
5	18BM2102	Media Culture & Society	3	0	0	0	3	3
6	18BM2103	Visual Analysis Tools	3	0	0	0	3	3
7	18BM2104	Graphic Design advanced	0	0	6	0	3	6
8	18BM2105	Audio & Video Production	2	0	4	0	4	6
9	18BM2106	2D Animation	2	0	6	0	5	6

SEMESTER IV

SNo	Course code	Course Name	L	T	P	S	Cr	CH
1	18UC2204	Aptitude Builder 1	0	0	4	0	2	4
2	18GN2204	Counseling 4	0	0	1	0	0	1
3	18GN2210	Co curricular Activity 4	0	0	0	2	0.5	2
4	18BM2201	Advertising	3	0	0	0	3	3
5	18BM2202	Television Production	1	0	4	0	3	5
6	18BM2203	A V Editing Techniques	1	0	4	0	3	5
7	18BM2204	Design for Web	3	0	2	0	4	5
8	18BM2205	Year End project	0	0	4	0	2	4
9	18BM2206	Basics of 3D	1	0	4	0	3	5
		Open Elective-I	3	0	0	0	3	3
		Open Elective-II						
		Management Electives						

SEMESTER V

S No	Course code	Course Name	L	T	P	S	Cr	CH
1	18UC3105	Aptitude Builder 2	0	0	4	0	2	4
2	18BM3101	Media Management & Entrepreneurship	3	0	0	0	3	3
3	18BM3102	Media Research Methods	2	0	2	0	3	4
4	18BM3103	Term Paper	0	0	6	0	3	6
5		Specialization Paper – I	2	0	4	0	4	6
6		Specialization Paper – II	2	0	4	0	4	6
7		Specialization Paper – III	2	0	4	0	4	6

ELECTIVE – I: ADVERTISING

SNo	Course code	Course Name	L	T	P	S	Cr	CH
1	**18BM3104**	Modern Techniques in Advertising	2	0	4	0	4	6
2	**18BM3105**	Advertising Media Planning	2	0	4	0	4	6
3	**18BM3106**	UX & UI Design	2	0	4	0	4	6

ELECTIVE – 2: ANIMATION

SNo	Course code	Course Name	L	T	P	S	Cr	CH
1	18BM3107	Advance 3D Animation	2	0	4	0	4	6
2	18BM3108	Advance Character Animation	2	0	4	0	4	6
3	18BM3109	Facial / LipSync	2	0	4	0	4	6

ELECTIVE – 3: FILM MAKING

SNo	**Course code**	**Course Name**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	18BM3110	Screen Writing and Story Boarding	2	0	4	0	4	6
2	18BM3111	Cinematography	2	0	4	0	4	6
3	18BM3112	Advanced Post Production Tools	2	0	4	0	4	6

SEMESTER VI

SNo	**Course code**	**Course Name**	**L**	**T**	**P**	**S**	**Cr**	**CH**
1	181E2246	Internship	0	0	0	0	8	0
2	181E4048	Major Project	0	0	0	32	8	32
3	181E4050	Portfolio/Presentation	0	0	0	0	4	0

DEPARTMENTOF COMMERCE

S.No	Course Code	Course Title	L	T	P	S	Cr	CH
SEMESTER I								
1	18UC1101	Basic English	0	0	4	0	2	4
2	18CM1101	Principles of Accounting	3	2	0	0	5	5
3	18CM1102	Fundamentals of Business Economics	3	0	0	0	3	3
4	18TS1151	Technical Skill-1 (Business Information system)	1	0	2	4	3	7
5	18CM1103	Business Mathematics & statistics	3	2	0	0	5	5
6	18CM1104	Principles of Organization &Management	3	0	0	0	3	3
7	18UC0007	Indian heritage & culture	0	0	2	0	1	2
8	18ACCAF3	Financial Accounting	3	2	0	0	0	0
9	18GN1101	Counseling - 1	0	0	1	0	0	1
10	18GN1107	Co-curricular activities-1	0	0	0	2	0.5	2
		Sub-Total	**13**	**4**	**8**	**4**	**22.5**	**29**
SEMESTER II								
1	18UC1202	English Proficiency	0	0	4	0	2	4
2	18CM1206	Financial Accounting	3	2	0	0	5	5
3	18CM1207	Macro-Economic analysis	3	0	0	0	3	3
4	18TS1252	Technical skill-2(Accounting information system)	1	0	2	4	3	7
5	18FL1203	Foreign Language	2	0	0	0	2	2
6	18CM1209	Business Law	2	0	0	0	2	2
7	18CM1210	Banking law and practice	3	0	0	0	3	3
8	18ACCAF1	Accountant in Business	3	2	0	0	0	0
9	18GN1202	Counseling - 2	0	0	1	0	0	1
10	18GN1208	Co-curricular activities-2	0	0	0	2	0.5	2
		sub total	**14**	**2**	**6**	**4**	**20.5**	**26**
SEMESTER III								
1	18UC2103	Professional Communication Skills	0	0	4	0	2	4
2	18CM2110	Advanced accounting	3	2	0	0	5	5
3	18CM2111	Fundamentals of Cost Accounting	3	2	0	0	5	5
4	18UC0009	Ecology & Environment	2	0	0	0	2	2
5	18CM2113	Management Accounting	3	2	0	0	5	5
6	18CM2114	Fundamentals of Income Tax	3	2	0	0	5	5

7	18CM2115	Principles of auditing	3	2	0	0	5	5
8	18ACCAF 2	Management Accounting	3	2	0	0	0	0
9	18ACCAF 4	Corporate & Business law	4	0	0	0	0	0
10	18GN2103	Counseling - 3	0	0	1	0	0	1
11	18GN2109	Co-curricular activities-3	0	0	0	2	0.5	2
		Sub-total	**17**	**10**	**4**	**0**	**29. 5**	**31**
SEMESTER IV								
1	18UC2204	Aptitude Builder -1	0	0	4	0	2	4
2	18CM2215	Corporate Accounting	3	2	0	0	5	5
3	18CM2216	Advanced Cost Accounting	3	2	0	0	5	5
4	18CM2217	Corporate & Allied Laws	3	0	0	0	3	3
5	18CM2218	Financial Management	3	2	0	0	5	5
6	18CM2219	Assessment of Direct Taxes	3	2	0	0	5	5
7	18UC0010	Universal Human Values & Professional Ethics	1	0	2	0	2	3
8	18TS2253	Technical Skill-3 (Commerce Lab)	1	0	2	4	3	7
9	18ACCAF6	Taxation [India Taxation instead of UK]	3	2	0	0	0	0
10	18ACCAF9	Financial Management	3	2	0	0	0	0
11	18GN2204	Counseling - 4	0	0	1	0	0	1
12	18GN2210	Co-curricular activities-4	0	0	0	2	0.5	2
		Sub-total	**17**	**10**	**8**	**4**	**32. 5**	**39**
SEMESTER V								
1	18UC3206	Campus to Corporate	0	0	4	0	2	4
2	18CM3121	Business strategy	3	0	0	0	3	3
3	18CM3122	Advanced Corporate Accounting	3	2	0	0	5	5
4	18CM3123	Accounting & Reporting standards	3	2	0	0	5	5
5	18CM3124	Goods and Services Tax	3	2	0	0	5	5
6	18CM3152	Elective-I	3	2	0	0	5	5
7	18CM3163	Elective-II	3	2	0	0	5	5
8	18ACCAF5	Performance Management	3	2	0	0	0	5
9	18ACCAF7	Financial Reporting	3	2	0	0	0	5
		Sub-total	**18**	**10**	**4**	**0**	**30**	32
SEMESTER VI								
1	18PT3201	Practice school (Industrial training-3rd year)	0	0	0	48	12	0
2	18ACCAF8	Audit and Assurance	4	0	0	0	0	0
3	18ACCAP1	Strategic business leader	3	0	0	0	0	0
4	18ACCAP2	Strategic business reporting	3	2	0	0	0	0

6	18ACCAP4	Advanced Financial Management	3	2	0	0	0	0
7	18ACCAP5	Advanced Performance Management	3	2	0	0	0	0
8	18ACCAP6	Advanced Taxation	3	2	0	0	0	0
9	18ACCAP7	Advanced Audit and Assurance	3	2	0	0	0	0
		SUB-TOTAL	**25**	**12**	**0**	**48**	**12**	**0**
1	18 PT 1101	Practice School / SIP (end of 1st Year)	0	0	0	12	3	12
2	18 PT 2101	Practice School / SIP (end of 2nd Year)	0	0	0	12	3	12
		Building Blocks for Communications	**0**	**0**	**0**	**10**	**10**	
		Business Information system	1	0	2	4	**3**	
		Foreign Language	2	0	0	0	**2**	
		Business Mathematics & statistics	3	2	0	0	**5**	**17**
		Indian heritage & culture	0	0	2	0	**1**	
		Ecology & Environment	2	0	0	0	**2**	
		Universal Human Values & Professional Ethics	1	0	2	0	**2**	
		Practie school (Industrial training)	0	0	0	48	**12**	
		Practice School / SIP (end of 1st Year)	0	0	0	12	**3**	
		Practice School / SIP (end of 2nd Year)	0	0	0	12	**3**	**83**
		Electives	6	4	0	0	**10**	
		core subjects					**97**	

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

S. No	Course Code	Name of the Course	L	T	P	S	Cr	CH
Humanities and social sciences Crtedits:28								
1	18UC1101	Basic English	**0**	0	4	0	2	
2	18UC1202	English Proficiency	**0**	0	4	0	2	
3	18UC0010	Universal Human values & Professional Ethics	**1**	0	2	0	2	
4	18UC0009	Ecology & Environment	**2**	0	0	0	2	
5	17BB21K3	Foreign Language – French/Mandrian/German	2	0	2	0	3	
6	18UC2204	Aptitude Builder I	0	0	4	0	2	
7	18UC2103	Professional Communication Skills	0	0	4	0	2	
8	17HS115	Soft Skills	2	0	2	0	3	
9	18BB32C1	Event management	2	0	2	0	3	
10	18BB32C2/18BB32C10/18BB32C11	Enrichment Courses I- Enterprise Resource Planning/ II-Creativity & Innovation/ III- Yoga & Health	2	0	2	0	3	
11	18UC3105	Aptitude Builder 2	0	0	4	0	2	
12	18UC3206	Campus to Corporate	0	0	4	0	2	
Statistics Credits :8								
1	17BS114	Business Mathematics	3	1	0	0	4	
2	17BS115	Business Statistics	3	1	0	0	4	
Core Courses Credits :79								
1	18BB11C2	Indian Business Environment	3	0	0	0	3	
2	17BB11C4	Perspectives of Management	3	0	0	0	3	
3	17BB11C5	Case Study Methodology	2	1	0	0	3	
4	17BB12C1	Introduction to Financial Accounting	3	1	0	0	4	
5	18BB12C3	Management Information Systems	3	0	0	0	3	
6	17BB12C4	Managerial Economics	3	0	0	0	3	
7	17BB21C1	Financial Accounting	3	1	0	0	4	
8	17BB21C2	Fundamentals of Income Tax	3	1	0	0	4	
9	18BB21C4	Marketing Management	3	0	0	0	3	
10	18UC0008	Indian Constitution	0	0	2	0	0	
11	17BB22C1	Financial Management	3	1	0	0	4	
12	17BB22C2	International Business Environment	3	0	0	0	3	
13	18BB22C3	Managing Personal Finance	3	0	0	0	3	
14	17BB22C4	Business Research Methods	3	1	0	0	4	
15	18BB22C5	Business Legislation	3	0	0	0	3	
16	17BB31C0	Management Accounting	3	1	0	0	4	
17	18BB31C2	Human Resource Management	3	0	0	0	3	
18	18BB31C3	Fundamentals of Digital Marketing	3	0	0	0	3	

19	17BB31C4	Business analytics	3	1	0	0	4	
20	17BB31C5	Project Management	3	1	0	0	4	
21	17BB32C0	Operations Management	3	1	0	0	4	
22	17BB32C3	Innovation & Entrepreneurship	3	0	0	0	3	
23	17BB32C4	Strategic Management				0	4	
24	18BB22C5/18BB22C6/18BB22C7/18BB22C8/18BB22C9	Management of Co-Operatives/Management of MNC's/Management of SME's/Management of NGO's/Management of Family Owned Business	3	0	0	0	3	

BBA LLB

S.No	Code	Title	L	T	P	S	Cr	PRE REQ
1	15BL11C0	General English and Legal Language	3	0	0	0	3	NIL
2	15BL11C1	Principles of Management	4	0	0	0	4	NIL
3	15BL11C2	Principles of Economics and ManagerialEconomics	4	0	0	0	4	NIL
4	15BL11C3	Law of Torts	4	0	0	0	4	NIL
5	15BL11C4	Law of Contracts - I	4	0	0	0	4	NIL
6	15BL11C5	Introduction to Law and Legal system	4	0	0	0	4	NIL
7	15ES119	Introduction to I.T	2	0	2	0	3	NIL
8	15BL12C0	Legal Professional Communication Skills (English – II)	3	0	0	0	3	NIL
9	15BL12C1	Human Resource Management	4	0	0	0	4	NIL
10	15BL12C2	Business Environment	4	0	0	0	4	NIL
11	15BL12C3	Corporate Law	4	0	0	0	4	NIL
12	15BL12C4	Law of Contracts – II	4	0	0	0	4	NIL
13	15BL12C5	Legal and Constitutional History	4	0	0	0	4	NIL
14	15BL12C6	Cyber Security	3	0	0	0	3	NIL
15	15BL21C0	Marketing Management	4	0	0	0	4	NIL
16	15BL21C1	Macro Economics	4	0	0	0	4	NIL
17	15BL21C2	Financial and Cost Accountancy	4	0	0	0	4	NIL
18	15BL21C3	Constitutional Law - I	4	0	0	0	4	NIL
19	15BL21C4	Law of Crimes – I	4	0	0	0	4	NIL
20	15BL21C5	Family Law - I	4	0	0	0	4	NIL
21	15BL22C0	Dynamics of Social Change	4	0	0	0	4	NIL
22	15BL22C1	Financial Management	4	0	0	0	4	NIL
23	15BL22C2	Management Information Systems	4	0	0	0	4	NIL
24	15BL22C3	Constitutional Law – II	4	0	0	0	4	NIL
25	15BL22C4	Administrative Law	4	0	0	0	4	NIL
26	15BL22C5	Family Law – II	4	0	0	0	4	NIL
27	15BL31C0	Organisational Behaviour	4	0	0	0	4	NIL
28	15BL31C1	Management Accounting	4	0	0	0	4	NIL
29	15BL31C2	Labour Laws - I	4	0	0	0	4	NIL
30	15BL31C3	Jurisprudence	4	0	0	0	4	NIL
31	15BL31C4	Law of Property	4	0	0	0	4	NIL
32	15BL31C5	Public International Law	4	0	0	0	4	NIL
33	15BL32C0	Quantitative Methods	4	0	0	0	4	NIL
34	15BL32C1	Interpretation of Statutes	4	0	0	0	4	NIL
35	15BL32C2	Labour Laws - II	4	0	0	0	4	NIL
36	15BL32C3	Law of Banking and N.I.Act	4	0	0	0	4	NIL
37	15BL32C4	Human Rights Law	4	0	0	0	4	NIL
38	15BL32C5	Moot Court Training – I	1	0	2	0	2	NIL
39	15BL41C0	Soft Skills - 1	2	1	1	0	3	NIL
40	15BL41C1	Code of Civil Procedure and Law of Limitation	4	0	0	0	4	NIL
41	15BL41C2	Law of Crimes – II	4	0	0	0	4	NIL
42	15BL41C3	Law of Evidence	4	0	0	0	4	NIL
43	15BL41C4	Intellectual Property Rights	4	0	0	0	4	NIL
44	15BL41C5	Law Elective - 1/Current Affairs and General Studies - 1	3	0	0	0	3	NIL

BACHELOR OF FINE ARTS (BFA

S. No	Course code	Course Name	L	T	P	S	Cr	PRE REQ
1	18UC1101	Basic English	0	0	4	0	2	NIL
2	18UC0009	Ecology & Environment	2	0	0	0	2	NIL
3	18GN1101	Counseling 1	0	0	1	0	0	NIL
4	18GN1107	Co curricular Activity 1	0	0	0	2	0.5	NIL
5	18 FA1101	Digital Literacy	3	0	0	0	3	NIL
6	18FA1102	Introduction to Visual ommunication	4	0	0	0	4	NIL
7	18 FA1103	History of Art-IB (Indian Art)	3	0	0	0	3	NIL
8	18 FA1104	Drawing Basics	1	0	6	0	4	NIL
9	18 FA1105	Advertising Art and Ideas	1	0	4	0	3	NIL
10	18UC1202	English Proficiency	0	0	4	0	2	NIL
11	18LN1206/ 18LN1207	Language – Telugu/French	2	0	0	0	2	NIL
12	18UC0010	Universal Human Values & Professional Ethics	1	0	2	0	2	NIL
13	18GN1202	Counseling 2	0	0	1	0	0	NIL
14	18GN1208	Co curricular Activity 2	0	0	0	2	0.5	NIL
15	18SC1105	Logic & Reasoning	0	0	2	0	1	NIL
16	18FA1201	History of Art – II (Western Art)	3	0	0	0	3	NIL
17	18 FA1203	Advanced Drawing	2	0	4	0	4	NIL
18	18 FA1202	Color Theory	1	0	6	0	4	NIL
19	18 FA1105	Sculpture	1	0	6	0	4	NIL
20	18UC2103	Professional Communication Skills	0	0	4	0	2	NIL
21	18GN2103	Counseling 3	0	0	1	0	0	NIL
22	18GN2109	Co curricular Activity 3	0	0	0	2	0.5	NIL
23	18UC0007	Indian Heritage & Culture	0	0	2	0	0	NIL
24	18FA2101	Art & Society	3	0	0	0	3	NIL
25	18FA2102	Graphic Design-I (Vector)	2	0	4	0	4	NIL
26	18FA2103	Basics of Photography	1	0	4	0	3	NIL
27	18FA2104	Script Writing	1	0	2	0	2	NIL

28	18UC2204	Aptitude Building 1	0	0	4	0	2	NIL
29	18GN2204	Counseling 4	0	0	1	0	0	NIL
30	18GN2210	Co curricular Activity 4	0	0	0	2	0.5	NIL
31	18FA2201	**Graphic Design-II (Raster)**	2	0	4	0	4	NIL
32	18FA2202	Lighting & Camera	2	0	4	0	4	NIL
33	18FA2203	Sound & Special Effects	2	0	4	0	4	NIL
34	18UC3105	Aptitude Building 2	0	0	4	0	2	NIL
35	18GN3105	Counseling 5	0	0	1	0	0	NIL
36	18GN3111	Co curricular Activity 5	0	0	0	2	0.5	NIL
37	18FA3101	Advertising Profession & Practice	2	0	4	0	4	NIL
38	18FA3102	Poster Design	2	0	4	0	4	NIL
39	18FA3103	Illustration	2	0	4	0	4	NIL
40	18UC3206	Campus to Corporate	0	0	4	0	2	NIL
41	18GN3206	Counseling 6	0	0	1	0	0	NIL
42	18GN3212	Co curricular Activity 6	0	0	0	2	0.5	NIL
43	18 FA3201	Contemporary Media	3	0	0	0	3	NIL
44	18FA3201	Art & Aesthetics	3	0	0	0	3	NIL
45	18FA3202	Press layout	2	0	4	0	4	NIL
46	18 FA 3203	VFX Pipeline Management	3	0	0	0	3	NIL
47	18FA4101	Product Campaign Design	3	0	0	0	3	NIL
48	18FA4102	Copy Writing	3	0	0	0	3	NIL
49	18FA4103	Layout & Typography	2	0	4	0	4	NIL
50	181E2246	Internship	0	0	16	0	8	NIL
51	181E4048	Major Projects	0	0	16	2	8	NIL
52	181E4050	Portfolio Presentation	0	0	8	0	4	NIL

		Specialization –I Animation	L	T	P	S	CR	PRE REQ
1	18FA2105	Introduction to compositing Tools	2	0	4	0	4	NIL
2	18FA2106	History of Animation and VFX	4	0	0	0	4	NIL
	Specialization –II Film Making							
3	18FA2107	**Principles of Cinematography**	2	0	4	0	4	NIL
4	18FA2108	Introduction to film Genres	2	0	4	0	4	NIL
	Specialization –III Painting							

5	18FA2109	Painting - I	0	0	8	0	4	NIL
6	18FA2110	Miniature Painting- I	2	0	4	0	4	NIL
	Specialization –IV Sculpture							
7	18FA2111	Modeling from Life	2	0	4	0	4	NIL
8	18FA2112	Sculpture Design	2	0	4	0	4	NIL
	Specialization –I Animation							
9	18FA2204	Introduction to 3D in Maya	2	0	4	0	4	NIL
10	18FA2205	Modeling	0	0	8	0	4	NIL
	Specialization –II Film Making							
11	18FA2206	Script writing & Story Board	2	0	4	0	4	NIL
12	18FA2207	Intermediate practical film making	2	0	4	0	4	NIL
	Specialization –III Painting							
13	18FA2208	Painting - II	0	0	8	0	4	NIL
14	18FA2209	**Miniature Painting - II**	2	0	4	0	4	NIL
	Specialization –IV Sculpture							
15	18FA2210	**Fiber Modeling & Casting**	0	0	8	0	4	NIL
16	18FA2211	Scrap Sculpture	2	0	4	0	4	NIL
	Specialization –I Animation							
17	18FA3104	Texturing & Lighting	2	0	4	0	4	NIL
18	18FA3105	Particle & Dynamics	0	0	8	0	4	NIL
	Specialization –II Film Making							
19	18FA3106	Basic Post Production Tools	2	0	4	0	4	NIL
20	18FA3107	Production Management	2	0	4	0	4	NIL
	Specialization –III Painting							
21	18FA3108	Oil Painting-I	0	0	8	0	4	NIL
22	18FA3109	Collage	2	0	4	0	4	NIL
	Specialization –IV Sculpture							
23	18FA3110	Installation Art	0	0	8	0	4	NIL
24	18FA3111	Casting, Pottery and Terracotta	0	0	8	0	4	NIL
	Specialization –I Animation							
25	18 FA3204	Rigging	2	0	4	0	4	NIL
26	18 FA3205	Character Animation	0	0	8	0	4	NIL
	Specialization –II Film Making							
27	18 FA 3206	Media Laws & Censorship	2	0	4	0	4	NIL
28	18 FA 3207	Fundamentals of Visual effects and Compositing	2	0	4	0	4	NIL
	Specialization –III Painting							
29	18 FA 3208	Creative Painting	0	0	8	0	4	NIL
30	18 FA 3209	Composition	2	0	4	0	4	NIL
	Specialization –IV Sculpture							
31	18 FA 3210	Experimental Sculpture	2	0	4	0	4	NIL
32	18 FA 3211	Mix Media	2	0	4	0	4	NIL

	Specialization –I Animation							
33	18FA4104	Advance Character Animation	2	0	6	0	5	NIL
34	18FA4105	Lip Sync & Facial	2	0	6	0	5	
	Specialization –II Film Making							
35	18FA4106	Advanced Practicals in Film making	2	0	6	0	5	

36	18FA4107	Advanced Post Production Tools	2	0	6	0	5	
	Specialization –III Painting							
37	18FA4108	Creative Painting - II	1	0	8	0	5	NIL
38	18FA4109	Mixed Media	2	0	6	0	5	
	Specialization –IV Sculpture							
39	18FA4110	Methods of Metal casting and ceramics sculpture	2	0	6	0	5	
40	18FA4111	**New Media**	2	0	6	0	5	
41		OPEN ELECTIVE – 1 – Annexure 1	3	0	0	0	3	NIL
42		OPEN ELECTIVE – 2 – Annexure 1						
43		MANAGEMENT ELECTIVE – Annexure1						

BACHELOR OF ARTS (BA)

Year	Course Code	Name of the Course	Contact Hours					
			L	T	P	S	Cr	CH
Semester I								
I	18GN11E1	Basics of English Communication	3	0	2	0	4	5
	18GN1107	Co curricular Activity - 1	0	0	0	2	0.5	2
	18GN1101	Counselling-1	0	0	1	0	0.5	1
	16GN11T1	Telugu-1	3	0	0	0	3	3
	16GN11H1	Hindi-1						
	16BA1101	Ancient Indian History	4	1	0	0	5	5
	18BA1102	Essentials of Micro Economics	4	1	0	0	5	5
	16BA1104	Physical Geography						
	18BA1105	Introduction to English Language and Literature						
	16BA1103	Introduction to Public Administration	4	1	0	0	5	5
	18BA11C1	General Science*	3	0	0	0	0	3
	18BA11C2	GK & Current affairs*	2	0	0	0	0	2
	18BA11C3	Quantitative Aptitude and Reasoning (CSAT)-1*	2	2	0	0	0	4
	Total		**25**	**5**	**3**	**2**	**23**	**35**

Year	Course Code	Name of the Course	Contact Hours					
			L	T	P	S	Cr	CH
	Semester II							
I	18GN12E2	English Interpretive Skills	3	0	2	0	4	5
	18GN1208	Co curricular Activity -2	0	0	0	2	0.5	2
	18GN1202	Counselling-2	0	0	1	0	0.5	1
	18UC0008	Indian Constitution*	0	0	2	0	0	2
	16GN12T2	Telugu-2	3	0	0	0	3	3

	16GN12H2	Hindi-2						
	16BA1201	Medieval Indian History	4	1	0	0	5	5
	18BA1202	Essentials of Macro Economics	4	1	0	0	5	5
	16BA1204	Human Geography						
	18BA1205	English Literature in Context-I(1500-1620)						
	16BA1203	Administrative Theory	4	1	0	0	5	5
	18BA12C1	Planning & Development*	4	0	0	0	0	4
	18BA12C2	GK & Current affairs*	2	0	0	0	0	2
	18BA12C3	Quantitative Aptitude and Reasoning (C-SAT) -2*	2	2	0	0	0	4
	Total		**26**	**5**	**5**	**2**	**23**	**38**

Semester III								
Year	**Course Code**	**Name of the Course**	**Contact Hours**					
			L	**T**	**P**	**S**	**Cr**	**CH**
II	18GN21E3	English Language Proficiency	3	0	2	0	4	5
	18GN2109	Co curricular Activity -3	0	0	0	2	0.5	2
	18GN2101	Couselling-3	0	0	1	0	0.5	1
	16GN21T3	Telugu-3	3	0	0	0	3	3
	16GN21H3	Hindi-3						
	16GN2102	Computer Skills	0	0	4	0	2	4
	16BA2101	Indian History & Culture 1526-1857	4	1	0	0	5	5
	16BA2102	Indian Economy-Problems & Policies	4	1	0	0	5	5
	16BA2104	Geography of India-1						
	18BA2105	English Literature in Context-II(1620-1850)						

	16BA2103	Union Administration	4	1	0	0	5	5
	18BA21C1	Indian Geography*	5	0	0	0	0	5
	18BA21C2	G.K & Current Affairs*	3	0	0	0	0	3
	Total		**26**	**3**	**7**	**2**	**25**	**38**

	Semester IV

Year	**Course Code**	**Name of the Course**	**Contact Hours**					
			L	**T**	**P**	**S**	**Cr**	**CH**
II	18GN22E4	Campus to Competitive World	3	0	2	0	4	5
	18GN2210	Co curricular Activity -4	0	0	0	2	0.5	2
	18GN2202	Counselling-4	0	0	1	0	0.5	1
	18UC0009	Ecology and Environment	2	0	0	0	2	2
	18UC0010	Universal Human Values and Professional Ethics	2	0	2	0	3	4
	16BA2201	Indian History & Culture 1858-1947	4	1	0	0	5	5
	16BA2202	Economic Development and Planning	4	1	0	0	5	5
	16BA2204	Geography of India-2						
	18BA2205	English Literature in Context-III(1820-1950)						
	16BA2203	State and Local Administration	4	1	0	0	5	5
	18BA22C1	World Geography*	5	0	0	0	0	5
	18BA22C2	G.K & Current Affairs*	2	0	0	0	0	2
	Total		**26**	**3**	**5**	**2**	**25**	**36**

Semester V

Year	**Course Code**	**Name of the Course**	**Contact Hours**					
			L	**T**	**P**	**S**	**Cr**	**CH**
III	18GN0001	Soft Skills	0	0	4	0	2	4
	18UC0007	Indian Heritage & Culture	2	0	0	0	2	2
	18BA3101	History of Modern World	4	1	0	0	5	5
	16BA31GX	Generic Elective-1	4	1	0	0	5	5

	16BA3103	Management of Resources	4	1	0	0	5	5
	18BA31C2	G.K & Current Affairs*	2	0	0	0	0	2
	18BA31C3	Data Inter - pretation*	2	0	2	0	0	3
	18GN3102	Science & Technology	2	0	0	0	2	2
	Total		**20**	**3**	**6**	**0**	**21**	**28**

	Semester VI

Year	**Course Code**	**Name of the Course**	**Contact Hours**					
			L	**T**	**P**	**S**	**Cr**	**CH**
III	16GN3201	Disaster Management	3	0	0	0	3	3
	18BA32C1	General Essay*	3	2	0	0	0	5
	16BA32Ex	D S Elective-1	4	1	0	0	5	5
	16BA32Ez	D S Elective-2	4	1	0	0	5	5
	16BA32GY	Generic Elective-2	4	1	0	0	5	5
	18BA32C2	G.K & Current Affairs*	3	0	0	0	0	3
	18BA32C3	International Relations*	2	0	0	0	0	2
	16BA3212	Social & Economic Development	2	2	0	0	4	4
	Total		**25**	**7**	**0**	0	**22**	**32**

				Contact Hours					
CODE	**ELECTIVE**	**SUBJECT CODE**	**SUBJECT**	**L**	**T**	**P**	**S**	**Cr**	**CH**
16BA32Ex	D S Elective-1	16BA3202	Archeology	4	1	0		5	5
		16BA3203	History and Culture of Andhra Pradesh	4	1	0		5	5
16BA32Ez	D S Elective-2	16BA3206	Indian Polity and Governance	4	1	0		5	5
		16BA3207	E-Governance	4	1	0		5	5
16BA31GX	Generic Elective-1	16BA3102	International Economic Order	4	1	0		5	5

		16BA3104	Remote Sensing and Geographic Information System	4	1	0		5	5
		18BA3105	English Literature in Context(Post-Modern Age)	4	1	0		5	5
16BA32GY	Generic Elective-2	16BA3204	Economic Data & Interpretation	4	1	0		5	5
		16BA3205	Human Resource and Economic development	4	1	0		5	5
		16BA3208	Regional Geography of India	4	1	0		5	5
		16BA3209	Contemporary Issues in Geography	4	1	0		5	5
		18BA3210	Academic Research-Dissertation	4	1	0		5	5
		18BA3211	Academic Research-Publications& Book Reviews	4	1	0		5	5

B.SC. HOTEL MANAGEMENT

S.No	Course Code	Name of the Course	L	T	P	S	Cr	PRE REQ
1	18HM11E1	English Communication Skills	1	0	4	0	3	NIL
2	18HM11C6	Introduction to Food Production	2	0	4	0	4	NIL
3	18HM11C7	Introduction to Food & Beverage Service	2	0		0	3	NIL
4	18HM11C8	Introduction to House Keeping	2	0	2	0	3	NIL
5	18HM11C9	Introduction to Front Office	2	0	2	0	3	NIL
6	18HM11K0	Introduction to Information Technology	2	0	2	0	3	NIL
7	18HM11L1	Hindi Language	3	0	0	0	3	NIL
8	18UC0010	Universal Human values & Professional Skills	1	0	4	0	3	NIL
9	18BH12C6	Principles of Food Production	2	0	4	0	4	NIL
10	18BH12C7	Principles of Food & Beverage Service	2	0	2	0	3	NIL
11	18HM12C8	Principles of House Keeping	2	0	2	0	3	NIL
12	18HM12C9	Principles of Front Office	2	0	2	0	3	NIL
13	18HM12K1	Food Science & Nutrition	3	0	0	0	3	NIL
14	18HM12L2	Basic French	2	0	2	0	3	NIL

15	18HM21E2	English Writing Skills	1	0	4	0	3	NIL
16	18HM21C6	Food Production Operations	2	0	4	0	4	NIL
17	18HM21C7	Food & Beverage Services Operations	2	0	2	0	3	NIL
18	18HM21C8	Accommodation Operations	2	0	2	0	3	NIL
19	18HM21C9	Hotel Accountancy	2	0	2	0	3	NIL
20	18HM21K2	Hotel Engineering	3	0	0	0	3	NIL
21	18UC0009	Ecology & Environment	3	0	0	0	3	NIL
22	18HM31E3	Entrepreneur And Soft Skills For Hospitality	1	0	4	0	3	NIL
23	18HM31C6	Food Production Management	2	0	4	0	4	NIL
24	18HM31C7	Food & Beverage Services Management	2	0	2	0	3	NIL
25	18HM31C8	Accommodation management	2	0	2	0	3	NIL
26	18HM31K3	Human Resource Management	3	0	0	0	3	NIL
27	18HM31K4	Hospitality Services Marketing	3	0	0	0	3	NIL
28	18UC0007	Indian Heritage & Culture	3	0	0	0	3	NIL
29	18UC3206	Campus To Hospitality Industry	1	0	4	0	3	NIL
30	18HM32K5	Travel & Tourism Management	3	0	0	0	3	NIL
31	18HM32K6	Entrepreneurship	3	0	0	0	3	NIL
32	18HM32K7	Hotel law	3	0	0	0	3	NIL
33	18HM32P0	Project	1	0	6	0	4	NIL
34	18HM10N0	Industrial Training 45 Days	0	0	0	0	6	NIL
35	18HM22N0	Intensive Internship 6 Months	0	0	0	0	24	NIL

Year	**Course Code**	**Name of the Course**	**Contact Hours**				**Credits**
			L	**T**	**P**	**Total**	
	ELECTIVES						
	18HM32E1	Advanced Food Production	2	0	4	6	4
	18HM32E2	Advanced Food & Beverage Services	2	0	4	6	4
	18HM32E3	Advanced Accommodation Management	2	0	4	6	4
GRAND TOTAL							**138**

MBA

S.No	Course Code	Course Title	L	T	P	S	CR	PRE REQ
HUMANITIES & SOCIAL SCIENCES Credits - 6								
1	18HS113	Soft Skills for Managers	2	0	2	0	3	NIL
2	17MB52K7	Business Communication	2	0	2	0	3	NIL
STATISTICS Credits - 9								
1	17MB51C0	Quantitative Methods	3	0	0	0	3	NIL
2	17MB52C2	Business Research Methodology	3	0	0	0	3	NIL
3	17MB52C3	Introduction to Business Analytics	2	0	2	0	3	NIL
PROFESSIONAL CORE Credits 47								
1	17MB51C1	Indian Business Environment	3	0	0	0	3	NIL
2	17MB51C2	Managerial Economics	3	0	0	0	3	NIL
3	17MB51C3	Financial and Management Accounting	2	2	0	0	3	NIL
4	17MB51C4	Marketing Management	3	0	0	0	2	NIL
5	17MB51C5	Organizational Behavior	3	0	0	0	2	NIL
6	17ES120	Information Systems	2	0	2	0	3	NIL
7	18MB51C7	Principles of Management	3	0	0	0	3	NIL
8	17MB52C0	Human Resource Management	3	0	0	0	3	NIL
9	17MB52C1	Financial Management	2	2	0	0	4	NIL
10	17MB52C4	Operations Management	3	0	0	0	3	NIL
11	17MB52C5	Business Legislation	3	0	0	0	3	NIL
12	17MB52C6	Enterprise Resource Planning	3	0	0	0	3	NIL
13	17MB61C0	Strategic Management	3	0	0	0	3	NIL
14	18MB62C0	International Business Environment	3	0	0	0	3	NIL
15	17MB62C1	Business Ethics & Corporate Governance	3	0	0	0	3	NIL
16	17MB62C2	Entrepreneurship	3	0	0	0	3	NIL
FUNCTIONAL ELECTIVES CREDITS - 24 (DUAL SPECIALIZATION WITH 4 COURSES IN EACH SPECIALIATION)								
1	17MB61M0	Consumer Behaviour	3	0	0	0	3	17MB51C4
2	17MB61M1	Services Marketing	3	0	0	0	3	17MB51C4
3	17MB61M2	B2B Marketing	3	0	0	0	3	17MB51C4
4	17MB61M3	International Marketing	3	0	0	0	3	17MB51C4
5	17MB62M4	Sales and Distribution Management	3	0	0	0	3	17MB51C4
6	17MB62M5	Business Analytics in Marketing	3	0	0	0	3	17MB51C4
7	17MB62M6	Brand Management	3	0	0	0	3	17MB51C4
8	17MB62M7	Customer Relationship	3	0	0	0	3	17MB51C4

		Management						
FINANCE								
1	17MB61F0	Financial Services and Markets	3	0	0	0	3	17MB52C1
2	17MB61F1	Security Analysis& Portfolio Management	2	1	0	0	3	17MB52C1
3	17MB61F2	International Financial Management	2	1	0	0	3	17MB52C1
4	17MB61F3	Principles of Taxation	2	1	0	0	3	17MB52C1
5	17MB62F4	Financial Derivatives	2	1	0	0	3	17MB52C1
6		(Pre-requisite: Security Analysis)	2	1	0	0	3	17MB52C1
7	17MB62F5	Business Analytics in Finance	2	1	0	0	3	17MB52C1
8	17MB62F6	Planning and Assessment of Income Tax	2	1	0	0	3	17MB52C1
HUMAN RESOURCE MANAGEMENT								
1	17MB61H0	Performance Management System	3	0	0	0	3	17MB52C0
2	17MB61H1	Training and Development	3	0	0	0	3	17MB52C0
3	17MB61H2	Industrial Relations & Labour Legislation	3	0	0	0	3	17MB52C0
4	17MB61H3	Leadership in Organizations	3	0	0	0	3	17MB52C0
5	17MB62H4	Compensation Management	3	0	0	0	3	17MB52C0
6	17MB62H5	Strategic Human Resource Management	3	0	0	0	3	17MB52C0
7	17MB62H6	Human Resource Development	3	0	0	0	3	17MB52C0
8	17MB62H7	Business Analytics in HR	3	0	0	0	3	17MB52C0
9	17MB62H8	Organizational Change & Development	3	0	0	0	3	17MB52C0
BUSINESS ANALYTICS								
1	17MB61U0	Advanced Analytics with R	3	0	0	0	3	17MB52C3
2	17MB61U1	Business Analytics in Marketing-I	2	0	2	0	3	17MB52C3
3	17MB61U2	Business Analytics in HR -I	2	0	2	0	3	17MB52C3
4	17MB61U3	Business Analytics in Finance -I	2	0	2	0	3	17MB52C3
5	17MB62U4	Business Forecasting & Econometrics	2	0	2	0	3	17MB52C3

6	17MB62U5	Business Analytics in Marketing-II	2	0	2	0	3	17MB52C3
7	17MB62U6	Business Analytics in HR –II	2	0	2	0	3	17MB52C3
8	17MB62U7	Business Analytics in Finance - II	2	0	2	0	3	17MB52C3
DIGITAL MARKETING								
1	17MB61K0	Media Planning	3	0	0	0	3	17MB51C4
2	17MB61K1	SEO	2	0	2	0	3	17MB51C4
3	17MB61K2	Affiliate marketing	3	0	0	0	3	17MB51C4
4	17MB61K3	Social Media Marketing &Analytics	2	0	2	0	3	17MB51C4
5	17MB62K4	Mobile Marketing	3	0	0	0	3	17MB51C4
6	17MB62K5	E-Mail & Content Marketing	2	2	0	0	3	17MB51C4
7	17MB62K6	E Commerce	3	0	0	0	3	17MB51C4
8	17MB62K7	Digital PR & Corporate Commmunication	2	2	0	0	3	17MB51C4
SECTORAL SPECIALIZATION CREDITS 6 (2 COURSES FROM 1 SECTOR)								
Retail								
1	17MB61R0	Overview of Retailing	3	0	0	0	3	Nil
2	17MB62R1	Management of Retail Operations	3	0	0	0	3	17MB61R0
Banking								
1	17MB61B0	Overview of Banking	3	0	0	0	3	Nil
2	17MB62B1	Banking Service Operations	3	0	0	0	3	17MB61B0
Insurance								
1	17MB62S0	Life Insurance	3	0	0	0	3	Nil
2	17MB62S1	General Insurance	3	0	0	0	3	17MB62S0
Foreign trade								
1	17MB61T0	International Logistics Management	3	0	0	0	3	Nil
2	17MB62T1	Export & Import Documentation & Insurance	3	0	0	0	3	17MB61T0
Information Technology								
1	17MB61I0	IT Enabled Services	3	0	0	0	3	Nil
2	17MB62I1	Marketing of Software Solutions (Pre-requisite: Project Management)	3	0	0	0	3	17MB61I0
Healthcare								
1	17MB61D0	Overview of Healthcare Management	3	0	0	0	3	Nil
2	17MB62D1	Management of Healthcare Operations	3	0	0	0	3	17MB61D0
SUMMER INTERNSHIP PROGRAM - 9 CREDITS								
MANAGEMENT RESEARCH PROJECT - 6 CREDITS								

M.SC (CHEMISTRY)

		Course Code	Course Title	L	T	P	Cr
COMMON	SEM-1	18CY1101	General Chemistry-I	4	0	0	4
		18CY1102	Inorganic Chemistry- I	4	0	6	7
		18CY1103	Organic Chemistry-I	4	0	6	7
		18CY1104	Physical Chemistry-I	4	0	6	7
	SEM-II	18CY1201	General Chemistry-II	4	0	0	4
		18CY1202	Inorganic Chemistry- II	4	0	6	7
		18CY1203	Organic Chemistry-II	4	0	6	7
		18CY1204	Physical Chemistry-II	4	0	6	7
ANALYTICAL CHEMISTRY	SEM-III	18 CY 2111	Separation Techniques -I	4	0	6	7
		18 CY 2112	Quality Control and Traditional Methods of Analysis-I	4	0	6	7
		18 CY 2113	Applied Analysis	4	0	0	4
			Elective-1	3	0	0	3
			Elective-2	3	0	0	3
			Electives				
		18 CY2114	Instrumental Methods of Analysis				
		18 CY2115	Applications of Chemical Spectroscopy				
		18 CY2116	Bio analytical Chemistry				
		18 CY2117	Environmental Chemistry				
		18 CY2118	Surface Analytical Techniques				
		18 CY2119	Analysis of Food and Drugs				
	SEM-IV	18CY2211	Separation Methods – II	4	0	6	7
		18CY2212	Traditional Methods of Analysis	4	0	6	7
			Elective-3	3	0	0	3
		18CY2213	Dissertation with Research Publication	0	0	12	6
			Electives				
		18CY2214	Advanced Applied Analysis				
		18CY2215	Advanced Instrumental Methods of Analysis				
		18CY2216	Classical Methods of Analysis				
ORGANIC CHEMISTRY	SEM-III	18C 2101	Photo Chemistry and pericyclic reactions	4	0	0	4
		18CY2102	Organic Synthesis-I	4	0	6	7
		18CY2103	Organic Spectroscopy	4	0	6	7
		Elective-I	Elective-I	3	0	0	3
		Elective-2	Elective-2	3	0	0	3
		Electives					
		18CY2104	Techniques for modern industrial applications	3	0	0	3
		18CY2105	Advanced Heterocyclic chemistry	3	0	0	3
		18CY2106	Bio Organic Chemistry	3	0	0	3
		18CY2107	Green Chemistry	3	0	0	3
		18CY2108	Food Chemistry	3	0	0	3
		18CY2109	Medicinal chemistry	3	0	0	3
		18CY2110	Nano Chemistry	3	0	0	3
		18CY2201	Organic Reaction Mechanisms and Named Reactions	4	0	6	7
		18CY2202	Organic Synthesis-2	4	0	6	7
		Elective-3	Elective-3	3	0	0	3
		18CY2203	Dissertation with Research Publication	0	0	12	6
		Electives					
		18CY2204	Advanced Organic Spectroscopy	3	0	0	3
		18CY2205	Natural Products and Biomolecules	3	0	0	3

		18CY2206	Organometalic Chemistry	3	0	0	3
		18CY2207	Chemistry of Drugs and Pharmaceuticals	3	0	0	3

M.SC(APPLIED MATHEMATICS)

S No.	Subject Code	Subjects	L	T	P	Credits
1	18AM1101	Real Analysis	4	0	0	4
2	18AM1102	Ordinary Differential Equations	3	0	2	4
3	18AM1103	Numerical Methods	3	0	2	4
4	18AM1104	Complex Analysis	4	0	0	4
5	18AM1105	Mathematical Statistics	4	0	0	4
6	18AM1106	Seminar-1	0	0	2	1
7	18AM1206	Topology	4	0	0	4
8	18AM1207	Abstract Algebra	4	0	0	4
9	18AM1208	Transform Techniques	3	0	2	5
10	18AM1209	Discrete Mathematics	4	0	0	4
11	18AM1210	Introduction to Computer Programming	3	0	2	4
12	18AM1211	Seminar-2	0	0	2	1
13	18AM2111	Partial Differential Equations	4	0	0	4
14	18AM2112	Classical and Continuum Mechanics	4	0	0	4
15	18AM2113	Data Structures	3	0	2	4
16	18AM2114	Functional Analysis	4	0	0	4
17	18AM2215	Fluid Dynamics	4	0	0	4
18	18AM2216	Operations Research	4	0	0	4

List of Electives

S No	Subject Code	Subjects	L	T	P	Credits
1	18AM2011	Mathematical Control Theory	4	0	0	4
2	18AM2012	Statistical Inference	2	0	2	4
3	18AM2013	Database Management	3	0	2	4
		Elective-II				
1	18AM2021	Fuzzy mathematics and applications	4	0	0	4
2	18AM2022	Advanced Numberical Analysis	3	0	2	4
3	18AM2023	Design and Analysis of Algorithms	3	0	2	4
		Elective-III				
1	18AM2031	Dynamical Systems	4	0	0	4
2	18AM2032	Number Theory	4	0	0	4
3	18AM2033	Mathematical Modelling	3	0	2	4

M.SC (PHYSICS)

S No.	Coursecode	Name of the Course	L	T	P	Credits
1	17PH5101	Mathematical Physics	3	2	0	4
2	17PH5102	Classical Mechanics	3	2	0	4
3	17PH5103	Quantum Mechanics - 1	3	2	0	4
4	17PH5104	Electronics	3	2	6	7
5	17PH5105	Modern Physics Lab-1	0	0	6	3
7	17PH5201	Statistical Mechanics	3	2	0	4
8	17PH5202	Quantum Mechanics - 2	3	2	0	4

9	17PH5203	Electromagnetic Theory and Modern Optics	3	2	6	7
10	17PH5204	Solid State Physics-1	3	2	0	4
11	17PH5205	Computational Methods and Programming	2	0	4	4
12	17PH5206	Seminar	0	0	2	1
13	17PH53E(-)	Elective-1	2	2	0	3
14	17PH5301	Atomic and Molecular Physics	3	2	0	4
15	17PH5302	Solid State Physics -2	3	2	6	7
16	17PH5303	Digital Electronics and Microprocessors	3	2	6	7
17	17PH5304	Term paper	0	0	2	1
18	17PH54E(-)	Elective-2	2	2	0	3
19	17PH54E(-)	Elective-3	2	2	0	3
20	17PH5401	\Dissertation	0	0	24	12
		Total Credits	**41**	**28**	**62**	**86**

Elective-1						
S No.	**Course Code**	**Name of the Course**	**L**	**T**	**P**	**Credits**
1	17PH53E1	Nuclear and Particle Physics	2	2	0	3
2	17PH53E2	Radar Systems and Satellite communication	2	2	0	3
3	17PH53E3	Fiber Optic Sensor	2	2	0	3
Elective-2						
1	17PH54E1	Nano science and Technology	2	2	0	3
2	17PH54E2	Antenna theory and Radio wave Propagation	2	2	0	3
3	17PH54E3	Climate change	2	2	0	3
4	17PH54E4	Thin Film Technology	2	2	0	3
Elective-3						
1	17PH54E5	Instrumentation	2	2	0	3
2	17PH54E6	Glass Science and Technology	2	2	0	3
3	17PH54E7	Micro-Electro- Mechanical Systems	2	2	0	3
4	17PH54E8	Weather Hazards & Risk Assessment	2	2	0	3